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### Mathematics/Computer Science

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Scientific and Technological  
Research Centers  
in  
Pakistan

Pakistan Council for Science and Technology (PCST)  
Islamabad  
November, 2003

## **FOREWORD**

Pakistan Council for Science and Technology (PCST) regularly publishes statistical information regarding scientific research and development in the country.

The data presented in this publication is based on a Peer Review study organized by PCST. The study involved the development of a statistical questionnaire, which was sent to 228 R&D organizations and 300 S&T departments. Peer Review Committees were requested to verify the information received through the questionnaire during their personal visits to each institution.

The number of institutions listed in this volume is 446 and are classified under major sectors of research activity. The list therefore, includes 187 R&D institutes & units and 259 science and technology departments of the universities. Information about institutions classified under different scientific fields, location, address, objectives, details of qualified manpower, and major achievements of last three years is provided. Despite the efforts information from some institutions could not be obtained. The book however, provides a comprehensive picture of the state of scientific research in Pakistan.

The immediate value of this Directory lies in its use as guide-book directing researchers/readers to active centers of research and can help networking local research centers working in areas of common interest, can also be useful for international agencies seeking collaboration with Pakistan research centers. It can also serve as a useful resource for planners and policy makers as it identifies strength and weakness of each institution.

I wish to acknowledge the efforts of the Science Section of the Council particularly Mrs. Nelofar Arshad and Mr. Asif Mir for compiling this Directory. The editing efforts of Mr. A.Q. Kazi are gratefully acknowledged. PCST would appreciate any suggestions/comments for improvement of the Directory.

**Dr. S.T.K Naim**  
**Chairperson**



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## INTRODUCTION

The present publication is the revised version of PCST's earlier publication that was brought out in the year 1993 with additional information on R&D manpower, R&D output and brief achievements of the organizations. The information provided in this book is based on the Peer Review study of R & D organizations and S & T departments of public sector universities organized by PCST. The book lists 187 R & D organizations and their subordinate institutes and 259 S & T department of universities classified under various major sectors of S&T activity.

The available information shows that out of total 446 Institutions, 37.67 percent are engaged purely with research and development activities and 58.07 are responsible for teaching as well as research and 4.26 provide services that facilitate research. Information about classified defence related R & D organizations is not included.

### **R & D Organizations**

Administratively R & D organizations and their subordinate institutes are working under various federal ministries and provincial departments as shown in Annexure-1. The percentage distribution of organizations classified under various sectors of activity indicate that the highest percentage 51.87 is in agriculture sector followed by scientific and technological services 10.16, health sciences 8.56, industrial research and manufacturing 8.56, ocean resources and marine sciences 4.81, space meteorology and geophysics 4.28, electronics & telecommunication 3.21, biotechnology & genetic engineering 2.14, energy 2.14, transport and communication 1.60, metallurgy and material sciences 1.07, physical planning & housing 1.07 and science policy research 0.53.

Regarding location (apart from administrative set-up), the highest percentage 41.66 is in the province of Punjab followed by Sindh 23.80, Federal 17.26, NWFP 9.52, Balochistan 5.95, AJ&K 1.19 and Northern areas 0.59 as shown in Table-2

The percentage of manpower engaged in research and development (in the year 2000) in R&D organization is highest in the sector of agriculture 50.31 followed by industrial research and manufacturing 12.36, space metrology and geophysics 8.90, electronics and telecommunication 7.30, S&T services 7.26, health sciences 5.13, energy 2.83, ocean resources & marine sciences 2.37, biotechnology and genetic engineering 1.74, metallurgy & material sciences 0.60, physical planning & housing 0.55, transport & communication 0.45, and science policy research 0.17.

Out of total manpower 45.35 percent are holding degree of M.Sc or equivalent, 8.40 are Ph.D degree holders, 12.79 are M.Phil or equivalent and 33.46 are Diploma and Certificate holders etc. Most R&D organizations are mandated to carryout research only. Some R&D organizations are also involved in training of M.Phil/Ph.D students through collaborative arrangements with universities.

## **Universities**

The directory provides information about 27 universities\* (Table-3) comprising 259 S&T departments, centres of excellence, specialized institutes etc, established to create scientific knowledge through research in addition to imparting education. These have been classified under the sector of higher education and research. It should be noted that only those 27 public sector universities have been included in this publication, which are conducting research in their established S&T departments.

Five universities are imparting training and research in the field of agriculture including veterinary sciences. Three are located in the province of Punjab and one each in NWFP and Sindh. Ten universities are responsible for teaching and research in engineering discipline, one each in the provinces of Balochistan and NWFP, four in Punjab, three in province of Sindh and one in Federal area. Among twelve general universities, one is located in AJ&K, one each in Balochistan and Federal area, two in NWFP, four in the province of the Punjab and three in the province of Sindh.

Out of total manpower engaged in R&D (in the year 2000) in the universities, 35.94 percent are PhD degree holders, 21.07 are M.Phil or equivalent, 32.92 are holding MSc degree and 10.08 are Diploma or Certificate holders.

The highest percentage of PhD 71.39 and M.Phil 46.44 have been produced (during the year 1998-2000) by general universities in various science subjects followed by agricultural universities 24.94 and 38.96 and then engineering universities 3.65 and 14.59 respectively.

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\* The number of public sector universities and degree awarding institutes increased to 52 (Annexure-I) but most of them were established in the last 3-5 years and their S&T departments are not well established.

**Administrative Agency Wise List of Public Sector  
S&T/R&D Organizations/Subordinate Institutes**

**Balochistan**

**Department of Agriculture, Cooperatives, Food and Fisheries**

1. **Agriculture Research Institute, Quetta**
  - Fruit Development Center, Quetta
  - Vegetable Seed Production Centre, Quetta

**Department of Livestock and Dairy Development**

2. **Beef Production Research Centre, Sibi**
3. **Disease Investigation Laboratory, Quetta**
4. **Veterinary Research Institute, Quetta**
5. **Livestock Experiment Station, Nasirabad**
6. **Multipurpose Sheep Research Station, Lora Lai**
7. **Wool Research Laboratory, Kalat**

**Federal**

**Ministry of Commerce**

8. **Pakistan Tobacco Board, Peshawar**
  - Pakistan Tobacco Research Substations (6) at; Gugrat, Kunjah, Mansehra, Okara, Nowshera, Khan Ghari

**Ministry of Communication**

9. **National Transport Research Center, Islamabad**

**Ministry of Information Technology and Telecommunication**

10. **Central Telecommunication Research Laboratories, Islamabad**
11. **National Radio Telecommunication Corporation, Haripur**

**Ministry of Defence**

12. **Armament Research and Development Establishment, Rawalpindi.**
13. **Defence Science and Technology Organization, Rawalpindi**
14. **Institute of Optronics, Rawalpindi**
15. **Margalla Institute of Electronics, Islamabad**
16. **Military Vehicles Research and Development Establishment, Rawalpindi**
17. **Pakistan Space and Upper Atmosphere Research Commission, Karachi**
  - Ionospheric Research Stations (2) at Karachi; Islamabad
  - Remote Sensing & Applications Centre, Karachi
  - SUPARCO Flight Test Range, Sonmiani Beach, Sonmiani

- SUPARCO Islamabad Office, Islamabad
- SUPARCO Plants, Karachi
- Satellite Grounds Station,
- Space Applications Research Centres (2) at Lahore & Peshawar
- Space Atmosphere Research Station, Multan

18. **Pakistan Meteorological Department, Islamabad**

- Climatological Data Processing Center,, Karachi
- Directorate of Forecasting and Climatology, Karachi
- Directorate of Maintenance, Karachi
- Flood Forecasting Division, Lahore
- Geophysical Center, Quetta
- Institute of Meteorology and Geophysics, Karachi
- National Agroment Centre, Islamabad
- Regional Meteorological Center, Lahore
- Regional Meteorological Center, Karachi

**Ministry of Environment, Local Government and Rural Development**

19. **Pakistan Forest Institute, Peshawar**

20. **Zoological Survey Department, Karachi**

**Ministry of Food, Agriculture and Livestock**

21. **Federal Seed Certification & Registration Department, Islamabad**

- Substation (12) at; D.I. Khan, Hyderabad, Khanewal, Lahore, Multan, Quetta, Rahimyar Khan, Sahiwal, Sakrand, Sargodha, Sukkur

22. **Marine Fisheries Department, Karachi**

23. **Pakistan Agricultural Research Council, Islamabad**

National Agricultural Research Center, Islamabad

- Agricultural Biotechnology Institute, Islamabad
- Agriculture Communication institute
- Agriculture Training Institute
- Animal Sciences Institute, Islamabad
- Aquaculture and Fisheries Research Institute, Islamabad
- Arid Zone Research Institute, Quetta
- Crop Science Research Institute
- Crop Disease Research Institute
- Crop Diseases Research Institute, Islamabad
- Ecotoxicology research Institute
- Farm Machinery Institute, Islamabad
- Horticultural Research Institute
- Integrated Pest Management Institute
- Institute of Natural Resources & Environmental Sciences, Islamabad
- Land Resources Research Institute, Islamabad
- Transfer Technology institute
- Federal Pesticides Research Laboratory, Multan
- Hamalyan Agricultural Research Institute, Kaghan
- Karakoram Agricultural Research Institute for Northern Areas, Gilgit

- National Sugar Crop Research Institute, Thatta
  - National Tea Research Institute, Mansehra
  - Pesticide Management Research Institute, Karachi
  - Tropical Agricultural Research Centre, Karachi
  - Vertebrate Pest Control Institute, Karachi
  - Coastal Areas Research Stations, Karachi
  - Agricultural Economics Research Units in all provinces including AJK
  - Research Units in Rice Research Institute, Kala Shah Kaku & Dokri
  - Liaison Offices in Lahore, Karachi, Peshawar and Quetta
24. **Pakistan Central Cotton Committee, Karachi**
- Central Cotton Research Institute, Sakrand
  - Pakistan Institute of Cotton Research and Technology, Karachi
25. **Soil Survey of Pakistan, Lahore**
- Field Offices, Karachi, Peshawar

**Ministry of Health**

26. **Jinnah Postgraduate Medical Center, Karachi**
27. **National Institute of Health, Islamabad**
28. **National Research Institute of Fertility Care, Karachi**
29. **National Research Institute of Reproductive Physiology, Islamabad**
30. **Pakistan Medical Research Council, Islamabad**
- PMRC National Health Research Complex, Lahore
  - PMRC Research Center (Fatima Jinnah Medical Centre) Lahore
  - PMRC Research Center (Dow Medical College) Karachi
  - PMRC Tuberculosis Research Center (King Edward Medical College) Lahore
  - PMRC Health Services Research Center (Sindh Medical College), Karachi
  - PMRC Research Center (Punjab Medical College) Faisalabad
  - PMRC Research Center (Army Medical College), Rawalpindi
  - PMRC Research Center (Khyber Medical College), Peshawar
  - Post Graduate Medical Institute, Peshawar
  - PMRC Research Center (Nishtar Medical College), Multan
  - PMRC Research Center (Quaid-a-Azam Medical College, Bahawalpur)
  - PMRC Research Center (National Institute of Health, Islamabad)
  - PMRC Research Center (Jinnah Postgraduate Medical Centre, Karachi)
  - PMRC Research Center (Bolan Medical College, Quetta)
  - PMRC Health System Research Center, PGMI Medical Complex, Peshawar
31. **National Institutes of Cardio-vascular Disease, Karachi**
32. **Sheikh Zayed Postgraduate Medical Institute, Lahore**

**Ministry of Industries and Production**

33. **Cement Research & Development Institute, Lahore**
34. **Fertilizer Research and Development Institute, Faisalabad**

35. **Heavy Mechanical Complex, Taxila**
36. **Pakistan Machine Tool Factory, Karachi**
37. **Institute of Material Science & Research (Pakistan Steel), Karachi**
38. **Synthetic Fiber Development & Application Centre, Karachi**

**Ministry of Petroleum and Natural Resources**

39. **Geological Survey of Pakistan, Quetta**
  - Geosciences Laboratory, Islamabad
  - Geodata Centre, Islamabad
  - Regional Directorates (4) at; Muzaffarabad, Karachi, Peshawar, Islamabad
40. **Hydrocarbon Development Institute of Pakistan, Islamabad**
  - Operation Offices (4); Quetta, Islamabad, Peshawar, Karachi
41. **PERAC Research and Development Foundation, Karachi**

**Ministry of Railways**

42. **Pakistan Railway Academy (R&D Cell), Lahore**

**Ministry of Science and Technology**

43. **Council for Works and Housing Research, Karachi**
  - National Building Research Institute, Karachi
44. **Centre for Applied Molecular Biology, Lahore**
45. **National Institute of Electronics, Islamabad**
46. **National Institute of Oceanography, Karachi**
47. **Pakistan Council for Renewable Energy Technology, Islamabad**
48. **Pakistan Council of Research in Water Resources, Islamabad**
  - Drainage and Reclamation Center, Hyderabad
  - Water Resources Research Centres, Quetta, Peshawar
  - Regional Offices, Bahawalpur, Lahore
49. **Pakistan Council for Science and Technology, Islamabad**
50. **Pakistan Council of Scientific and Industrial Research Laboratories, Islamabad**

**Multifunctional Laboratories**

- **PCSIR Laboratories, Karachi**
  - Pharmaceuticals Research Centre
  - Material Sciences Research Center
  - Food & Marine Resources Research Center
  - Applied Chemistry Research Centre
  - Centre for Environmental Studies
  - Pilot Plan Division
- **PCSIR Laboratories, Lahore**
  - Applied Chemistry Research Center
  - Food & Biotechnology Research Centre
  - Pakistan Institute for Materials & Minerals
  - Applied Physics, complex & Instrumentation Centre
  - Centre for Environmental Studies

- Engineering Research Centre
- **PCSIR Laboratories, Peshawar**
  - Medicinal Botanic Research Centre
  - Food Technology Centre
  - General Services Division
- **PCSIR Laboratories, Quetta**
  - Food Technology Division
  - Mineral Technology Division

Mono-functional Laboratories

- **Fuel Research Center, Karachi**
    - Analytical/Environmental Division
    - Coal Conversion & Combustion Division
    - Common Services Division
  - **Leather Research Center, Karachi**
    - Leather Technology Division
    - Chemicals Research Division
    - Training Division
    - Research Utilization & Extension Division
  - **Demonstration Cum Training Centre, Skardu**
    - Fruit Processing & Preservation
    - Fruit Dehydration Section
    - Training Section
    - Mobile Processing & Preservation Training Unit
      - **PCSIR Laboratories, Hyderabad**
      - **Pak Swiss Training Centre, Karachi**
      - **Pak Swiss Training Centre, Quetta**
      - **Institute of Industrial Electronics, Karachi**
      - **Scientific Information Centre, Karachi**
  - **National Physical and Standards Laboratory, Islamabad**
    - Standards & Measurement Division
    - Materials Division
  - **Environmental Monitoring Centre, Islamabad**
    - Microbiology Section
    - Chemical Section
    - Air Monitoring Section
    - Solar Energy Division
    - Wind Energy Division
    - Bio-Engineering Division
51. **Pakistan Science Foundation, Islamabad**
- Pakistan Scientific and Technological Information Centre, Islamabad
  - Pakistan Museum of Natural History, Islamabad
52. **Pakistan Standards & Quality Control Authority, Karachi**
- Standard Development Centre, Lahore
  - Technical Services Centre, Lahore
  - Quality Control Center, Lahore



53. **Pakistan National Accreditation Council, Islamabad**

**Ministry of Water and Power**

54. **Salinity Monitoring Directorate, Lahore**

55. **International Sedimentation Research Institute, Lahore**

**Prime Minister's Secretariat**

*A .Q. Khan Research Laboratories*

56. **Biomedical and Genetic Engineering Division, Islamabad**

57. **Pakistan Atomic Energy Commission**

- Atomic Energy Medical Centre, Jamshoro
- Atomic Energy Medical Centre, Multan
- Atomic Energy Medical Centre, Lahore
- Atomic Energy Medical Centre, Karachi
- Center for Nuclear Medicine, Lahore
- Nuclear Institute for Agriculture and Biology, Faisalabad
- Nuclear Institute for Food and Agriculture, Peshawar
- Nuclear Institute for Agriculture, Jamshoro
- National Institute for Biotechnology & Genetic Engineering, Faisalabad
- PAEC Nuclear Medicine and Oncology Centre, Islamabad
- PAEC Nuclear Medicine and Oncology Centre, Peshawar
- PAEC Nuclear Medicine and Oncology Centre, Karachi
- PAEC Nuclear Medicine and Oncology Centre, Quetta
- PAEC Nuclear Medicine and Oncology Centre, Multan

**NWFP**

**Department of Food, Agriculture and Livestock and Fisheries**

58. **Agricultural Research Institute, Tarnab, Peshawar**

59. **Agricultural Research Institute, D.I. Khan**

60. **Directorate of Veterinary Research Institute, Peshawar**

61. **Directorate of Fisheries, Peshawar**

62. **Government Cattle Breeding and Dairy Farm, Peshawar**

63. **Semen Production Research Unit, Harichand, Peshawar**

64. **Sugar Crops Research Institute, Mardan**

**Small Industries Development Board, Ministry of Industries**

65. **Pak Swiss Agricultural Light Engineering Programme, Mardan**

**Department of Industries, Commerce, Minerals, Transport and Labour**

66. **Minerals and Environment Testing Laboratory, Peshawar**

## PUNJAB

### Department of Agriculture (Research Wing)

67. **Ayub Agricultural Research Institute, Faisalabad**
- Agricultural Economics Section, Faisalabad
  - Agriculture Research Institute, Faisalabad
  - Agronomic Research Institute, Faisalabad
  - Arid Zone Research Institute, Bhakkar
  - Agriculture Biotechnology Research Institute, Faisalabad
  - Barani Agricultural Research Institute, Chakwal
  - Beekeeping and Hill Fruit Pests Research Station, Rawalpindi
  - Biochemistry Section, Faisalabad
  - Cotton Research Institute, Faisalabad
  - Fodder Research Institute, Sargodha
  - Food Technology Section, Faisalabad
  - Horticulture Research Station, Sahiwal
  - Horticulture Section, Faisalabad
  - Horticulture Research Station, D.G. Khan
  - Jojoba Research Station, Bahawalpur
  - Maize & Millet Research Institute, Sahiwal
  - Mango Research Station, Shujabad
  - Oilseeds Research Station, Khanpur
  - Oilseeds Research Station, Faisalabad
  - Plant Pathology Section, Faisalabad
  - Plant Protection Institute, Faisalabad
  - Plant Virology Section, Faisalabad
  - Post Harvest Research Institute, Faisalabad
  - Pulses Research Institute, Faisalabad
  - Rapid Soil Fertility Survey & Soil Testing Institute, Lahore
  - Regional Agricultural Research Institute, Bahawalpur
  - Rice Research Institute, Kala Shah Kaku
  - Soil & Water Conservation Research Institute, Chakwal
  - Soil Bacteriology Section, Faisalabad
  - Soil Chemistry Section, Faisalabad
  - Soil Salinity Research Institute, Pindi Bhattian
  - Statistical Section, Faisalabad
  - Sugarcane Research Institute, Faisalabad
  - Vegetable Research Institute, Faisalabad
  - Wheat Research Institute, Faisalabad
  - Central Cotton Research Institute, Multan

### Department of Communication and Works

68. **Building Research Station, Lahore**
69. **Road Research and Material Testing Institute, Lahore**

**Department of Wild Life and Parks**

70. **Punjab Wild Life Research Institute, Faisalabad**  
71. **Punjab Forestry Research Institute, Faisalabad**

**Department of Irrigation and Power**

72. **Directorate of Land Reclamation, Lahore**  
73. **Irrigation Research Institute, Lahore**

**Department of Livestock and Dairy Development**

74. **Department of Livestock Farms, Lahore**
- Animal Nutrition Centre, Rakh Dera Chal
  - Sheep and Goat Development Centre, Leiah
  - Livestock Experiment stations (25) at different places
  - Wool Research Laboratories, Bahawalpur
75. **Directorate of Livestock Production Research Institute, Bahaduranagar, Okara**
- Livestock Experiment Stations, Bahaduranagar and Qadirabad
76. **Research Institute for Physiology of Animal Reproduction, Kasur**  
77. **Directorate of Barani Livestock Production Research Institute, Kherimurat**  
78. **Poultry Research Institute, Rawalpindi**
- Government Poultry Farms Multan, D.G.Khan, Bahawalnagar, Gujrat, Mianwali, Dina, Jhelum, Attock, Sargodha
79. **Veterinary Research Institute, Lahore**  
80. **Foot and Mouth Disease Research Centre, Lahore**

**Department of Health**

81. **Institute of Public Health, Lahore**

**Department of Fisheries**

82. **Fisheries Research and Training Institute, Lahore**  
83. **Fish Seed Hatchery, Islamabad**

**Sindh**

**Department of Agriculture, Livestock and Fisheries**

84. **Central Veterinary Diagnostic Laboratory, Tandojam**  
85. **Directorate of Poultry Production and Research, Karachi**  
86. **Directorate of Fisheries, Sindh, Karachi**  
87. **Livestock Development and Research for Buffaloes, Rohri**
- □ Semen Production Unit, Breed Improvement Center, Rohri
  - □
88. **Rice Research Institute, Dokri**  
89. **Red Sindhi Cattle Breeding Farm, Hyderabad**

90. **Sindh Horticulture Research Institute, Mirpurkhas**
- Date Palm Research Station, Kot Digi
  - Guava Research Station, Karachi
  - Jajoba Research Station ,Tandojam
  - Tomato Research Station, Badin
  - Vegetable Research Stations (3) at: Husri, Sukkur, Mirpurkhas
  - Chikoo, Papaya & Banana Research Station, Sujawal
  - Chilies Research Station, Mirpurkhas
  - Coconut Research Station, Karachi
91. **Sindh Poultry Vaccine Centre, Karachi**
92. **Wheat Research Institute, Sakrand, Nawabshah**

**Department of Irrigation and Power**

93. **Soil Mechanics and Hydraulics Laboratory, Karachi**
94. **Land Reclamation Division, Sukkur**

**Azad Jammu & Kashmir**

**Department of Forest, Fisheries & Tourism**

95. **Forestry Research Division, Muzaffarabad**
96. **Fisheries Wing, Muzaffarabad**

## **Public Sector Universities/Degree Awarding Institutions Imparting S&T Education and Conducting Research**

1. **Allama Iqbal Open University, Islamabad**
2. **Air University, Complex, Islamabad**
3. **Bahria University, Islamabad**
4. **Balochistan University of Engineering & Technology, Khuzdar**
5. **Balochistan University of Information Technology & Management Sciences, Quetta**
6. **Bahauddin Zakariya University, Multan**
7. **COMSATS Institute of Information Technology, Islamabad**
8. **Federal Urdu University of Arts, Science & Technology, Karachi**
9. **Fatima Jinnah Women University, Rawalpindi**
10. **Gomal University, D.I.Khan**
11. **Government College University, Lahore**
12. **Hazara University, Dhodial, Mansehra**
13. **Institute of Business Administration, Karachi**
14. **Institute of Management Sciences, Peshawar**
15. **International Islamic University, Islamabad**
16. **Islamia University, Bahawalpur**
17. **Karakorum International University, Gilgit**
18. **Kohat University of Science & Technology, Kohat**
19. **Lahore College for Women University, Lahore**
20. **Liaquat University of Medical & Health Sciences, Jamshoro**
21. **Military College of Engineering, Risalpur Cantt**
22. **Mehran University of Engineering & Technology, Jamshoro**
23. **National University of Modern Languages, Islamabad**
24. **National University of Sciences and Technology, Rawalpindi**
25. **NWFP Agricultural University, Peshawar**
26. **NWFP University of Engineering & Technology, Peshawar**
27. **National College of Arts, Lahore**
28. **National Textile University, Faisalabad**
29. **NED University of Engineering & Technology, Karachi**
30. **Pakistan Institute of Engineering & Applied Sciences, Islamabad**
31. **Pakistan Military Academy, Abbottabad**
32. **Pakistan Naval Academy, Karachi**
33. **Quaid-i-Azam University, Islamabad**
34. **Quaid-Awam University of Engineering & Technology, Nawabshah.**
35. **Shah Abdul Latif University, Khairpur**
36. **Sindh Agriculture University, Tandojam**
37. **University of Azad Jammu & Kashmir, Muzaffarabad**
38. **University of Balochistan, Quetta**
39. **University of Malakand, Chakdara,**
40. **University of Peshawar, Peshawar**
41. **University of Agriculture, Faisalabad**
42. **University of Arid Agriculture, Rawalpindi**
43. **University of Education, Lahore**

44. **University of Engineering & Technology, Lahore**
45. **University of Engineering & Technology, Taxila**
46. **University of the Punjab, Lahore**
47. **University of Veterinary and Animal Sciences, Lahore**
48. **University of Health Sciences, Lahore**
49. **University of Sargodha, Sargodha.**
50. **University of Karachi, Karachi**
51. **University of Sindh, Jamshoro**
52. **Virtual University of Pakistan, Lahore**

Table-1: **Sector Wise Distribution of R&D Organizations/subordinate Institutes and S&T Departments of Universities**

<b>S. #</b>	<b>Sector</b>	<b>No. of Units</b>
1.	Higher Education & Research	259
2.	Agriculture	97
3.	Industrial research and Manufacturing	16
4.	Health Sciences	16
5.	Scientific & Technological Services	19
6.	Ocean Resources & Marine Sciences	9
7.	Space, Meteorology & Geophysics	8
8.	Biotechnology & Genetic Engineering	4
9.	Energy	4
10.	Transport & Communication	3
11.	Metallurgy & Material Sciences	2
12.	Physical Planning and Housing	2
13.	Electronics and Telecommunication	6
14.	Science Policy Research	1
	<b>Total</b>	<b>446</b>

**Table-2 Province\*/Sector Wise Distribution of R&D Organizations/Subordinate Institutions**

Sector	Punjab	Sindh	NWFP	Balochistan	Federal	AJ&K	Northern Areas	Total
Agriculture	47	20	9	6	13	1	1	97
Biotechnology & Genetic Engineering	2				2			4
Energy		2			2			4
Electronics & Telecommunication	1	1	1		3			6
Health Sciences	7	5	2	-	2	-		16
Industral Reseach & Manufacturing	4	8	2	2	-	-		16
Metellargy & Material Sciences	1	1	-	-				2
Ocean Resources & Marine Sciences	1	4	1	-	2	1		9
Physical Planning & Housing	1	1						2
S&T Services	5	4	1		9			19
Science Policy Research					1			1
Space, Meteorology and Geophysics	1	3	-	2	2			8
Transport & Communication	2				1			3
<b>Total</b>	<b>70</b>	<b>50</b>	<b>17</b>	<b>10</b>	<b>37</b>	<b>2</b>	<b>1</b>	<b>187</b>

\*Apart from administrative setup

**Table-3 Province Wise Distribution of Universities**

Head	Punjab	Sindh	NWFP	Balochistan	Federal	AJ&K	Total
Agriculture	3	1	1	0	0	0	5
Engineering	4	3	1	1	1	-	10
General	4	3	2	1	1	1	12
<b>Total</b>	<b>11</b>	<b>7</b>	<b>4</b>	<b>2</b>	<b>2</b>	<b>1</b>	<b>27</b>



# Agriculture

## Agricultural Economics Section

**Postal Address:**

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657281-90/256

**Fax:** 041-653874

**Parent Organization:**

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- To conduct research on agriculture economics.
- To carry out economic analysis of data of research scientists.
- To calculate cost benefit ratio.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	6	0	6

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	5	0	1	1

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any other Achievements**

Nil

## Agricultural Research Institute

### Postal Address:

Agricultural Research Institute, Ratta Kulachi, Bannu Road  
Dera Ismail Khan-29020

**Telephone:** 0961-740090/740046

**Fax:** 0961-740415

**E-mail:** Khalidabdullah99@yahoo.com

### Parent Organization:

NWFP Agriculture University

### Name of Administrative Ministry / Department:

Department of Food, Agriculture and Livestock, NWFP

### Main Objectives:

- Evaluation and synthesis of high yielding, insect and disease resistant cultivators of crops, fruits and vegetables.
- Development of improved production technologies for irrigated, Rod Koh and Barani areas.
- Seed production of superior varieties for further multiplication.
- Adaptive research and demonstration trials on farmer fields.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr)/ equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	22	1	0	29

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	2	2	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	4	4

#### (c) Any Other Achievements

Developed two new wheat varieties namely Dera-98 and Daman-98

## Agricultural Research Institute

### Postal Address:

Tarnab Post 24330, Tarnab, Peshawar

Telephone: 091-2964030

Fax: 091-2964097

E-mail: [aritarnab@paknet2.ptc.pk](mailto:aritarnab@paknet2.ptc.pk)

### Parent Organization:

Agricultural Research Institute

### Name of Administrative Ministry / Department:

Department of Agriculture, NWFP

### Main Objectives:

- To increase agricultural productivity by increasing per unit area production
- To enhance efficiency of agricultural inputs so as to increase the net profit of farm user.
- To develop and promote landless farm activities like honey bees keeping, floriculture and mushroom cultivation to improve economic status of masses.
- To improve food products and by-products for general consumption, industry and export.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
15	82	0	0	97

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	3	65	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	3	0

**(c) Any Other Achievements**

Training of farmers in different operations e.g. orchard management, fertilizer application, bee keeping, preservation of food products, etc.

**Agriculture Research Institute****Postal Address:**

Agriculture Research Institute / AARI, Faisalabad

**Telephone:** 041-657281-90/229

**Parent Organization:**

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- Improvement of major crops for yield, disease resistance, and other parameters employing biotechnologies.
- Development of salinity tolerant plants for salt-affected soils employing biotechnologies.
- Development/screening of legume and lands for super nodulation and high biological nitrogen fixation.
- Micro propagation of elite plants of high economic value

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	11	0	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	10	0	0	0

**b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Agriculture Research Institute

**Postal Address:**

Balochistan, Quetta

**Telephone:** 081-9211198

**Parent Organization:**

Agriculture Research Institute

**Name of Administrative Ministry / Department:**

Agriculture, Cooperatives, Food & Fisheries Department, Government of Balochistan

**Main Objectives:**

- To develop appropriate technology for each agro-ecological zone of the province and enhance the agricultural production through better use of existing resources.
- To identify various production constraints hindering the agricultural development and to propose new improved applicable means for the elimination of these constraints.
- To develop food commodities which will yield the highest possible production per unit area to meet the requirement of rapidly growing population.
- To determine the appropriate cropping, systems cultural practices, soil improvements, water management, plant protection, harvesting and storage practices for the improved varieties which will conserve the natural resource base.
- To explore the potential for new crops or seed that have export value for the province or may significantly reduce imports.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
5	1	78	0	84

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	12	95	0	0	3

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any other Achievements**

Nil

**Agronomic Research Institute**

**Postal Address:**

Jhang Road, Faisalabad

**Telephone:** 041-653525

**Fax:** 041-550476

**Parent Organization:**

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- Testing of new varieties/strains developed at commodity research institutes/sections for the formulation of production package
- On-farm research with farming systems perspective under different agro-ecological zones of the Punjab in order to develop technology appropriate to farmer's circumstances
- Developing techniques/technologies aimed at increasing income of the farmers and farmer's welfare by optimizing resource use through:
  - Developing new or by bringing modest changes in the existing cropping systems.
  - Developing economically viable and technically feasible inter and relay crop systems keeping in view the farmer's resource base.
- Weed management, their identification and establishing the crop wise weeds list.
- Study on weed biology and seed viability to determine the proper stage for their control and introduction of different weed control methods, i.e., cultural/chemical method.
- Advancing viable tested technologies to the end users through FSR methodology.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	37	1	1	42

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	16	0	1	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Production technology for major field crops were developed which resulted in increase of yield per unit area.

## Animal Sciences Institute

### Postal Address:

National Agricultural Research Centre, Islamabad

Telephone: 051-9255040

Fax: 051-9255021

Website: [www.parc.gov.pk](http://www.parc.gov.pk)

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food Agriculture & Livestock, Islamabad

### Main Objectives:

- To conduct research of national importance in animal production and animal health.
- To develop, validate and disseminate appropriate technologies to end users, farmers, industry, research institutions
- To interact with national and international institutions for collaborative research and other professional matters.

- To provide analytical, diagnostic, consultancy and advisory services to farmers/entrepreneurs and agencies.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
16	17	4	0	37

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	7	31	6	1	28

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	7	8

#### (c) Any Other Achievements

- Developed breeding plant for cattle in Northern areas.
- Estimated economic value of livestock sector in Afghanistan.
- Carried out population survey of Sahiwal cattle in 26 districts of Punjab by analyzing 20 years data generated on 11 farms in Punjab.
- Success in surgical ET in buffalo.
- Developed milk preservatives doses.
- Wool testing and analyzing.

### Arid Zone Research Institute

#### Postal Address:

Arid Zone Research Center, PARC, P.O.Box # 63 Brewery Road, Quetta Balochistan

**Telephone:** 081-853620

**Fax:** 081-853620

#### Parent Organization:

Pakistan Agricultural Research Council

#### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture & Livestock, Islamabad



### Main Objectives:

- To establish an international research center at Quetta with a network of research institutes in Punjab, NWFP and Sindh to cater research and development needs of arid/semi-arid areas of Pakistan.
- To plan and conduct research and develop, promote and demonstrate improved systems of cropping, farming, livestock husbandry and efficient soil and water management.
- To develop solutions to problems in the arid and semi-arid zones while improving the sustainability of the biological systems and reducing the dangers of further environmental degradation of the fragile ecologies of these arid and semi-arid areas
- To collaborate with international institutions in the adaptation, testing and demonstration of improved crops farming and livestock systems

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	4	9	2	21

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	10	6	5	0	10

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- i. Release of one wheat (AZRI-96), one barley (Sanober-96), one lentil (Shir-AZ-96) and one forage legume (Kuhak-96) for arid highlands of Balochistan.
- ii. Introduction of forage shrubs (*Atriplex canescence* & *A.lentiformis*) in arid/semi-arid areas.
- iii. Formulation of strategic feed supplement for small ruminants.

## Arid Zone Research Institute

### Postal Address:

Arid Zone Research Institute, Bhakkar

**Telephone:** 04653-412335

**Fax:** 04653-412335

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Developing new high yielding, good quality varieties of crops sown in the area
- Introduction and selection of suitable crop types
- Testing newly evolved / introduced strains for their wider adaptability
- Study of insect pest and diseases of crop and their control

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	6	0	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- i. Mung variety MN-92 was introduced in the Thal area during 1991-92. Because of short duration and profit oriented, the variety MN-92 was adopted by the farmers for the region rapidly. Now mung has attained position as a commercial crop of the region. Consequently country has become self sufficient in the pulses of mung.
- ii. Four advance lines of chickpea were tested i.e 91A039, 91A001, 93A082 and 92A048 in National Uniform Yield Trial. The advance lines exhibited better yield performance than check varieties.

## Barani Agricultural Research Institute

### Postal Address:

P.O. Box 35, Talagang Road, Chakwal

**Telephone:** 0573-569367, 569269

**Fax:** 0573-569366

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- The development of high yielding crop varieties of cereals, food legumes, oilseeds, fodders etc. through genetic re-arrangement
- To develop varieties of different crops tolerant to drought/disease/insect pests with wider adaptability
- The development of more efficient technology for water harvesting, moisture conservation etc. for getting more yield/unit area under environmental stresses
- Establishment of experimental/progeny orchard through introduction and acclimatization of fruit varieties and standardize production technology for local and exotic varieties
- Multiplication and distribution of true to type plants to the growers and expansion of area under orchard
- To develop appropriate cropping system for different ecological zones

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	21	8	1	38

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	30	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any other Achievements**

Nil

**Beef Production Research Centre****Postal Address:**

Beef Production Research Centre, Sibi

**Telephone:** 412328

**Parent Organization:**

Beef Production Research Centre, Sibi

**Name of Administrative Ministry / Department:**

Livestock and Dairy Development Department, Balochistan

**Main Objectives:**

- To evolve a beef breed by crossing of exotic cattle breed with local to give:
  - High birth weight.
  - Higher weight at wearing age.
  - Rapid growth rate.
  - Early maturity.
  - Reduction in calving interval.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	6	58	64

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any other Achievements**

Nil

**Beekeeping and Hill Fruit Pests Research Station****Postal Address:**

Opp-Divisonl Public School, Shamsabad Murree Road, Rawalpindi

**Telephone:** 051-9290435**Parent Organization:**

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- To devise economical and environment friendly control measures of treatment of fruit pests.
- To conduct research on various aspects of bee managment.
- To impart training to the farmers regarding bee keeping.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr)/ equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	6	0	6

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	11	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Biochemistry Section

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657281-90 Ext. 239

**Fax:** 041-653874

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Nutritional quality evaluation of new and promising varieties of vegetables, fruits, cereals, oilseeds and pulses through chemical and biological means.
- Evaluation of nutritive values of different varieties of fodder crops for animal feeding.
- Use of agricultural and industrial wastes in crop production.
- Yield and quality improvement of crops through improved plant nutrition and soil condition.
- To control environmental pollution and its impact on crop quality and soil health.
- Use of agro-industrial wastes, by-products for livestock feeds etc.
- Advisory service to farmers, industries and various disciplines of Ayub Agricultural Research Institute for quality testing of their products/samples etc.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr)/ equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	6	0	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	16	0	0	3

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

The technologies developed and research findings were transferred to the users

**Central Cotton Research Institute****Postal Address:**

National High-Way, Sakrand-67210, District Nawabshah, Sindh

**Telephone:** 0241-22356

**Fax:** 0241-51356

**Website:** [www.ccris.cjb.net](http://www.ccris.cjb.net)

**Parent Organization:**

Pakistan Central Cotton Committee

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture & Livestock, Islamabad

**Main Objectives:**

- Breeding high yielding, early maturing, heat drought, insect-pest and disease (specially CLCV) resistant cotton varieties with good fibre traits.
- To develop agro-eco-system and integrated pest management for cotton crop.
- To test the efficacy of pesticides against cotton pests.
- To study the plant diagram, fertilizer and water requirement of cotton crop.
- To develop cotton production technology.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	23	2	0	29

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	3*	1	16	1	0	0

\*Collaborative

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2 varieties	0

**(c) Any Other Achievements**

Nil

**Central Cotton Research Institute****Postal Address:**

Old Shuja Abad road,P.O. Box No 572, Multan-60500

**Telephone:** 061-9200340-41

**Fax:** 061-9200342

**Website:** [www.ccris.org.pk](http://www.ccris.org.pk)

**E.mail:** ccri@mul.paknet.com.pk

**Parent Organization:**

Pakistan Central Cotton Committee

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture & Livestock, Islamabad

**Main Objectives:**

- Study the cotton plant from botanical, genetical, physiological, chemical, entomological, pathological and other relevant stand points in a coordinated manner
- Undertake research work of country-wide importance, handle problems of inter-regional nature and those which other research organizations can not adequately deal with for developing in-house research
- Advance knowledge on the cotton plant reaction to environment with a view to have a better understanding of the mechanism of its life
- Provide education and training in cotton production and research technology to extension, research and teaching staff
- Identify problems of cotton growers and find out the remedial measures
- Transfer production technology from research farm to cotton growers
- Educate and motivate cotton growers and monitor research findings
- Provide technical support to the Pakistan Central Cotton Committee in coordinating and developing a national programme for cotton research and development



- Provide training in cotton production technology to the developing countries

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	1	26	5	36

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	14	49	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	3 varieties	0

#### (c) Any Other Achievements

Cotton production technology was improved for efficient use of farm inputs to raise standard of living of farming community

## Central Veterinary Diagnostic Laboratory

#### Postal Address:

Tandojam

#### Parent Organization:

Directorate of Veterinary Research and Diagnosis

#### Name of Administrative Ministry / Department:

Department of Agriculture, Livestock and Fisheries, Sindh

#### Main Objectives:

- Provision of diagnosis for the livestock and poultry diseases.
- Development of essential diagnostic reagents for investigation of livestock diseases.
- Study of epidemiology of the livestock diseases in Sindh.
- Training of professional and para-veterinary staff.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	20	148	169

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

The lab provided useful service of diagnosis to livestock owners of the province and a few studies on epidemiology of livestock disease were started

## Cotton Research Institute

### Postal Address:

Jhang Road, Faisalabad

Telephone: 041-655545

Fax: 041-651437

E-mail: Dircrif@fsd.paknet.com.pk

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Development of new improved cotton varieties.
- Applied research on all aspects related to cotton crop.
- Development of production technology for cotton varieties.
- Planning and development of cotton production.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	26	0	30

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	6	1	0	15

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	5	0

### (c) Any Other Achievements

With the dissemination of virus resistant varieties cotton production in the Punjab has sustained under cotton leaf curl virus environment.

## Crop Diseases Research Institute

### Postal Address:

NARC, Chak Shahzad, Park Road, Islamabad

Telephone: 051-9255036

Fax: 051-9255034

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture and Livestock, Islamabad

### Main Objectives:

- Problem oriented basic research phytopathology.
- Coordination of phytopathological research in the country.
- Help to plant breeders in developing disease resistant varieties of crop plants.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	5	7	14	34

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3*	3*	12	39	10	2	48

\*Collaborative

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	4

### (c) Any Other Achievements

- i. Development of wheat germplasm resistant to stem, leaf and strips rusts
- ii. Genetic sources of resistance against disease of economically important crops have been identified.
- iii. A biochemical technique based on carbohydrate analysis has been developed to identify resistant genotypes in corn against corn stalk rot.

## Crop Sciences Institute

### Postal Address:

NARC, Chak Shahzad, Park Road, Islamabad

**Telephone:** 051-9255036

**Fax:** 051-9255034

### Parent Organization:

National Agricultural Research Council/Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture and Livestock, Islamabad

### Main Objectives:

- To strengthen the research on crops of economic importance through nationally coordinated research programmes thus establishing linkages in the provincial research institutes and agricultural universities.

## Manpower Engaged in R&D (2000)\*

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
35	55	0	0	90

\*Included in NARC

## R&D Output (1998-2000)\*

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

\*Included in NARC

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

The institutes besides, establishing linkages with the provincial institutions of the country has also developed a working relationship with international centers like CIMMYT, IRRI, ICRISAT, ICARDA

## Directorate of Barani Livestock Production Research Institute

### Postal Address:

Directorate of Barani Livestock Production Research Institute Kherimurat (Tanaza Dam), Tehsil, Fateh Jang, Attock

**Telephone:** 0557/210781

**E-mail:** [blpri@isb.paknet.com.pk](mailto:blpri@isb.paknet.com.pk)

### Parent Organization:

Barani Livestock Production Research Institute

### Name of Administrative Ministry / Department:

Livestock and Dairy Development Department, Punjab

### Main Objectives:

- To establish comprehensive Barani Livestock Production Research at Kherimurat, under crash programe

- Introduce a comprehensive livestock production extension programme in project area.
- Provide in service training to Govt. personnel and vocational training to livestock producer of barani area.
- Introduce range development programme and its useful utilization for better livestock products in barani area.
- To study disease problems by diagnosing its causes.
- Improve livestock feeding and management programme in barani areas and to introduce data collecting programme for preparing and monitoring the livestock development programme in barani area.
- To disseminate results to the livestock producers through publicity and publication.

### **Manpower Engaged in R&D (2000)**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS(Engr) equivalent</b>	<b>M.Sc./B.E./BS(Engr)/ MBBS/DVM equivalent</b>	<b>Others</b>	<b>Total</b>
2	0	15	0	17

### **R&D Output (1998-2000)**

#### **(a) R&D Manpower / Scientific Publications:**

<b>Manpower Produced</b>		<b>Publications</b>				
<b>M.Phil.</b>	<b>Ph.D.</b>	<b>International Journals</b>	<b>National Journals</b>	<b>Review Articles</b>	<b>Books</b>	<b>Others</b>
N.A	N.A	0	0	14	4	10

#### **(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

#### **(c) Any Other Achievements**

Training imparted to professionals and farmers

### **Directorate of Land Reclamation, Punjab**

#### **Postal Address:**

Canal Bank Moghalpura, Lahore

**Telephone:** 042-6823025

**Parent Organization:**

Directorate of Land Reclamation, Punjab

**Name of Administrative Ministry / Department:**

Department of Irrigation &amp; Power, Punjab

**Main Objectives:**

- On farm reclamation of salt-affected soils
- Annual salinity survey of the irrigated areas of the Punjab
- To conduct basic and applied research in soil and water problems related with sodicity, salinity and waterlogging in the laboratories. Reclamation research stations and canal circles etc.
- Management of poor quality sub-soil water for economic crop production
- Characterization of public & government tubewells in the Chaj Doab
- Groundwater monitoring for resource management.
- Monitoring of irrigation system for environmental pollution.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	48	7	9	65

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	5	25	0	0	8

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Directorate of Livestock Production Research Institute

### Postal Address:

Livestock Production Research Institute, Bahadarnagar, Okara

Telephone: 0442-66181/661081 Fax: 0442-661281

E-mail: [ipri@fsd.paknet.om.pk](mailto:ipri@fsd.paknet.om.pk)

### Parent Organization:

Livestock Production Research Institute

### Name of Administrative Ministry / Department:

Department of Livestock and Dairy Development, Punjab

### Main Objectives:

- Production of progeny bulls, rams and bucks for the improvement of future generation.
- Formulation and testing of efficient and cheap rations containing agro-industrial by-product/wastes and crop residues for the economical production of milk and meat.
- Devising health control measures for more productivity.
- Testing and evaluation of various indigenous/exotic varieties of fodder, grasses and shrubs to be used for livestock feeding and to carry out mixed cropping trials on high yielding perennial forage, grasses and legumes.
- Identification of practical problems encountered in the successful marketing and economics of livestock and their by-products.
- Training of professional and para-professional and farmers to equip them with modern techniques and technology.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	48		54

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
50*	7*	8	48	3	0	5

\*Collaborative



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	4	0

**(c) Any Other Achievements**

It has contributed significantly towards the genetic improvement of buffaloes and cattle and also distributed 9.869 million roots/stumps of mott grass to farmers.

**Directorate of Poultry Production and Research****Postal Address:**

Karachi

**Parent Organization:**

Directorate of Poultry Production and Research

**Name of Administrative Ministry / Department:**

Department of Agriculture, Livestock and Fisheries , Sindh

**Main Objectives:**

- Conduct Research on various aspects of Poultry Industry i.e. from breeding to marketing.
- Develop technologies and disseminate them to farmers. Embark upon continuous training programmes for farmers and professionals.
- Improve rural poultry diagnosis and prevention of poultry diseases.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	17	66	84

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

150 graduate students from Karachi University completed their research requirements.

**Directorate of Veterinary Research Institute****Postal Address:**

Bacha Khan Chowk Charsadda Road, GPO Box 367, Peshawar, 25000

**Telephone:** 091-9210218-9

**Fax:** 091-9210220

**E-mail:** [vri@pes.comsats.net.pk](mailto:vri@pes.comsats.net.pk)

**Parent Organization:**

Veterinary Research Institute

**Name of Administrative Ministry / Department:**

Department of Agriculture, Livestock and Cooperation, NWFP

**Main Objectives:**

- Conduction of research and diagnosis of parasitic, microbial, metabolic and hormonal disease
- Production of appropriate biologics and diagnostic agents against prevalent diseases of economic importance.
- Application of biotechnology for productivity enhancement of livestock through research and development in disease diagnosis, vaccine production, reproduction, nutrition and dairy technology.
- Conduction of academic research in collaboration with different universities
- Technology transfer through courses, campings, seminars, workshops.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	27	10	1	43

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10*	3*	5	10	3	0	35

\*Collaborative research

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

### (c) Any Other Achievements

- i. The Veterinary Research Institute, Peshawar organized the following training programme  
Annual six weeks training programme for poultry farmers  
Annual two weeks training programme for veterinary graduates in poultry disease diagnosis  
Training programme for farmers and others in livestock health reproduction on special request of NGOs

## Disease Investigation Laboratory

### Postal Address:

Disease Investigation Laboratory, Quetta

### Parent Organization:

Disease Investigation Laboratory, Quetta

### Name of Administrative Ministry / Department:

Livestock and Dairy Development Department, Balochistan

### Main Objectives:

- Diagnosis of livestock and poultry diseases
- Identification and characterization of local infectious agents.
- Conducting autopsies for wildlife and provide control advice.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	6	23	30

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	1	0	0	3

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Ecotoxicology Institute

### Postal Address:

NARC, Chak Shahzad, Park Road, Islamabad

**Telephone:** 051-9255036

**Fax:** 051-9255034

### Parent Organization:

National Agricultural Research Center/Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture and Livestock, Islamabad

### Main Objectives:

- To assist in protecting the bio-diversity by providing biological monitoring services and to suggest measures to minimize health hazards due to use of agro chemicals to the workers and public.
- To overview the effect of pesticides and herbicides degradation on the beneficial soil micro-organisms and of commonly used insecticide on earthworms in the soil.

### Manpower Engaged in R&D (2000)\*

\*Included in NARC

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

\*Included in NARC

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

\*Included in NARC

### (b) Any Other Achievements

The studies of dozens of herbicides for weed control in soybean indicated that one half of the recommended dose of herbicides if applied at the right time will increase vegetative growth and yield without having any adverse effect on soil micro organisms.

## Farm Machinery Institute

### Postal Address:

National Agricultural Research Centre, Park Road, Islamabad

Telephone: 051-9255044

Fax: 051-9255034

Website: [www.parc.gov.pk](http://www.parc.gov.pk)

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture and Livestock, Islamabad

### Main Objectives:

- To undertake market research and product planning studies to establish specifications of demand oriented machines which need to be introduced in the country.
- To transfer mechanization technologies into Pakistan from similar agro-climatic regions worldwide by evaluating, adapting and introducing potentially successful machines.
- To develop and disseminate post-harvest technologies in order to preserve agricultural and horticultural produce for longer period and to save post-harvest losses.

- To design and develop appropriate farm machines which could be locally manufactured with available production technology in the country.
- To encourage local production of suitable agricultural machines by providing designs and other technical assistance to manufactures.
- To test and issue performance reports on popular locally manufactured agricultural machines.
- To undertake agronomic, socio-economic and industrial research studies related to mechanization of agriculture in this country
- To train engineers from various machinery research institutions, universities and manufacturers in the design, development and production of agricultural machines.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	4	3	4	16

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	6	3	2	0	12

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	4	0

#### (c) Any Other Achievements

Tested and evaluated 15HP Chinese Tractor, Salicornia Thresher, Yanmar & Kubota Combine Harvesters.

## Federal Seed Certification & Registration Department

### Postal Address:

Mauve Area, G-9/4, Islamabad

### Parent Organization:

Federal Seed Certification & Registration Department

### Name of Administrative Ministry/Department:

Ministry of Food, Agriculture and Livestock, Islamabad

### Main Objectives:

- To control the quality of all crop seeds throughout Pakistan according to prescribed standards.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr)/ equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	1	55	0	62

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	*	*	*	*	*

\*Information not Available

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Fodder Research Institute

### Postal Address:

P.O. Box 43, Resala No. 5, New Seed Farm, Sargodha, Punjab

Telephone: 0451-712653

Fax: 0451-711741

E-mail: [maqsoodahmad68@hotmail.com](mailto:maqsoodahmad68@hotmail.com)

**Parent Organization:**

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture Department (Research Wing), Punjab

**Main Objectives:**

- Evaluation and hybridization of elite fodder germplasm (local/exotic) to evolve high yielding and good quality fodder varieties/hybrids tolerant to biotic and abiotic stresses.
- Production and distribution of pre-basic/basic seed of different fodder strains/hybrids.
- Devising a package of improved production technology for new fodder crop varieties and cultivators hybrids.
- Bio-assay/evaluation of different fodder crops and forage grasses for their nutritive status, palatability and digestibility.
- Dissemination/transfer of fodder and seed production technology to farmers and other stakeholders through participatory research/demonstration.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr)/ MBBS/DVM equivalent	Others	Total
6	0	25	1	32

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
4 varieties	0	0

**(c) Any Other Achievements**

- Four high yielding and good quality fodder varieties, one each in Oats (S-200), Guar (BR-99), Maize (Afgohee Sargodha 2002) and Sorghum (JS-2002) have been evolved/released for general cultivation.
- Breeding techniques for fodder crops developed and standardized.



- iii. Production technology for new fodder/varieties devised and popularized through electronic (audio visuals) and print media.
- iv. Fodder yield has increased due to adoption of improved production technology and spread of seed of new varieties/hybrids.
- v. Imparted training to five Afghan Nationals on “seed production technology for fodder crops” under the auspices of FAO/UNO from 29-5-2000 to 1-6-2000
- vi. Rice bean (both legumes) have been introduced as novel fodder crops/species.

## Food Technology Section

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657281-90 Ext. 235

**Fax:** 041-653874

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- To conduct research and new product development works.
- Teaching and demonstration on processing and preservation of food and food products at domestic level.
- Pilot scale production of different food products in order to popularize among masses.
- To render technical guidance to entrepreneurs, farmers and food industries on the processing and preservation technology.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr)/ MBBS/DVM equivalent	Others	Total
1	0	8	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	6	5	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	15	2

**(c) Any Other Achievements**

Three hundred peoples were trained in the processing and preservation of fruits and vegetables at domestic level.

**Foot and Mouth Disease Research Centre****Postal Address:**

Veterinary Research Institute, Lahore

**Parent Organization:**

Directorate of Livestock Research, Lahore

**Name of Administrative Ministry / Department:**

Department of Livestock and Dairy Development, Punjab

**Main Objectives:**

- Preparation of Foot and Mouth disease vaccine and antisera.
- Serotyping of prevalent strains of Foot and Mouth disease in Pakistan
- Research on Foot and Mouth disease in Pakistan.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	7	6	60	74

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	1	3	0	3

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Forestry Research Division

**Postal Address:**

Upper Plate, Muzafarabad

**Telephone:** 058810-43482

**Parent Organization:**

Forestry Research Division

**Name of Administrative Ministry / Department:**

Department of Forest & Tourism, Govt of Azad Jammu and Kashmir

**Main Objectives:**

- Research in soil conservation and watershed management
- Research in tree improvement and plant protection
- Research in forest management and silviculture
- Research in medicinal plants and biodiversity conservation

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	0	5	6

### R&D Output (1998-2000)

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	4	0	0	2

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any other Achievements**

Nil

## Fruit Development Centre

**Postal Address:**

Agriculture Research Institute, Sariab, Quetta

**Telephone:** 081-850025

**Parent Organization:**

Agricultural Research Institute, Quetta

**Name of Administrative Ministry / Department:**

Department of Agriculture, Cooperatives, Food &amp; Fisheries, Government of Balochistan

**Main Objectives:**

- To conduct research on different aspect of deciduous fruits for yield and quality improvement in Balochistan.
- To train the technical staff of fruit development centre in various discipline of horticulture.
- To conduct research on orchard management, nutrition, Integrated Pest Managment and post harvest physiological aspects.
- To adopt the modern irrigation practices i.e., drip and bubbler and efficient use of water.
- To impart training to the growers and agriculture extensions workers in modern fruit protection techniques.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	10	0	12	22

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	5	44	10	6	6

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any other Achievements**

Nil

## Government Cattle Breeding and Dairy Farm

### Postal Address:

Government Cattle Breeding and Dairy Farm, Harichand, Peshawar

### Parent Organization:

Government Cattle Breeding and Dairy Farm

### Name of Administrative Ministry / Department:

Agriculture, Livestock and Fisheries, NWFP

### Main Objectives:

- To increase milk and meat production of indigenous cattle through crossbreeding with exotic breeds.
- To educate the farmers on the requirement of livestock during various stages of life.
- To serve as a model farm for progressive farmers.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	81	85

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Horticultural Research Institute

### Postal Address:

NARC, Chak Shahzad, Park Road, Islamabad

Telephone: 051-9255036

Fax: 051-9255034

### Parent Organization:

National Agricultural Research Center/Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture and Livestock, Islamabad

### Main Objectives:

- To collect, screen and test germplasm at NARC and other provincial research institute dealing with crops specific to the area.

### Manpower Engaged in R&D (2000)\*

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\*Included in NARC

### R&D Output (1998-2000)\*

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

\*Included in NARC

#### (b) Patents / Processes / Products\*

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

\*Included in NARC

#### (c) Any Other Achievements

- In potato, true potato seed technology was developed which produced virus free seed and is cost effective than conventional seed. The coordinated potato programme has done a good job in developing package of technology for increasing the over all production of potato in the country.

## Horticulture Research Station

### Postal Address:

Horticulture Research Station, Pak Pattan Road, P.O.Box.36, Sahiwal-57000

**Telephone:** 0441-65341

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Department of Agriculture Research, Punjab

### Main Objectives:

- Rootstock standardization.
- Introduction of superior varieties.
- Determination of nutritional requirements.
- Survey for bud selection.
- Production of pedigreed nursery plants.
- Advisory services.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	6	0	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	1	0	0	7

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2 varieties	0

#### (c) Any other Achievements

Nil

## Horticulture Section

**Postal Address:**

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657281-90/217

**Parent Organization:**

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- Selection and acclimatization of exotic cultivars of different fruits.
- Standardization of propagational techniques for various fruit cultivars and various cultural practices like nutritional pruning, intercultural and irrigational aspects.
- Provision of pedigreed fruit plants of recommended cultivars to the farmers at cheaper rates and advisory services.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	12	0	15

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	4	4	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

The fruits of the orchard is sold in open auction annually. The nursery plants are sold to the farmers at cheaper rates and a huge income is generated.



## Horticulture Research Station

**Postal Address:**

Near Police Line, D.G Khan

**Telephone:** 0641-470124

**Parent Organization:**

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- Systematic studies to develop the field technology for increased production of fruit
- To know about the nutritional requirement of various tropical fruits
- To standardize better orchard management practices

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	0	4

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

A large amount of incomes is generated through sale of plant and fruits.

## Institute of Natural Resources & Environmental Sciences

### Postal Address:

National Agricultural Research Center, Park Road, Islamabad

Telephone: 051-9255022

Fax: 051-9255074

E-mail: [wri@wr-narc-isb.sdnpk.org](mailto:wri@wr-narc-isb.sdnpk.org)

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture & Livestock, Islamabad

### Main Objectives:

- The primary objective is to optimize the productivity of per unit of water use and/or available (precipitation and irrigation water) for rain-fed and irrigated areas
- The short-term objective is to optimize the net farm return through improved water management and conservation techniques with active participation of farmers and NGOs
- The ultimate objective is to develop healthy balance between resource utilization and conservation on sustained basis with active participation of farmers and NGOs.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	9	10	36	60

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	16	-	-	30

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	3

### (c) Any Other Achievements

- i. Training in GIS remote sensing to AKRSP, AJK, SUPARCO, CCR, IND, etc.
- ii. Training of WM in pressurized irrigation systems
- iii. Training of Punjab Agriculture extension staff in use of wastes and wastewater recycling.
- iv. Training of Dir district development project staff in soil and water conservation.
- v. Assisted farmers in installation of drip and sprinkler irrigation systems.
- vi. Assisted farmers in integrated land use and soil and water conservation under Barani farming systems.
- vii. Assisted fish farmers in design of water conveyance system
- viii. Assisted farmers in the design of dug wells, tube wells and skimming well.
- ix. Assisted farmers in design of farm landscapes.

### Integrated Pest Management Institute

**Postal Address:**

NARC, Chak Shahzad, Park Road, Islamabad

**Telephone:** 051-9255036

**Fax:** 051-9255034

**Parent Organization:**

National Agricultural Research Center/Pakistan Agricultural Research Council

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture and Livestock, Islamabad

**Main Objectives:**

- To control insect's pest using integrated Pest Management (IPM) approach to minimize the use of pesticides and to avoid any environmental hazards.
- To develop appropriate technology for the control of vertebrate pests to reduce losses in the field and storage to evolve cost effective and environmentally safe methods for the control of weeds.

**Manpower Engaged in R&D (2000)\***

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	2	9	0	18

## R&D Output (1998-2000)\*

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

\*included in NARC

### (b) Patents / Processes / Products\*

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

\*included in NARC

### (c) Any Other Achievements

- i. Excellent relationship has been developed with the provincial research institutes and the scientists usually visit the provincial institutes to diagnose the problems and suggest measures for the control of insects of that region.
- ii. The rodent control techniques developed for the farmers

## Jojoba Research Station

### Postal Address:

Tipu Shaheed Road, Model Town A. Bahawalpur (P.O No. 39)

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

**Telephone:** 0621-880117

### Main Objectives:

- Introduction of Jojoba seed/plant in the province
- Determination of suitable varieties for agro-climatic condition prevailing in the province, specially for Bahawalpur, Multan and D.G.Khan Division
- Standardization of planting & picking techniques for the plant.
- Determination of optimum production technology and its dissemination to the farmer.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	4	12	5	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	6 strains	Production technology

#### (c) Any Other Achievements

Jojoba has been grown on about 800 acres.

### Karakoram Agriculture Research Institute for Northern Areas

#### Postal Address:

Karakoram, Juglote, Gilgit

Telephone: 05816/50204, 50206

Fax: 05811-52870

Website: karinaglt.comsat.net.pk

#### Parent Organization:

Pakistan Agricultural Research Council

#### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture & Livestock. Islamabad

#### Main Objectives:

- To carry out applied & problem oriented research in all disciplines of agriculture.
- Training of scientific staff and farmers.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	9	3	5	17

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	10	2	0	3

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2	0

### (c) Any other Achievements

- i. Production and distribution of certified fruit plants.
- ii. Seed production of improved crop varieties.
- iii. Domestication of medicinal plants.
- iv. Introduction of trout pond culture.

## Land Resources Research Institute

### Postal Address:

NARC, Chack Shahzad , Park Road, Islamabad

**Telephone:** 051-9255021

**Fax:** 051-9255074

**Website:** www.parc.gov.pk

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture & Livestock. Islamabad

### Main Objectives:

- Utilization and management of land resources for sustained soil and crop productivity with following specific objectives:
  - Ameliorate plant nutrient disorders and main fertility of soil.
  - Investigate the role of microorganism in enhancing crop production
  - Manage marginal soils and waters for economic agricultural return
  - Nutrient dynamics in relation to soil mineralogy
  - Ameliorate adverse soil physical conditions for enhancing crop productivity
  - Provide sophisticated services to other institutions and train manpower in soil management
  - Identify and strengthen gaps in national soil science research system

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
17	13	0	0	30

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
4*	0	0	67	0	0	0

Collaborative

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	10 (Technologies generated)	1 (Bio-fertilizer)

### (c) Any other Achievements

- i. Developed a fertilizer band placement technology, which saves 50% fertilizers without any yield loss.
- ii. Identified and established micronutrient deficiencies in cotton crop, and developed technologies for enhanced cotton production by ameliorating micronutrient disorders.
- iii. Promoted and distributed the seed of three salt-tolerant rice varieties to small farmers in four districts of Punjab.

## Land Reclamation Division

### Postal Address:

Barrage Colony, Sukkur

### Parent Organization:

Land Reclamation Division

### Name of Administrative Ministry / Department:

Department of Irrigation & Power, Sindh

### Main Objectives:

- To collect and compile Sem and Thor statistics
- To collect, compile statistics to reclaim Sem and Thor affected area by leaching process

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	0	3

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any other Achievements

Nil

## Livestock Development & Research for Buffaloes

### Postal Address:

Rohri

### Parent Organization:

Livestock Development & Research for Buffaloes

### Name of Administrative Ministry / Department:

Department of Agriculture, Livestock and Fisheries, Sindh

### Main Objectives:

- To develop and improve Kundi breed buffaloes and produce bulls of high quality for breeding and propagation of the breed.
- To improve and establish the desirable breed production and reproduction traits of a truly established breed.
- To carry out feeding and managerial research with dissemination of end results to the farmers.
- To improve milk yield and feed efficiency of the animals.



## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	58	0

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Continued maintenance of the farm as productive entity for multiplication of animals, production of bottom line milk yield, production of some cash crops on arable land.

## Livestock Experiment Station

### Postal Address:

Karachi

### Parent Organization:

Livestock Experiment Station

### Name of Administrative Ministry / Department:

Department of Agriculture, Livestock and Fisheries, Sindh

### Main Objectives:

- To maintain high potential Red Sindhi herd.
- To produce quality breeding bulls.
- To conduct experiment on Red Sindhi Cattle.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	1	68	69

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

- i. Maintenance of the available animals on the farm.
- ii. Sale of the milk produced by these animals.

## Maize & Millet Research Institute

### Postal Address:

Yusafwala, Sahiwal

Telephone: 0441-301141

Fax: 0441-301028

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- To evolve high yielding well adopted insect pest and disease resistant varieties of maize, sorghum and pearl millet.
- To constitute high yielding hybrids.
- To produce pre-basic and basic seed of improved varieties.
- To develop packages of production technology for the growers to get maximum return from improved varieties/hybrids.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	26	1	30

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any other Achievements

Nil

## Mango Research Station

### Postal Address:

Mango Research Station, Shujabad, Multan

Telephone: 06513-396576

E-mail: [aggrewal@hotmail.com](mailto:aggrewal@hotmail.com)

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Selection of promising strains, introduction of exotic varieties and evolution of new varieties through hybridization.
- Use of growth regulator in mango culture.
- Standardization of cultural methods such as irrigation, cultivation, manuring, training, pruning and protection from frost.
- Standardization of propagation methods.

- Plant protection measures.
- Alternate bearing in mango.
- Study of nutritional requirements of mango plants.
- Study of various factors influencing the excessive fruit drop in some varieties and its control.
- Malformation of mango inflorescence.
- Studies on “quick decline” of mango plants.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	4	0	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	6	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- The scientists of this research station visit the problem orchards on request of growers.
- The scientists of this research station also participate in radio & TV programmes to create awareness regarding production technology of mango

### National Agricultural Research Centre

#### Postal Address:

Park Road, P.O. N.I.H., Islamabad-45500

Telephone: 051-9255028

Fax: 051-9255034

Website: [www.parc.org.pk.com](http://www.parc.org.pk.com)

#### Parent Organization:

Pakistan Agricultural Research Council

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture and Livestock, Islamabad

**Main Objectives:**

- Conduct research in areas of national importance, which cannot adequately be undertaken elsewhere.
- Develop and maintain the national genetic resources conservation programme and promote the documentation, distribution, and use of a wide range of plant and animal germplasm.
- Provide laboratory facilities for basic and applied research in selected aspects of plant and animal sciences, food technology, soil sciences, water resources, farm mechanization, space informatics, etc.
- Support provincial institutions by conducting fundamental research and by providing facilities for all scientists to solve complex problems for which their institutions may not be adequately equipped.
- Collaborate with relevant national and international research organizations to develop research excellence and to generate useful technology.
- Assist research institutions in assessment of research needs, development of programme, and taking policy action.
- Emphasize systems approach by synthesizing production technologies for various agricultural commodities into integrated systems that maximize productivity of farm resources.
- Develop training programmes to conduct short-term training courses and to hold technical conferences and seminars for national staff engaged in agricultural research, planning, and development.
- Develop a reference library, an agricultural research database, and a centralized information and informatics service that encourages cooperation and communication among national, regional and international institutions and provides up-to-date research information to all scientists and extension specialists in the country.
- Define alternative research strategies and assess their implications for food and fiber production, food production processes, technological change in agriculture, low-income groups, international food trade and food security.

- Publish and distribute the results obtained from research programmes and promote the immediate and efficient application of results emerging from research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
149	37	169	0	355

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
58*	50*	233	542	169	15	110

\*Collaborative research

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
4	3	9

#### (c) Any Other Achievements

NARC has contributed significantly in enhancing agricultural productivity in the country through technologies adopted by the farmers and private entrepreneurs. Scientists of the center have widely published in national and international journals besides contribution to various reports, policy papers and extension articles for the farmers and other stakeholders.

## National Sugar Crop Research Institute

#### Postal Address:

Junghshahi Road, PARC Colony Makli, Thatta

Telephone: 770524, 770133

Fax: 770524

#### Parent Organization:

Pakistan Agricultural Research Council

#### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture and Livestock, Islamabad

#### Main Objectives:

- To develop sugarcane varieties with high sugar yield and disease stress resistant for different agro-ecological zones of the country.

- To develop agronomic requirements for the new varieties such as plant population for plant of routine crops, row spacing suitable for accommodating inter crops with highlight utilization efficiency.
- To develop linkage between national and international institutes for exchange of scientific information, visit of scientists and training of scientific manpower.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
1	0	11	6	18

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	5	8	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
1	37 sugarcane varieties	Thatta-10 variety

#### (c) Any Other Achievements

The Institute has developed high sugar yield varieties in sugarcane. The benefit of the varieties will be worth billion of rupees to the farmers and mill owners of the country.

## Nuclear Institute for Agriculture and Biology

### Postal Address:

Jhang Road, P.O.Box # 128, Faisalabad

**Telephone:** 041-654221-30 **Fax:** 041-654213

E-Mail: [niab@fsd.paknet.com.pk](mailto:niab@fsd.paknet.com.pk) Web-site: [www.niab.org.pk](http://www.niab.org.pk)

### Parent Organization:

Pakistan Atomic Energy Commission

### Name of Administrative Ministry / Department:

Prime Minister's Secretariat, Islamabad

### Main Objectives:

- Utilization of nuclear and other modern techniques in agriculture and biology to solve the problems of crop production and conservation.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
21	0	70	15	106

### \*R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
-	-	-	-	-	-	-

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
-	-	-

\*Information not available

#### (c) Any Other Achievements

Nil

## Nuclear Institute for Food and Agriculture

#### Postal Address:

Nuclear Institute for Food and Agriculture, P.O.Box-446, Peshawar

Telephone: 091-2964060-62

Fax: 091-29964059

#### Parent Organization:

Pakistan Atomic Energy Commission

#### Name of Administrative Ministry / Department:

Prime Minister's, Islamabad

#### Main Objectives:

- Use of nuclear and other technique for crop production, protection and soil management.
- Conservation of food resources.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	2	32	17	58



## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	20	66	0	0	2

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	4	1

### (c) Any Other Achievements

Release of crop varieties and enhancement of technical know-how.

## Oilseeds Research Station

### Postal Address:

P.O Box No. 40 Khanpur, District. Rahim Yar Khan

**Telephone:** 0707-72134

**Fax:** 0707-72134

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Evolution of high yielding, diseases & insect pest tolerant varieties of rape and mustard.
- Maintenance of gene pool.
- Package of production technology.
- Coordination amongst oilseed breeders/specialists.
- Production of pure seed.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	0	3

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
1	1	0

### (c) Any other Achievements

Nil

## Oilseeds Research Station

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

Telephone: 041-651523

Fax: 041-550358

E-mail: [doci-fd@brain.com.pk](mailto:doci-fd@brain.com.pk)

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Development of better varieties with high yield and improved oil quality.
- Development of hybrids in sunflower, canola and castor for higher yields.
- Pre-basic seed production of all oilseeds for supply to the public and private seed corporations/companies.
- To up date and disseminate production technology of oilseed crops through electronic media with the assistance of agri.extension wing.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr)/ equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	37	0	40

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	4	5	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	15	2

### (c) Any Other Achievements

1. Production technology of oilseeds helped in increasing oilseed production of the country.
2. Training imparted to three hundreded farmers.

## Pakistan Agricultural Research Council

### Postal Address:

P.O. Box 1031, G-5/1, Islamabad, Pakistan

Telephone: 051- 9203071-75 Fax: 051- 9202968

E-mail : [chair@comsats.net.pk](mailto:chair@comsats.net.pk)

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food Agriculture & Livestock, Islamabad

### Main Objectives:

- Undertake, aid, promote and coordinate agricultural research
- Arrange expeditious utilization of research results
- Establish research establishments mainly to fill in the gaps in existing programme of agricultural research
- Arrange the training of high level scientific manpower in agricultural sciences
- Generate, acquire and disseminate information relating to agriculture
- Establish and maintain a reference and research library
- Perform any other functions related to the matters aforesaid.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
182	138	353	3	676

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	-	-	-	-	-

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
-	-	-

\*Information not available

### © Any other Achievements

PARC has scored modest achievements in increasing the production of wheat, cotton, sugarcane, etc. Its other success includes development of disease free potato seed, a high yield variety of date palm, production of off-season tomatoes and cucumber. PARC has also developed better varieties of oil-bearing crops (sunflower and canola).

## Pakistan Central Cotton Committee

### Postal Address:

Moulvi Tamizuddin Khan Road, Karachi-74200

Telephone: 021-9205991-3

Fax: 021-9205941

E-mail: [tcde@isb.comsats.net.pk](mailto:tcde@isb.comsats.net.pk)

### Parent Organization:

Pakistan Central Cotton Committee, Karachi

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture & Livestock, Islamabad

### Main Objectives:

- The Committee is responsible for promoting and co-ordinating research and its dissemination of results toward improvement in growing, marketing and manufacturing of cotton and cotton by-products in the country.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	10	5	19

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications					
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others	
N.A	N.A	0	2	0	0	5	

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any other Achievements

Nil

## Pakistan Council of Research in Water Resources

### Postal Address:

House No. 3&5, Street No. 17, F-6/2, Islamabad

### Name of Administrative Ministry / Department:

Ministry of Science and Technology, Islamabad

### Parent Organization:

Pakistan Council of Research in Water Resources

**Telephone:** 051-9218984

**Fax:** 051-9218939

**E-mail:** pcrwr2isb.comsats.net.pk

**Website:** www.pcrwr.gov.pk

### Main Objectives:

- To organize co-ordinate and promote research in the various fields of water resources and to set up national research establishments in these fields.
- To give financial and technical support to universities and other research institution for carrying out collaborative research schemes.
- To promote research activity on various aspects of water resources among the young graduates through establishment of fellowships in the various subject of water resources in collaboration with the various engineering and agricultural universities.
- To collect, disseminate and arrange utilization of information and research processes for results and publish scientific papers, reports and periodicals relating to the activities of the Council.
- To accept fees, donations, endowments and gifts for furthering the object of the Council.

- To establish a library in Islamabad in respect of the subject concerning the activities of the Council;
- To establish scientific liaison, with other related national and international organizations.
- To undertake any further activities to promote generally the aims and object of the Council.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
4	8	42	45	99

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	PhD.	International Journals	National Journals	Review Articles	Books	Others
N.A.	N.A.	2	15	0	0	47

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Pakistan Forest Institute

#### Postal Address:

Pakistan Forest Institute, Peshawar

**Telephone:** 091-9216123

**Fax:** 091-9216203

#### Parent Organization:

Pakistan Forest Institute

#### Name of Administrative Ministry / Department:

Ministry of Environment, Local Government and Rural Development, Islamabad

#### Main Objectives:

- To conduct and promote forestry education and research into forest development including production, utilization and marketing of forest produce and in related

fields which are appropriate to the continued development of forestry sector and conservation of resource base.

- To collect and disseminate information relating to forest management and development forest produces and forest products utilization
- To coordinate activities within Pakistan relating to research and development, publicity and other matter relating to forest development and wood industries and to liaise with bodies outside Pakistan concerned with these matters
- To advise federal and provincial governments and regional forest departments, wood using departments industries and farmers on all matters relating to wood production and utilization.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	0	36	7	50

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	41	0	5	7

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Pakistan Institute of Cotton Research and Technology

#### Postal Address:

Moulvi Tamizuddin Khan road, Karachi-74200

Telephone: 021-9205991-3

Fax: 021-9205941

#### Parent Organization:

Pakistan Central Cotton Committee

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture and Livestock, Islamabad

**Main Objectives:**

- Research: Fundamental and applied research on cotton fiber, yarn, cloth, cotton-seed and their processing technology.
- Help to Cotton Breeders: Testing facilities are provided to cotton breeders and researchers in evaluating various varieties of cotton at development stage, particularly where testing facilities are not available.
- Quality Survey of Pakistan Cotton: Comprehensive data of fiber characteristics and spinning performance of different varieties of cotton is published annually. This report provides useful information to growers, ginners, textile industry, exporters and researchers.
- Testing Facilities provided to Industry: Testing facilities are provided to textile industry/exporting agencies by rapid testing of their material from fiber to fabric.
- Technical Assistance provided to Textile Industry: Technical assistance is being provided in solving the problems of the industry/exporters whenever required.
- Training Facilities: Imparting practical training to personnel engaged in local Industry, trade, government agencies, foreign scholars and degree students of the universities, such as Mehran University of Engineering and Technology, Jamshoro, NED University of Engineering and Technology, Karachi, Textile Institute of Pakistan (a project of APTMA) etc.
- Role of the Institute in Standardization: Director and Officers of the institute participate in the meetings of Pakistan Standard Institute for making new standards and updating the existing one for different textile material and test methods.

**Manpower Engaged in R&D (2000)**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS(Engr) equivalent</b>	<b>M.Sc./B.E./BS(Engr) MBBS/DVM equivalent</b>	<b>Others</b>	<b>Total</b>
2	1	2	13	18



## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	10	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

### (c) Any Other Achievements

Nil

## Pakistan Tobacco Board

### Postal Address:

46-B, office enclave, Phase-V, Hayatabad, Peshawar

**Telephone:** 091-9217153, 9217245      **Fax:** 091-9217149

### Parent Organization:

Pakistan Tobacco Board

### Name of Administrative Ministry / Department:

Ministry of Commerce, Islamabad

### Main Objectives:

- To regulate, control and promote the export of tobacco, tobacco products and to fix grading standards.
- To undertake and assist research connected with tobacco industry, impart training in tobacco testing and generally to take measures in the interest of the tobacco industry.
- To render assistance for the development of new tobacco growing areas and establishment of model farms, to organize and assist special research connected with tobacco cultivation and generally to render assistance for improving tobacco production.
- To collect statistics on all matters relating to tobacco and tobacco industry.

- To perform such other function as the federal government may, from time to time, direct.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
0	0	31	11	42

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A.	N.A.	0	0	0	0	1

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Pesticide Management Research Institute

#### Postal Address:

PRI, TARC, PARC, Old Block Nos.9 &10, Karachi University Campus, Karachi

Telephone: 021-4990809, 474081-82

Website: [www.parc.gov.pk](http://www.parc.gov.pk)

#### Parent Organization:

Pakistan Agricultural Research Council

#### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture & Livestock, Islamabad

#### Main Objectives:

- Quality assurance on samples received from private organizations and individuals
- Studies on residue of pesticides in fruits, vegetables, other agricultural commodities, human blood and milk of cotton pickers etc.
- Studies on toxicological investigation to determine effect of pesticides on the agro-ecosystem, non target organisms, species specificity of pesticides and causes of resistance.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	1	1	1	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	8	10	14	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

The Institute has earned an amount of Rs.800,000.00 in pesticide testing fee during the fiscal years,1996-99.

## Plant Pathology Section

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657281-90 Ext: 245

**Fax:** 041-653874

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- To conduct research on plant diseases caused by fungi, bacteria and nematodes.
- To collaborate with the plant breeders in evolving the disease resistant varieties of the crops and vegetables.
- To study seed born mycoflora of different vegetables and field crops and to find out the appropriate chemical control measure.
- Studies on Phytophthora spp. and Pythium spp. effecting different crops, vegetables, and fruit plants in the Punjab.

- To test the efficacy of different new and commercial fungicides against various diseases of field crops, vegetables and plants.
- Identifying cultural biological means of disease control measures.
- Identification of new diseases of field crops, vegetables and fruit plants and developing their management strategies.
- Transfer of disease management technology through electronic and printed media.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	9	2	15

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	14	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Plant Protection Institute

#### Postal Address:

Plant Protection Institute, Jhang Road, Faisalabad

**Telephone:** 041-656324

**Fax:** 041-673299

#### Parent Organization:

Ayub Agricultural Research Institute

#### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

#### Main Objectives:

- Studies on biology and population dynamic of major pests of important crops.
- Standardization of pesticides in the Punjab.

- Testing of pesticides formulation through bioassay techniques.
- In-service training in the science of plant protection.
- Quality control of pesticides.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	19	90	115

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	24	1	0	42

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

In addition to research activities, the institute is also engaged in transfer of technology by imparting training in the modern techniques of plant protection to agriculture extension personnel and other agencies.

### Plant Virology Section

#### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

Telephone: 041-659067

Fax: 041-653874

E-mail: [pvpaaria@yahoo.com](mailto:pvpaaria@yahoo.com)

#### Parent Organization:

Ayub Agricultural Research Institute

#### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

#### Main Objectives:

- Survey, identification and study of plant viruses of crops, vegetables and fruit plants.

- Development of technology for production of virus free plant material.
- Studies on insect vectors of plant viruses for better understanding of the virus disease spread through vector and developing control measures.
- Screening of plant material of different crops/vegetables for resistant to plant viruses.
- Control of plant viruses by thermotherapy/chemotherapy.
- Elimination of plant viruses by tissue culture and micropropagation of healthy plant material.
- Production of pre-basic seed potato.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	4	0	6

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	10	30	4	2	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2	0

#### (c) Any Other Achievements

Potato seed production training to trainers.

### Post Harvest Research Institute

#### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

Telephone: 041-651370

#### Parent Organization:

Ayub Agricultural Research Institute

#### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

**Main Objectives:**

- To conduct R& D work on post harvest technology of fruits and vegetables
- To develop on-farm primary storage technology of vegetables.
- To modernize cold stores.
- To introduce grading and packaging technology.
- To conduct training programmes.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	5	0	5

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	13	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	3	0

**(c) Any other Achievements**

Nil

**Poultry Research Institute****Postal Address:**

Shamshabad, Murree Road, Rawalpindi

**Telephone:** 051-9290162

**Fax:** 051-9290170

**E-mail:** dpri2@yahoo.com

**Website:** [www.punjab.gov.pk](http://www.punjab.gov.pk)

**Parent Organization:**

Directorate of Livestock

**Name of Administrative Ministry / Department:**

Livestock and Dairy Development Department, Punjab

**Main Objectives:**

- Research, education & extension in poultry production
- To establish & promote rural poultry farming in the province

- To formulate policies for enhancing eggs & poultry meat production

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	146	0	148

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	12	50	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	1

#### (c) Any Other Achievements

All research works is problems oriented. Its results are communicated to Poultry sector for utilization for productivity enhancement.

### Pulses Research Institute

#### Postal Address:

Ayub Agriculture Research Institute, Faisalabad

Telephone: 041-652633

Fax: 041-653874

E-mail: [pulsesdr@fsd.comsats.net.pk](mailto:pulsesdr@fsd.comsats.net.pk)

#### Parent Organization:

Ayub Agricultural Research Institute

#### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

#### Main Objectives:

- Study of germplasm & creation of variability for the selection & evaluation; for the development of desirable variety of Gram, Lentil, Mung, Mash & Other pulse crops.
- Screening of breeding material for the selection of genotypes/lines resistant/tolerant to disease and insect pests.
- Developing package of production technology for pulse crops.



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	13	0	0	17

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	4	17	0	0	12

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
2	6	1

#### (c) Any other Achievements

Nil

## Punjab Forestry Research Institute

#### Postal Address:

P.O.Box.1522, Nishatbad, Faisalabad

**Telephone:** 041-751992-93

**Fax:** 041-756845

#### Parent Organization:

Punjab Forestry Research Institute

#### Name of Administrative Ministry / Department:

Department of Forestry, Wildlife, Fisheries and Tourism, Punjab

#### Main Objectives:

- To promote sustainability of forests and development of agro-forestry system.
- To impart formal technical forestry education.
- To conduct refresher and special courses for in-service personals, farmers, NGOs etc.
- To produce and supply quality seed.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	24	0	26

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	6	16	14	12

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any other Achievements

Nil

## Punjab Wildlife Research Institute

### Postal Address:

Sheikhupura Road, Faisalabad

**Telephone:** 041-751981/752026

**Fax:** 041-752026

### Parent Organization:

Punjab Wildlife Research Institute

### Name of Administrative Ministry / Department:

Department of Wildlife and Parks, Punjab

### Main Objectives:

- To study population dynamics of the wildlife species in the Punjab province and to determine population trends to plan future management of wildlife species.
- To evaluate habitat of wildlife species occurring in the Punjab.
- To study feeding, agonistic, territorial, and reproductive behaviour of wildlife species of concern for their better management.
- To study disease of wildlife, their diagnostics, find ways to cure diseases and training staff to combat diseases in wild populations.
- To run and maintain a captive breeding programme in the province, especially for endangered species.
- To undertake research for the provision for appropriate environment to animals and birds in captivity to optimise their propagation.

- Publish research result in the form of technical notes, scientific papers, journals, popular articles and research bulletins to make the information available for general public as well as scientific community.
- Develop, publish and distribute education materials for general public emphasizing the importance of wildlife and create environment awareness.
- To co-ordinate and collaborate in the field of research and environment education, with the national and international organizations to promote awareness regarding conservation.
- To design and conduct training programmes for existing wildlife staff and the new entrants to the service.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	1	2	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	14	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Rapid Soil Fertility Survey & Soil Testing Institute

#### Postal Address:

160-Ahmad Block New Garden Town, Lahore

Telephone: 042-5862073

Fax: 042-5862073

E-mail: [swferres@hotmail.com](mailto:swferres@hotmail.com)

#### Parent Organization:

Ayub Agricultural Research Institute

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- Establishing critical limits for essential plant nutrient elements
- Standardization of analytical techniques
- Calibration of soil tests with crops responses under controlled conditions
- Site specific fertilizer amendment recommendations
- Monitoring quality inputs
- Encouraging integrated use of organic and mineral fertilizers to improve fertilizers use efficiency and crop productivity
- On farm research on various crops for their nutrient requirement
- Improving fertilizer use efficiency to arrest losses and protect environment
- Yield constraint research to highlight major contributing factors
- Integrated plant nutrient system for sustainable agriculture

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent B.Sc Hons. Agri.	Others	Total
8	126	10	6	150

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	19	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any other Achievements**

Nil

## Red Sindhi Cattle Breeding Farm

### Postal Address:

Taluka Tando Mohd Khan Distt, Hyderabad

### Parent Organization:

Red Sindhi Cattle Breeding Farm ,Hyderabad

### Name of Administrative Ministry / Department:

Agriculture & Livestock Department, Governement of Sindh

### Main Objectives:

- To conduct work for improving the genetic qualities of Red Sindhi breed of cattle for high milk yield.
- To study the pasture and grazing management at the farm in relations to the breed.
- To study the nutritional requirements of Red Sindhi Cattle by experimenting with locally grown concentrates.
- To evolve early maturity of animals of this breed through scinetific breeding.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Other s	Total
0	1	2	46	49

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	10	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any other Achievements

Nil

## Regional Agricultural Research Institute

### Postal Address:

Regional Agricultural Research Institute, P.O.Box No.18, Bahawalpur

**Telephone:** 0621-876109

**Fax:** 0621-886054

**E-mail:** raribwp@yahoo.com

**Website:** [www.Punjab.gov.pk](http://www.Punjab.gov.pk)

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- The development of new varieties of wheat, pulses, oilseed, sorghum and millets possessing high yield, drought, disease and insect pests resistance traits and well suited for the region alongwith their production technology
- Identification and control of diseases and insect pests of field crops, vegetables and fruit orchards prevailing in the region.
- Evaluation of new fungicides, pesticides and weedicides for the control of disease, insect pests and weeds of different crops, vegetables and fruits orchards.
- Development of pest and disease management techniques of different crops.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	18	0	0	19

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	14	6	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
4 wheat varieties	0	0

**(c) Any Other Achievements**

Development of new varieties of field crops.

**Research Institute for Physiology of Animal Reproduction**

**Postal Address:**

Research Institute for Physiology of Animal Reproduction, Bhuneki (Pattoki) Kasur

**Parent Organization:**

Research Institute for Physiology of Animal Reproduction

**Name of Administrative Ministry / Department:**

Livestock and Dairy Development Department, Punjab

**Main Objectives:**

- To study the physiology of normal reproduction in domestic animals with special reference to cattle and buffalo.
- To study the seasonality of buffalo breeding and its possible interaction to climate, feed availability, mineral supply and management.
- To provide the facilities for diagnosis of special genital infections.
- To conduct the morphological and chemical studies on buffalo bull semen and its deep freezing to develop optimum deep freezing technique for buffalo semen.
- To standardize the embryo transfer technique for better exploitation of superior cows.
- To offer the services to government farms and other large herd owners of cattle and buffalo with a view to assist in control of problems of reproduction.
- To impart training to in-service veterinary and para-veterinary staff.
- To produce breeding bulls for dairy cattle crossbreeding

**Manpower Engaged in R&D (2000)**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS(Engr) equivalent</b>	<b>M.Sc./B.E./BS(Engr) MBBS/DVM equivalent</b>	<b>Others</b>	<b>Total</b>
1	17	7	176	201

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	1	3	0	3

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Rice Research Institute

### Postal Address:

Rice Research Institute Dokri, Distt. Larkana, Sindh

**Telephone:** 0741-480328

### Parent Organization:

Rice Research Institute

### Name of Administrative Ministry / Department:

Agriculture, Livestock and Fisheries Department, Government of Sindh

### Main Objectives:

- Collection and evaluation of rice germplasm
- Evolution of improved rice varieties with particular reference to high yield, early maturity, insect pest resistance and better grain quality.
- Development and dissemination of production technology for rice.
- Improvement in the cultural practices for growing rice such as preparation of nursery bed, land preparation, sowing time, spacing, age of seedlings and methods of planting.
- Improvement in the efficient use of fertilizer in the flood rice.
- Weed control through different means.
- To study role of micro nutrients such as zinc, iron, manganese, copper and boron.



- To take measures for effective control of insect, pests such as rice stem borers mealy bugs, white backed plant hopper and leaf folder.
- Pure seed multiplication of different improved rice varieties.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	50	1	53

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	7	6	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	2

#### (c) Any Other Achievements

To bring low lying and deep water areas under rice crop cultivation.

### Rice Research Institute

#### Postal Address:

Kala Shah Kaku

Telephone: 042-290368

Fax: 042-290361

#### Parent Organization:

Ayub Agricultural Research Institute

#### Name of Administrative Ministry / Department:

Agriculture (Research wing), Lahore

#### Main Objectives:

- To develop high yielding , early maturing, medium and fine grain varieties of rice that are resistant/tolarant to insect-pests and diseases.
- To develop optimum cultural and agronomic practices for rice crop suited to different rice growing regions in the Punjab
- To train extension workers for transfer of rice production technology to the growers and to train rice procurement staff of different agencies in identification of paddy and rice of different varieties

- To produce pre-basic and basic seed for supply to the Punjab Seed Corporation and for distribution among farmers

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	17	9	0	27

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	9	0	0	73

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	8

#### (c) Any Other Achievements

- The first application of granular insecticide was recommended in standing water in the third/fourth week of August while insecticidal spray application in the third/fourth week of September to control white backed plant hopper and also leaf folder and rice stem borers, if any
- High quality seed is the pre-requisite for quality rice production. About 150 tons of pre-basic, basic and certified seed of different varieties are produced annually for supply to the Punjab Seed Corporation, private seed companies and rice growers.

### Semen Production Unit, Breed Improvement Centre

#### Postal Address:

Kundi Buffalo Farm Rohri, Rohri

#### Parent Organization:

Semen Production Unit, Breed Improvement Centre Rohri

#### Name of Administrative Ministry / Department:

Agriculture, Livestock and Fisheries Department, Government of Sindh

#### Main Objectives:

- To produce semen doses of Kundi Buffalo Bull
- To arrange supply of these doses to the artificial insemination centres in Sindh.

- Maintain superior quality local and exotic bulls

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	25	28

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Semen Production Unit

#### Postal Address:

Semen Production Unit, Harichand , Peshawar

#### Parent Organization:

Semen Production Unit

#### Name of Administrative Ministry / Department:

Department of Agriculture, Livestock and Fisheries, NWFP

#### Main Objectives:

- To increase milk and meat through breed improvement.
- To maintain stud cattle and buffalo bulls for semen production.
- To assist artificial insemination programmes in insemination/breeding policy of the province

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	15	18

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Semen Production Unit

### Postal Address:

Karachi

### Parent Organization:

Semen Production Unit

### Name of Administrative Ministry / Department:

Department of Agriculture, Livestock and Fisheries, Sindh

### Main Objectives:

- Maintenance of superior quality local and exotic bulls (Cattle & Buffaloes).
- Production of frozen semen of local and exotic breeds for use in AI programme in Sindh.
- Supply of liquid nitrogen to AI centres in the province.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

## R&D Output (1998-2000)

### (b) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Unit produces frozen semen from Kundi buffaloes and Red Sindhi cattle. Unit supplied 6052 doses of Kundi and 3541 doses of Red Sindhi in 1997-98, 2106 of Kundi and 1434 of Red Sindhi in 1998-99 and 1898 of Kundi and 2373 of Red Sindhi in 1999-2000.

**Sheep / Goat Development Centre****Postal Address:**

Chungi No. 9, Hazoori Bagh Road, Multan

**Telephone:** 9200661-516673

**Parent Organization:**

Sheep / Goat Development Department

**Name of Administrative Ministry / Department:**

Livestock & Dairy Development Department, Punjab

**Main Objectives:**

- To improve production potential of sheep / goat through selective breeding for producing better quality and quantity of wool and mutton.
- To provide veterinary coverage for the conservation of sheep / goat development in the project area at an extensive scale to check losses due to mortality and disease incidence.
- To impart para-veterinary training to the flock owners at grass root level for education, management feeding and prophylactic measures.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	8	5	0	13

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Wool analysis to measure the improvement in fibre diameter of different sheep breeds is done to monitor the extent of improvement as a result of improved breeding operations and maintenance of good health by the activities of the Sheep/Goat Development, Project, Punjab, Multan.

## Sindh Horticulture Research Institute

### Postal Address:

Mirpur Khas, Sindh

**Telephone:** 0231-9290140

**Fax:** 0231-929014

### Parent Organization:

Sindh Horticulture Research Institute

### Name of Administrative Ministry / Department:

Agriculture, Livestock & Fisheries Department, Government of Sindh.

### Main Objectives:

- **Fruits:**
- Introduction, acclimatization and evaluation of exotic and indigenous fruit strains.
- Survey, evaluation and selection from indigenous stock.
- Establishment of progeny stocks of selected varieties.
- Distribution of stocks from progeny selection.
- Propagation and nursery techniques for speedy multiplication of progeny selections.
- Introduction and acclimatization of new tropical fruits suitable under agro-climatic conditions of Sindh Province.

- To evaluate new high yielding quality, disease and pest resistant varieties of tropical & sub-tropical fruit crops.
- To study the periodical nutritional requirements of fruits.
- To evaluate the soil fertilizer status of fruit crops.
- Vegetables
- To maintain the germplasm of different kinds of vegetable.
- To evolve high yielding, early maturing, and disease resistant varieties by introduction, selection and acclimatization in order to evolve suitable varieties of vegetables for commercial plantation in Sindh.
- To fix the criteria for selection of seedlings of vegetables for permanent plantation.
- To ascertain the optimum agronomical, fertilizer and water requirements for obtaining maximum yield.
- To ascertain the time of sowing and harvesting for obtaining the maximum yield of good quality vegetables.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	2	80	0	83

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	40	0	15

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
14	2	2

#### (c) Any Other Achievements

- Production of pre-basic and basic seed of vegetable crops
- Supply of quality seed of vegetable crops to the growers.
- Supply of true to type fruit plant nursery to the growers for increasing the production.
- Transfer of production technologies to the growers.

v. Survey the farmer's field and gardens for the guidance/recommendations for control of insect pest and disease.

## Sindh Poultry Vaccine Center

### Postal Address:

Animal Science Complex, Korangi, Karachi-74900

**Telephone:** 021-5064160

**Fax:** 021-5065852

**E-mail:** shafqat@hotmail.com

**Website:** [www.spvc.gov.pk](http://www.spvc.gov.pk)

### Parent Organization:

Sindh Poultry Vaccine Centre

### Name of Administrative Ministry / Department:

Department of Livestock and Animal Husbandry, Government of Sindh.

### Main Objectives:

- To produce improved life attenuated and killed vaccine for ND, Hydro-IB, IBD, HPS, AI and Fowl-pox. Exporting the vaccines and other allied products to neighboring countries.
- To develop the capability of producing vaccines against other major poultry diseases like, MD, EDS, ILT and mycoplasmosis etc.
- To carry out research on the epidemic/crisis of the poultry industry to develop quick reliable and accurate diagnosis.
- To recommend an effective programme for the prevention of major diseases by vaccination.
- To produce/provide specified pathogen free (SPF) eggs for the production of poultry vaccine.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
1	2	7	1	11

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	3	1	0	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
2	2	0

**(c) Any Other Achievements**

Save foreign exchange by minimizing import of vaccine. Provide technical service to poultry farmers free of cost. Provide good quality vaccine at low price.

**Soil & Water Conservation Research Institute,****Postal Address:**

P.O. Box No. 30, Talagang road, Chakwal

**Telephone:** 0573-569365

**Fax:** 0573-569719

**E-mail:** barichakwali@yahoo.com

**Website:** [Bari02@isb.paknet.pk](mailto:Bari02@isb.paknet.pk)

**Parent Organization:**

Ayub Agricultural Research Institute, Faisalabad

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- To develop high yielding crop varieties of cereals, food legumes, oilseeds, feeders etc. through genetic re-arrangement.
- To develop varieties of different crops tolerant to drought/disease insect pests with wider adaptability.
- The development of more efficient technology for water harvesting, moisture conservation etc. for getting more yield/unit area under environmental stresses.
- Establishment of experimental/progeny orchard through introduction and acclimatizations of fruit varieties and standardization of production technology for local and exotic varieties.
- Multiplication and distribution of true type plants to the growers and expansion of area under orchard.
- To develop appropriate cropping system for different ecological zones.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
8	0	37	2	47

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A-	N.A	0	15	0	0	12

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	5 varieties of different corps	0

### (c) Any other Achievements

Nil

## Soil Bacteriology Section

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657281-90/241

**Fax:** 041-653874

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

To study and research on:

- Biological Nitrogen Fixation (BNF) with legumes and non legumes crops.
- Phosphate solubilizing (PS) micro-organisms.
- Integrated Plant Nutrient Management (IPNM).
- Soil environment and microbial activity relationship.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	6	0	6

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	3	1	0	1

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2	0

### (c) Any Other Achievements

Five thousand packets of Rhizobium and four thousand of diazotrophs were supplied to the farmers.

## Soil Chemistry Section

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657281-90 Ext. 240

**Fax:** 041-653874

**E-mail:** [soilchem@fsd.paknet.com.pk](mailto:soilchem@fsd.paknet.com.pk)

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- To diagnose the optimum nutrients requirements of crops.
- Diagnosis of nutrients deficiencies in soil and plants.
- Characterization of physical and chemical properties in relation to soil productivity.
- Developing soil and tissue test based fertilizer recommendations.
- The possibility of using sub-soil brackish water for irrigation through its appropriate management.
- Judicious use of agricultural chemicals to avoid environmental pollution.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	5	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	3	15	1	0	20

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Soil Mechanics & Hydraulics Labs

#### Postal Address:

Baloch Colony Shara-i-Faisal, Karachi

Telephone: 021-4533821

#### Parent Organization:

Soil Mechanics & Hydraulics Labs

#### Name of Administrative Ministry / Department:

Department of Irrigation and Power, Sindh

#### Main Objectives:

- To test the engineering material i.e. steel, concrete, aggregate, soil water etc to solve the problems.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	5	0	5

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (c) Any Other Achievements

Routine tests carried out to solve the problems of engineers for execution of the work.

## Soil Salinity Research Institute

### Postal Address:

Pindi Bhattian, Hafizabad

Telephone: 0438-531376

Fax: 0438-5313376

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- To generate technology for reclamation of salt affected soils
- Evolution of technology for utilization of salt-affected lands and brackish water
- Screening and evolution of salt-tolerant varieties
- Advisory service to the farmers

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	16	0	18

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	9	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

- i. Four thousand farmers were advised on soil reclamation technology and other related fields on the basis of 15211 samples
- ii. Research projects were conducted at Soil Salinity Research Institute and degrees are awarded by university of agriculture, Faisalabad

**Soil Survey of Pakistan****Postal Address:**

Multan Road, Lahore

**Telephone:** 042-7831377

**Parent Organization:**

Soil Survey of Pakistan

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture and Livestock, Islamabad

**Main Objectives:**

- Preparing an inventory of the soil resources of Pakistan through reconnaissance soil survey.
- Detailed soil surveys of important agricultural areas and agricultural research stations.
- Basic research on important properties of soil of Pakistan and their classification and correlation with the soils of agriculturally advanced countries.
- Interpretation of soil survey data for use in agricultural development planning of the country.
- Providing technical guidance to institutions/agencies concerned with the use of land.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	33	5	40

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Statistical Section

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

Telephone: 041-657281 Fax: 041-653874

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Designing and analysis of research experiments.
- Vetting of annual research programme of all the research institute working under Ayub Agricultural Research Institute, Faisalabad,.
- Evaluation / transformation of research data.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	8	11

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	3

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Advisory services to farmers

## Sugar Crops Research Institute

### Postal Address:

Sugar Crops Research Institute, Mardan

Telephone: 0931-9230068

Fax: 0931-9230068

E-mail: [SCRI@Brain.net.pk](mailto:SCRI@Brain.net.pk)

### Parent Organization:

Sugar Crops Research Institute

### Name of Administrative Ministry / Department:

Department of Agriculture, NWFP

### Main Objectives:

- Develop sugar crops varieties appropriate to local climatic conditions
- Develop production/protection technologies for sugar crops.
- Production of pre-basic/basic seed of improved sugarcane varieties.
- Introduction of the technologies to the end users through various means.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
2	15	0	0	17



## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	20	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	7	0

### (c) Any Other Achievements

- i. Three sugarcane varieties developed for commercial cultivation since 1998-2000. (SN-98, SPSG.394 and MCP.421)
- ii. New inter-crops with sugarcane introduced.
- iii. Borers control through Integrated Pest Management standardized.
- iv. Termites control strategy developed.
- v. Improved production technology developed.

## Sugarcane Research Institute

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041-657817

**Fax:** 041-651437

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- To develop high yielding and high sugar varieties.
- To develop improved package of production technology for sugarcane.
- To screen the cane varieties against diseases/pests.
- To conduct research on the best use of cane by-products.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	26	0	29

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	34	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
5	4	0

### (c) Any Other Achievements

Nil

## Vegetable Research Institute

### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

**Telephone:** 041/652518

**Fax:** 041/657466

### Parent Organization:

Ayub Agricultural Research Institute

### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

### Main Objectives:

- Collection and evaluation of vegetable germplasm(local and exotic).
- Development of drought, frost, heat tolerant vegetable varieties.
- Evaluation of high yielding and disease resistant varieties through hybridization.
- Standardization of nursery techniques.
- Research on vegetable forcing and suitable cropping.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	35	0	35

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	20	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	4	4

### (c) Any Other Achievements

250-300 people were trained in the processing and preservation of fruits and vegetables at domestic level.

## Vertebrate Pest Control Institute

### Postal Address:

Old Block 9 & 10, Karachi University Campus, Karachi-75270

Telephone: 021-4988514, 474081-82

Website: [www.parc.gov.pk](http://www.parc.gov.pk)

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture & Livestock, Islamabad

### Main Objectives:

- Identify the major vertebrate pest problems in different agro-ecosystems.
- Assess crops and food storage losses from vertebrate pests.
- Develop safe, effective and economical control methods through testing new products which are suitable and practical for farmers.
- Test rodenticides and avicides both under laboratory and field conditions so as to help the concerned agencies in regulating their use.
- Demonstrate vertebrate pest control techniques at farm level through pilot control programmes.
- Investigate rodents-borne diseases hazardous to human and livestock health.

- Transfer knowledge to the farming community through the Provincial Agricultural Extension Services by holding master trainer courses, seminars and producing a wide range of advisory bulletins, leaflets and pamphlets.
- Establish feedback system through appointing liaison officer in each province.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	6	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	7	8	3	0	14

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
1	0	0

#### (c) Any Other Achievements

Rs. 0.200 million earned as providing rodent control services to different civic bodies.

### Veterinary Research Institute

#### Postal Address:

Brewary Road, Quetta

**Telephone:** 081-9202956

**Fax:** 081-9202636

#### Parent Organization:

Veterinary Research Institute

#### Name of Administrative Ministry / Department:

Department of Livestock and Dairy Development, Balochistan

#### Main Objectives:

- Production of important veterinary vaccines.
- Research related to vaccine production.
- Education and training.

- Provision of antigens (vaccinal strain)

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	10	30	43

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	4	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

The institute has provided research facilities to ten postgraduate students of University of Balochistan and Sindh Agriculture University, Tandojam in various related disciplines.

## Veterinary Research Institute

#### Postal Address:

Veterinary Research Institute, Lahore

#### Parent Organization:

Veterinary Research Institute

#### Name of Administrative Ministry / Department:

Department of Livestock and Dairy Development, Punjab

#### Main Objectives:

- Production of vaccines, sera and diagnostic agents for livestock and poultry.
- Disease diagnosis and investigation.
- Research on animal health problems.
- Training of professional and para-professional veterinary staff and farmers.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	39	44	314	399

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10*	0	5	10	3	0	35

\*Collaborative

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

- i. The Veterinary Research Institute involved in control of infectious disease in livestock and poultry.
- ii. Annual training programme for poultry farmers are conducted.

## Wheat Research Institute

### Postal Address:

Taluka Sakrand, District Nawabshah

Telephone: 904/024151

### Parent Organization:

Wheat Research Institute, Sakrand

### Name of Administrative Ministry / Department:

Department of Agriculture, Livestock and Fisheries, Sindh

### Main Objectives:

- To evolve high yielding wheat varieties.
- To formulate package of technology, for getting maximum returns on wheat crop.
- To evolve rust resistant, waterlogged saline soil and stress condition.
- To communicate the modern research technology & famitize the growing community from modern research techniques and promising wheat varieties.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	5	2	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Wheat Research Institute

#### Postal Address:

Ayub Agricultural Research Institute, Faisalabad

Telephone: 041/651529,651415

Fax: 041-684721

E.mail: [dirwri@fsd.paknet.com.pk](mailto:dirwri@fsd.paknet.com.pk)

#### Parent Organization:

Ayub Agricultural Research Institute

#### Name of Administrative Ministry / Department:

Agriculture (Research Wing), Punjab

#### Main Objectives:

- To develop high yielding varieties with wider adaptability.
- Disease resistance,rusts,bunt,smuts.
- Stress breeding(salt tolerance,heat tolerance).

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	26	0	30

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	17	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
4	0	0

### (c) Any other Achievements

Nil

## Zoological Survey Department

### Postal Address:

Block-61, Pakistan Secretariat, Karachi

Telephone: 021-9203334

E-mail: [zsd61@yahoo.com](mailto:zsd61@yahoo.com)

### Parent Organization:

Zoological Survey Department

### Name of Administrative Ministry / Department:

Ministry of Environment, Local Government and Rural Development, Islamabad

### Main Objectives:

- To obtain information on distribution, population dynamics and status of the animal life of Pakistan.
- To set up and maintain standard zoological collections for reference.
- To undertake research on the ecology, biology, physiology and biochemistry of important marine animals.
- To advise the government on all zoological matters including conservation, management, export and import of wildlife.
- To impart wildlife education and create public awareness about wildlife conservation.



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	5	9	7	22

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	10	4	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

The department is playing a vital role in finding the status of animals of Pakistan and giving suggestions for better protection, conservation to all the four provinces of Pakistan and Azad Kashmir through its Ministry and a small wing NCCW. Department has over 50 years of long history in animal research and is still contributing its valuable part in the progress and prosperity of Pakistan.

## Biotechnology & Genetic Engineering

### Agricultural Biotechnology Institute

**Postal Address:**

National Agricultural Research Center (NARC), Park Road, Islamabad

**Telephone:** 051-9255217

**Fax:** 051-9255217

**Website:** www.parc.gov.pk

**Parent Organization:**

Pakistan Agricultural Research Council

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture & Livestock, Islamabad

**Main Objectives:**

- Respond to burning issues of national importance for productivity enhancement in high value crops through innovative biotechnological approaches e.g. tissue culture and genetic engineering.
- Dissemination of the technology to the end user/private sector for mass scale utilization and commercialization.
- Develop/explore national/international linkages for future collaboration in advanced technology
- Train manpower/students,(graduate, post-graduates in frontlines areas of biotechnology and genetic engineering) develop infrastructure both at national and international level.
- Public sensitization of the technology by organising workshops/symposia and popular article writing in almost all the national dailies of Pakistan.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	2	5	0	12

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3*	1*	1	42	10	0	6

\*Collaborative

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Agriculture Biotechnology Research Institute****Postal Address:**

Agriculture Biotechnology Research Institute / AARI, Faisalabad

**Parent Organization:**

Ayub Agricultural Research Institute

**Telephone:** 657281-90/229

**Name of Administrative Ministry / Department:**

Agriculture (Research Wing), Punjab

**Main Objectives:**

- Improvement of major crops for yield, disease resistance, and other parameters employing biotechnologies.
- Development of salinity tolerant plants for salt-affected soils employing biotechnologies.
- Development/screening of legume lands for super nodulation and high biological nitrogen fixation.
- Micro propagation of elite plants of high economic value

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	11	0	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	4	1	0	0

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Biomedical and Genetic Engineering Division****Postal Address:**

Biomedical and Genetic Engineering Division, Dr. A.Q Khan Research Laboratories, G.P. O Box 2891 G-9/1, Islamabad

**Parent Organization:**

Dr. A. Q. Khan Research Laboratories

**Telephone:** 051-9261138**Fax:** 051-9261144**E-mail:** sqmehdi@comsats.net.pk**Name of Administrative Ministry / Department:**

Prime Minister's Secretariat, Islamabad

**Main Objectives:**

- Human genome diversity.
- Medical biotechnology.
- Genetics of inherited diseases.
- Population genetics.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	2	9	0	18

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
11*	6*	42	0	0	0	0

\*Collaborative Research

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievement:**

The Biomedical and Genetic Engineering Division is the only laboratory in the Muslim World that is internationally recognized for its contributions to the human genome diversity project and disease genetics. It has mapped approximately 20 genes and loci for blindness, deafness and other inherited disorders in Pakistan families. It has the world's largest bank of human cell lines. Some have been deposited with CEPH, France, through UNESCO. The laboratory's tabulation of transplantation antigens (HLA) assists surgeons in organ transplantation. It has pioneered the following techniques in Pakistan: DNA based diagnosis of bacterial and viral diseases  
DNA based paternity and forensic analysis.

**National Institute for Biotechnology & Genetic Engineering**

**Postal Address:**

P.O. Box 577, Jhang Road, Faisalabad

**Parent Organization:**

Pakistan Atomic Energy Commission

**Telephone:** 041-651475/79

**Fax:** 041-651472

**Name of Administrative Ministry / Department:**

Prime Minister's Secretariat, Islamabad

**Main Objectives:**

- Development of an infrastructure for techniques of Biotechnology & Genetic Engineering for solving problems related to agriculture, energy, industry, health and waste management.
- Generation of knowledge in biotechnology for practical utilization
- To maintain a large culture collection and gene bank
- The training of man-power for post-graduation and dissemination of the R&D results.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
21	6	32	33	92

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
22	10	12	5	1	3	27

**(b) Patents / Processes / Products:**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	2	1

**(c) Any Other Benefits:**

Establishment of molecular markers for rapid selection in breeding  
Markers of identification of a variety

## Electronics and Telecommunication

### Central Telecommunication Research Laboratories

**Postal Address:**

Central Telecom Research Labs. (CTRL) Sector H-9/4, Islamabad

**Telephone:** 4431023,4432516

**Fax:** 4432137,4841319

**Parent Organization:**

Pakistan Telecommunication Company Limited

**Name of Administrative Ministry / Department:**

Ministry of Information Technology and Communication, Islamabad

**Main Objectives:**

- To undertake design & development of new equipment and systems for the specific requirements of the PTCL and to recommend their economic means of production.
- To study the technology and present systems in use in the PTCL and those developed by the advanced countries and to come up with our own solutions to the problems arising out of R&D operations in the country.
- To watch and observe the progress of developments in various Telecommunication fields in the world and to conduct research in those fields.
- To study and keep PTCL abreast of the latest developments in telecommunications techniques and system in international communication and regulation in international forums like the International Telecommunication Union (ITU) and International Satellite Organization (INTELSAT) etc.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	2	13	15

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Institute of Industrial Electronics****Postal Address:**

Street-22/c Block-6, Gulshan-e-Iqbal, Karachi

**Telephone:** 021-4982353    **Fax:** 021-4966274**Parent Organization:**

Pakistan Council of Scientific and Industrial Research

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- To lay the foundation for development and generation of technical manpower and know-how in the field of industrial electronics
- Maintenance and repair of industrial equipment instruments belonging to public and private sector organizations
- Design, development and small scale production of electronics equipment and systems.
- Quality control in electronics components devices, equipment etc
- Train at undergraduate level students in practical oriented engineering discipline of industrial electronics

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
0	0	13	4	17

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0



**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Industry recognition

**Institute of Optronics****Postal Address:**

P.O Box No. 1596, Chaklala, Rawalpindi

**Telephone:** 051-9280522-23

**Fax:** 051-9280521

**E-mail:** iop@comsats.net .pk

**Parent Organization:**

Institute of Optronics, Rawalpindi

**Name of Administrative Ministry / Department:**

Ministry of Defence, Rawalpindi

**Main Objectives:**

- To introduce and promote optronics technology in Pakistan.
- To produce optronics systems to meet the immediate requirements of the three services.
- To undertake research and development work in the field of optronics.
- To accelerate the pace of technology development by enhancing indigenous, design and manufacturing capabilities.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	2	10	47	60

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	2	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Margalla Institute of Electronics****Postal Address:**

22, H-9, Islamabad

**Telephone:**051-9257481-82**Fax:** 051-9257478**Parent Organization:**

Margalla Institute of Electronics

**Name of Administrative Ministry / Department:**

Ministry of Defence

**Main Objectives:**

- Redesign and production of PCBs
- R&D work in
  - Finding alternates for obsolete components
  - Better quality substitutes
  - Recommended services schedules
  - Designing new electronics circuits
  - Designing new electronics systems
- Progressive assembly, system integration, testing and phased indigenous manufacture of equipment

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
0	0	33	4	37

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**National Institute of Electronics****Postal Address:**

Plot No. 17, Street No.6, Sector H-9 P.O. Box No. 1406, Islamabad

**Telephone:** 051-9258501-4**Fax:** 051-9258515**E-mail:** [nie@perd.net.pk](mailto:nie@perd.net.pk)**Parent Organization:**

National Institute of Electronics

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Research, design and development in vital areas of Electronics
- Research, design and development of common utility items/systems
- Research, development and dissemination of know-how to public/private sector
- Research, liaison/interaction for modern/emerging technologies related to electronics communication in the country and at international level including TOT

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
0	7	21	0	28

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	2	2	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

- i. Patents under negotiation being offered to private sector.
  - (1) Traffic light controller
  - (2) Security alarm system
  - (3) Hearing Aid
- ii. Development of industrial /processes automation and control projects underway
  - (2) Artillery computer system
  - (3) Energy saving System
- iii. Under development
  - (1) PLC based factory automatic
  - (2) Large displays for commercial use
  - (3) Switch mode on-line UPS
- iv. a. Engg. internship/projects  
 b. Basic/advanced level computer & IT courses produced 30 students at graduate level and 300 at post graduate diploma level.

**National Radio Telecommunication Corporation****Postal Address:**

NRTC, Haripur

**Parent Organization:**

National Radio Telecommunication Corporation

**Name of Administrative Ministry / Department:**

Ministry of Defence/Information Technology and Telecommunication, Islamabad

**Main Objectives:**

Manufacturing of the radio telecommunication equipment for the organizations of defence and civilian sectors

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	400	400

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

<b>Manpower Produced</b>		<b>Publications</b>				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved/Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any Other Achievements**

Nil

## Energy

### Fuel Research Centre

**Postal Address:**

Off University Road, Karachi-39, Pakistan-75280

**Telephone:** 021-8141738,8141785

**Fax:** 021-8141754

**E-mail:** [fre\\_pcsir@hotmail.com](mailto:fre_pcsir@hotmail.com)

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Research and development of fuels.
- Monitoring of gaseous emissions and analyses of effluents.
- Analytical testing/evaluation of fuels.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
3	2	14	3	22

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	5	2	0	0

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
2	2	0

**(c) Any Other Achievements**

- i. One thousand coal samples were analyzed for cement and other industries.
- ii. Eight hundred drinking water samples of Punjab and Sindh region were analyzed for arsenic and fluoride.

- iii. Five tones of coal briquettes were produced from Lakhra lignite for private party.
- iv. Humic acids and fulvic acids were produced for field trials.

## **Hydrocarbon Development Institute of Pakistan**

### **Postal Address:**

Hydrocarbon Development Institute of Pakistan, Islamabad

### **Parent Organization:**

Hydrocarbon Development Institute of Pakistan, Islamabad

**Telephone:** 051-9203588, 9203958      **Fax:** 051-9204902

### **Name of Administrative Ministry / Department:**

Ministry of Petroleum and Natural Resources, Islamabad

### **Main Objectives:**

- Assist the Ministry of Petroleum & Natural Resources in the design of national policies for the development of hydrocarbon industry taking into account the national needs especially those of strategic nature.
- Undertake R&D especially to:
  - a. Facilitate exploration of oil & gas.
  - b. Promote optimum exploitation and utilization of existing hydrocarbon resources.
  - c. Investigate new energy possibilities and related technologies for adoption/induction.
  - d. Monitor and recommend measures for controlling environmental pollution relating to petroleum operations.
- Promote quality control and standardization of hydrocarbons, including POL and their blends.
- Establish and operate a comprehensive computer managed database relevant to the objectives of HDIP, linked with indigenous and foreign databases.
- Develop and promote use of clean, economic and alternate fuels.
- Market aggressively HDIP's consultancy expertise and facilities to the public and private sector organizations and companies.
- Assist the universities and others in the preparation and conduct of courses and training programmes in the field of hydrocarbons.

- Coordinate their R&D work with other national organizations (public and private sector) engaged in similar activities.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	5	36	51	97

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	2	3	7	10	3	2

#### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	1	1

#### (c) Any Other Achievements

Nil

## Pakistan Council of Renewable Energy Technologies

#### Postal Address:

Plot No#25, H-9, Islamabad

**Telephone:** 4448468

**Fax:** 4448469

**E-mail:** shamsi@isb.comstas.net.pk

**Website:** [www.PCRET.gov.pk](http://www.PCRET.gov.pk)

#### Parent Organization:

Pakistan Council for Renewable Energy Technologies

#### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

#### Main Objectives:

- Research, develop, acquire, adapt, indigenize, promote and disseminate renewable energy technologies like solar energy (thermal and photovoltaic) micro hydro power, wind energy, biomass / biogas, hydrogen, and other human / environment friendly energy technologies in the country to meet its energy needs, in particular of the remote rural areas, aiming ultimately at achieving technological self reliance in



energy sector, socio-economic development, improvement in the quality of life, sustenance of healthy environment and eco-system, conservation of bio-diversity, reduction of CO<sub>2</sub> emission and mitigation of other green house gases.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	2	20	55	85

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	12

#### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	10	7

#### (c) Any Other Achievements

Nil

## Solar Energy Research Centre

#### Postal Address:

22km Super Highway, P.O.Box.356, Hyderabad

Telephone: 0221-651726

#### Parent Organization:

Pakistan Council for Scientific and Industrial Research

#### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

#### Main Objectives:

- Research and development in the field of new and renewable sources of energy.
- To tender technical services (chemical analysis) to industries.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	12	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Health Sciences

### Armed Forces Institute of Pathology

**Postal Address:**

The Mall Road, Rawalpindi

**Telephone:** 051-561-33337, 30077

**Fax:** 051-9271247

**E-mail:** afippak@yahoo.com: afipcomdt@hotmail.com

**Parent Organization:**

Armed Forces

**Name of Administrative Ministry / Department:**

Ministry of Defence/GHQ

**Main Objectives:**

- To provide routine and specialized pathology services to the Armed Forces.
- To impart postgraduate training in various disciplines of pathology and allied subjects including nuclear medicine.
- To impart training to the laboratory technicians.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	11	23	0	37

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2*	5	12	0	6	0

\*Collaborative

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	4	0

**(c) Any Other Achievements**

Diagnosis of different diseases by using advance equipments.

## Atomic Energy Medical Centre

### Postal Address:

Atomic Energy Medical Centre, Jamshoro

**Telephone:** 0221-771148-49

**Fax:** 0221-771411

### Parent Organization:

Pakistan Atomic Energy Commission

### Name of Administrative Ministry / Department:

Prime Minister's Secretariat, Islamabad

### Main Objectives:

- To provide updated diagnostic and therapeutic facilities for patients specially suffered from Cancer using Radionuclide

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	15	35	51

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- Progressively working to improve health awareness, cancer prevention and management for the community.
- Progressively improving facilities of diagnosis of different diseases and early detection of Cancer.

## Centre for Nuclear Medicine (CENUM)

### Postal Address:

Myo Hospital, P.O.Box No.53, Lahore

**Telephone:** 042-7324141,7245121 **Fax:** 042-7313267

**E-mail:** cenol@ihr.comsats.net.pk

### Parent Organization:

Pakistan Atomic Energy Commission

### Name of Administrative Ministry / Department:

Prime Minister's Secretariat, Islamabad

### Main Objectives:

- To provide Nuclear Medicine diagnostic and therapeutic facilities to patients.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	12	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	1

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Institute of Public Health

### Postal Address:

6-Birdwood Road, Lahore

**Telephone:** 042-9200708

**Fax:** 042-9200868

**E-mail:** iphpk@brain.net.pk

**Website:** www.iph.paklinks.com

### Parent Organization:

Institute of Public Health

### Name of Administrative Ministry / Department:

Health Department, Government of the Punjab

### Main Objectives:

- To contribute to the improvement of health status of human populations through education, research and technical assistance for the development of health policies, translation of policies into feasible action plans and operationalization of these plans. The institute, through its research and development programme strives to acquire and disseminate knowledge regarding health systems management, promotion of health, control of communicable and non-communicable diseases and to become centre of excellence for the development of public health at national and international levels.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	13	28	0	43

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	3	0	42	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Institute of Radiotherapy & Nuclear Medicine

### Postal Address:

University Campus, Peshawar

**Telephone:** 091-9216114-7, 9216118

**Fax:** 091-9216119

**E-mail:** irnum@psh.paknet.com.pk

### Parent Organization:

Pakistan Atomic Energy Commission

### Name of Administrative Ministry / Department:

Prime Minister's Secretariat, Islamabad

### Main Objectives:

- Diagnosis and treatment of various diseases including cancer by making use of radioisotopic techniques & radioactive sources.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	5	24	0	32

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	4	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Jinnah Postgraduate Medical Centre

### Postal Address:

Rafiqi Shaheed Road Karachi-75510

**Telephone:** 021-9201360

**Fax:** 021-9201370

**Parent Organization:**

Jinnah Postgraduate Medical Centre, Karachi

**Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad

**Main Objectives:**

- Undergraduate and postgraduate teaching in medicine.
- Diagnostic centre with treatment facilities.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	0	5	0	15

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**National Health Research Complex****Postal Address:**

Sheikh Zayed Hospital, Lahore-54600

**Telephone:** 042-5864644, 5865731-40 **Fax:** 042-5830639**Parent Organization:**

Pakistan Medical Research Council

**Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad



## Main Objectives:

- To conduct, coordinate multi-disciplinary and multi-centre clinical research on national health problems.
- To provide research support to the primary and secondary health care programme.
- To conduct research to develop effective and economical health related interventions for improving the health status of the vulnerable population groups.
- To conduct hospital and field based research study on the health of community and develop health information system.
- To conduct research in clinical sciences and other related disciplines.
- To provide a creative interface between basic and clinical science and facilitate to develop scientists who will bridge the gulf between beds ion and laboratory.
- To undertake training programme, for self reliance in medical research, career planning and research tools.
- To develop medical computerization software suitable for conditions in Pakistan.
- To conduct scientific research study on medical facilities, including herbs and drugs available in the indigenous systems of medicine.
- To disseminate the results of research and recommendations for utilization.
- To coordinate clinical research work of all Pakistan Medical Research Centres.
- To develop liaison with other clinical institutes in the country and abroad.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	4	0	5

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	9	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

### **(c) Any Other Achievements**

The National Health Research Complex (NHRC) specializes in Hormone testing. The services are offered to the Shaikh Zayed Medical Complex patients. The Federal Employees and Zakat patients are free of any charges.

The NHRC also helps students of M.Sc., M.Phil. and Ph.D. of the Complex as well as of the teaching and research institutions of the city like the Punjab University and its affiliated colleges, etc.

### **National Institute of Health**

#### **Postal Address:**

Chakshazad, Islamabad

**Telephone:** 051-9255117, 9255110-4

**Fax:** 051-9255099

#### **Parent Organization:**

National Institute of Health

#### **Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad

#### **Main Objectives:**

- To advise the Federal Govt. on the control of diseases by suitable methods.
- To implement all the schemes and proposals approved by the Federal Government.
- To investigate epidemic and other communicable diseases and to conduct research on these problems using modern techniques and achieve excellence in this behalf and to collaborate with other concerned agencies under the government or provincial government.
- To develop methodology and standards techniques for the investigation of various diseases prevalent in the country.
- To disseminate these techniques to the people working in the profession by holding training courses.
- To develop an Institute of Tropical Diseases for research and training.
- To function as National Type Culture Collection Centre.
- To develop a National Type Virus Reference Centre.
- To conduct research and training in community medicine and health services development.
- To control environment with special reference to air, water and food.

- To analysis and test the quality of drugs and act as the laboratory for the purpose of sub-section (5) of section 22 of the Drug Act 1976 (XXX1 of 1976).
- To function as sole producer of vaccines and sera prophylactic and the therapeutic use and acquire capability of meeting domestic and foreign demands.
- To conduct research on traditional system of medicine and to collaborate with the international agencies.
- To impart training in drug analysis.
- To collaborate with the World Health Organization in quality of drug.
- To conduct research on applied nutrition like Clinical Nutrition and Food Analysis and undertake nutrition education program.
- To advise Federal Govt. in developing food standards and pure food laws in collaboration with the international agencies like the World Health Organization and the Food and Agriculture Organization.
- To train medical laboratory technicians and technologist.
- To undertake repair and maintenance of sophisticated electro medical equipment for other institutions on agreed terms and conditions.
- To function as a source of supply of small laboratory animals for use in the research and other fields on agreed terms and conditions.
- To perform such other functions related to the matters aforesaid as the Board may decide with the approval of the Federal Government.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	22	48	30	108

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	2	1	73	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**National Research Institute of Fertility Care****Postal Address:**

ST. 13 & 14, Block-1, Scheme-5, Clifton, Karachi-75600

**Telephone:** 021-5835561/5823502 **Fax:** 021-5823501

**E-mail:** nrifc@Hotmail.com

**Website:** [www.mopw.gov.pk/nrifcfull](http://www.mopw.gov.pk/nrifcfull)

**Parent Organization:**

National Research Institute of Fertility Control

**Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad

**Main Objectives:**

- Identification of suitable new contraceptive methods by assessing their acceptability, effectiveness and side effects by undertaking extensive research and also suggests any improvement, if required.
- Elucidation of relationships and casual factors affecting population growth by undertaking epidemiological research.
- Quality control of contraceptives used in the country, whether manufactured locally or imported.
- Growth and development of research manpower.
- Provision of laboratory support for contraceptive, fertility research as well as epidemiological and operational research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	6	0	10

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	1

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

- i. Research Echo published quarterly
- ii. Annual research seminar on reproductive health

## Pakistan Medical Research Council

### Postal Address:

Shahrah-e-Jamhuriat Off Constitution Avenue, G-5/2, Islamabad

**Telephone:** 051-9207386,9216793

**Fax:** 051-9216774,9224327

**E-mail:** pmrc@isb.comsats.net.pk

**Website:** www.pmrc.gov.pk

### Parent Organization:

Pakistan Medical Research Council

### Name of Administrative Ministry / Department:

Ministry of Health, Islamabad

### Main Objectives:

- To organize, coordinate and promote health research in various disciplines of medical sciences and public health.
- To publish and otherwise disseminate technical and general information on research work of the Council through holding seminars, meetings and conferences.
- To establish linkages with other national and international organizations for the development of health system research.
- To advise the federal government and provincial governments on all matters related to health research.

- To ensure that health research is linked with the national socio-economic development plans.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
14	4	43	2	63

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	3	0	4	0	1

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	HbsAg ELISA KIT	0

#### (c) Any Other Achievements

- Determined the health profile of the people of Pakistan for the first time through national health survey of Pakistan and a unique data set has been generated for health planners, policy makers and medical educators.
- The Council has prepared “Developing and Strengthening the Health Research System in Pakistan: Guidelines for Action and Operational Plan 2001-2006”. This Action Plan will not only guide individuals and institutions in undertaking the research according to country needs but will also help in identifying resources and capacity development needs of health research in Pakistan.
- The Council has established links with international health research organizations like the Commission on Health Research for Development (COHRED), Concerted Action, SHARED (a computer network for exchange of information on health) and the Global Health Forum. Successful collaboration in research has been undertaken with the US Department of Health and Human Services (DHSS) and the London School of Tropical Medicine and Hygiene.
- The Council has been able in the recent past to get funding for its major surveys through competition for research grants and will continue to do so.

### PMRC Research Center( Dow Medical College)

#### Postal Address:

Dow Medical College, Karachi

Telephone: 021-7779311

Fax: 021-7779311

**Parent Organization:**

Pakistan Medical Research Council

**Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad

**Main Objectives:**

- To conduct research on priority health problems of the country.
- To collaborate with national & international research centres.
- To collaborate with medical education department of Dow Medical College.
- To facilitate research oriented workshops for post graduates.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	0	0	1

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	6	0	0	1

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**PMRC Health Services Research Centre(Sindh Medical College)****Postal Address:**

Sindh Medical College, Karachi

**Parent Organization:**

Pakistan Medical Research Council

**Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad

**Main Objectives:**

- Promotion of research, design and conduct research in Health System Research.

- Guide postgraduates to design research project.
- Teaching research methodology & biostatistic to students.
- Teaching medical writing to under graduate and postgraduates.
- To provide diagnostic facilities to research workers in chemical department & other related organizations.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	0	0	2

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	5	1	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### PMRC Research Center(Punjab Medical College)

#### Postal Address:

PMRC Research Center Punjab Medical College, Sargodha Road, Faisalabad

**Telephone:** 041-9210187 & 041-9210095/Ext.2314

#### Parent Organization:

Pakistan Medical Research Council

#### Name of Administrative Ministry / Department:

Ministry of Health, Islamabad

#### Main Objectives:

- To provide facilities to researchers, from amongst the academic staff of the host institute, at all stages of their research work.



- To facilitate thesis research work of post-graduate medical students of the host institute.
- To inculcate research orientation in undergraduate medical students of the host institute.
- To extend technical expertise to the postgraduate students coming from the host institutes and local sister research organizations.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	1	0	3

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1*	1*	0	9	0	1	0

\*Collaborative

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### PMRC Research Centre(Army Medical College)

#### Postal Address:

Army Medical College, Abid Majid Road, Rawalpindi

Telephone: 051-517613

Fax: 051-581085

#### Parent Organization:

Pakistan Medical Research Council

#### Name of Administrative Ministry / Department:

Ministry of Health, Islamabad

**Main Objectives:**

- To train young medical graduates in the medical research.
- To guide the faculty members of the Army Medical College who are interested in the medical research.
- To provide research facilities i.e. laboratory space, secretarial and statistical assistance for the research workers of the college for carrying out medical research.
- To act as a centre for participation in various national and multi-centre research studies sponsored by PMRC.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
1	0	0	13	14

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**PMRC Research Centre (Khyber Medical College)****Postal Address:**

Khyber Medical College, Peshawar

**Telephone:** 091-9216215

**Fax:** 091-9216216

**E-mail:** pmrckmc@brain.net.pk

**Parent Organization:**

Pakistan Medical Research Council

**Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad

**Main Objectives:**

- To organize, coordinate and promote scientific research in various fields of medicine and public health.
- To arrange for the utilization of results of research conducted in the institutes and laboratories associated with the Council.
- To publish and otherwise disseminate technical and general information on scientific matters related to the research work of the Council.
- To establish scientific liaison with other national and international organizations connected with the scientific activities of the Council.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
3	0	0	0	3

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1*	1*	0	16	0	0	0

\*Collaborative

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Collaborative project of UNICEF, resulted in getting a computer monitor, two printers, weighing machine.

**PMRC Research Centre(Nishtar Medical College)****Postal Address:**

Nishtar Medical College, Multan

**Telephone:** 061-511487

**Fax:** 061-511487

**E-mail:** pmrc@mul.paknet.com.pk

**Parent Organization:**

Pakistan Medical Research Council

**Name of Administrative Ministry / Department:**

Ministry of Health, Islamabad

**Main Objectives:**

- To organize, coordinate and promote medical research.
- To guide academics of the host institute in making research proposals, and to assist in research work.
- To collaborate in research work of Ph.D., M.Sc M.Phil.. students of Bahaudin Zakaria University Multan and FCPS students of College of Physicians and Surgeons. In addition, help in writing dissertation/thesis and papers for publication.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	1	0	2

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	9	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Industrial Research and Manufacturing

### Applied Physics & Instrumentation Technology Center

**Postal Address:**

PCSIR Laboratories Karachi Complex ,off University road, Karachi

**Telephone:** 021-8141832-5

**Fax:** 021-8141847

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Develop measuring and analytical techniques to study physical processes
- Develop and produce, partly/fully indigenous, selected scientific instruments for industry, R &D institutions and testing & analytical laboratories.
- Train manpower in instrument design, manufacture and repair.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	1	13	1	18

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	15	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Cement Research and Development Institute

### Postal Address:

Near New Lahore Race Club, Kot Lakhpat, Lahore

**Telephone:** 042-5121658

**Fax:** 042-5123474

### Parent Organization:

Cement Research and Development Institute

### Name of Administrative Ministry / Department:

Ministry of Industries and Production, Islamabad

### Main Objectives:

- Research work of cement and allied material.
- Testing of all kinds of cement and allied materials (Limestone, clay gypsum, iron ore, fire clay, fly ash, pozzolan, slag etc.)
- Calibration and training.
- Conducting seminars and training courses.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	2	5	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Centre for Technology Development and Production of Textile & Leather Chemicals and Auxiliaries

### Postal Address:

PCSIR Laboratories Complex, Off University Road, Karachi

**Telephone:** 021-8142895-8      **Fax:** 021-8141832, 8141847

### Parent Organization:

Pakistan Council of Scientific and Industrial Research, Islamabad

### Name of Administrative Ministry / Department:

Ministry of Science and Technology, Islamabad

### Main Objectives:

- Extension of available facilities and to build and create a nucleus for large scale production of dyestuffs, optical brighteners, UV absorbers, softeners and other for textile & leather auxiliaries.
- To atleast substitute the huge import of dyes and pigment and other textile & leather chemicals.
- To train/nurture technical manpower in the area of textile/leather chemicals.
- To boost activities of the proposed centre in the direction to cater the need of local industry in connection with improving finish/standard of textile/leather goods for their value addition.
- To provide technical guidance to local exporters.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	14	1	15

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	NA	3	17	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
7	23	10

**(c) Any Other Achievements**

Revenue generated through lease of processes, advisory/consultancy, analytical services and production activity

**Defence Science and Technology Organization****Postal Address:**

128 Sir Syed Road, Rawalpindi

**Telephone:** 051-9280503

**Fax:** 051-928050-2

**Parent Organization:**

Defence Science and Technology Organization

**Name of Administrative Ministry / Department:**

Ministry of Defence

**Main Objectives:**

- To carryout innovative research with a view to ultimate practical utility to the defence services.
- Emphasis on applied research rather than on copying of simple item or minor adaptation

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	5	76	127	213

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements****Department of Food Division (PCSIR)****Postal Address:**

Mastang Road, near Mian Ghundi, PCSIR , G.P.O. Box No.387, Quetta

**Telephone:** 081-460128

**Fax:** 081-460158

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research, Islamabad

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Systematic evaluation, utilization of indigenous raw materials, intermediates and end product leading to innovation of technologies in minerals and food.
- To conduct research and development on the problems faced by the relevant industrial sector.
- To plan the establishment of new science based industries which would help to improve the export performance of the country.
- To adopt measures for the application and utilization of research results.
- Indigenous technical development through adaptation, modification and improvement of the existing technologies to suit the local conditions.
- To test bench scale findings on pilot plant.
- To provide advisory service to the clients in private and public sector industries.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	2	4	0	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	6	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Testing, evaluation and advisory facilities area created in the fields of Food and Mineral Technology, which were availed by a host of local entrepreneurs. These include:

- i. Complete facilities for chemical characterization and analysis of ores and minerals.
- ii. Microbiology analysis facilities for chemical evaluation of various fruits and fruit products.
- iii. Facilities for complete physico-chemical evaluation of industrial effluents.
- iv. Facilities for physico-chemical characterization of irrigation water and soil.
- v. Capabilities of undertaking complete testing of manures and fertilizers.

## Heavy Mechanical Complex

### Postal Address:

Taxila, District, Rawalpindi

### Parent Organization:

State Engineering Corporation, Islamabad

**Telephone:** 051-9270562-6, 0596-9314181    **Fax:** 051-9270560,  
0596-9314203

**E-mail:** [hmcengg@isb.paknet.com.pk](mailto:hmcengg@isb.paknet.com.pk)    **Website:** [www.hmc.com.pk](http://www.hmc.com.pk)

### Name of Administrative Ministry / Department:

Ministry of Industries and Production, Islamabad

### Main Objectives:

- Development and supply of turnkey plants.
- Development of equipment for BMRE.
- Undertaking projects of national economic significance.
- Acquiring state-of-art in melting technology.

- Broadening the engineering base of the company through acquisition/development of new technology.
- Disseminating technical know-how to related engineering units throughout the country.
- Ensuring rapid move towards self-reliance.
- Saving foreign-exchange through import substitution and exports.
- Exploring and developing new avenues for expansion and growth of engineering sector in the country.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	18	21	40

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Leather Research Centre (PCSIR)

#### Postal Address:

D-102, South Avenue, SITE, Karachi – 75700

Telephone: 021-2570765

Fax: 021-2578748

E-mail: [irepcsirkar@hotmail.com](mailto:irepcsirkar@hotmail.com)

#### Parent Organization:

Pakistan Council of Scientific and Industrial Research

#### Name of Administrative Ministry / Department:

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- To develop and improve upon processes for making leather and disseminate the know-how to tanning industry.
- To provide job-work, analytical and consultancy services to the industry.
- Human resource development through conducting training courses in leather processing and various other aspects of leather technology.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	11	2	17

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	3	0	0	4

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
2	8	0

**(c) Any Other Achievements**

Nil

**Pak Swiss Agricultural Light Engineering Programme****Postal Address:**

Small Industries Estate Nowshera Road Mardan, Mardan

**Name of Administrative Ministry / Department:**

N.W.F.P. Small Industries Development Board, Ministry of Industries

**Parent Organization:**

Pak Swiss Agricultural Light Engineering Programme

**Telephone:** 0931-68237

**Fax:** 0931-68250

**Main Objectives:**

- Promote agriculture mechanization by way of need based design & development and promotion of Agriculture Implements.
- Promote the development of Agriculture Light Engineering in private sector, through training & assistance in manufacturing.

**Manpower Engaged in R&D (2000):**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	14	17

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A.	N.A.	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	42 (Agri. Implements)

**(c) Any Other Achievements**

Two hundred and twenty nine training courses in related fields were conducted.

**PAK SWISS Training Centre****Postal Address:**

PCSIR Campus, Off-University Road, Karachi

**Telephone:** 021-8141963

**Fax:** 021-8141962

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research, Islamabad

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Three years diploma course in precision mechanics & instrument technology.
- Four years specialized diploma course in dies & mould technology

- One year post diploma certificate course in industrial electronics.
- Design & manufacturing of engineering components for plants, machinery & appliances.
- Consultancy.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	2	10	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Pakistan Council of Scientific and Industrial Research Laboratories, Peshawar

#### Postal Address:

PCSIR Laboratories Jamrud Road, Peshawar

**Telephone:** 091-9216240/42

**Fax:** 091-9216232

#### Parent Organization:

Pakistan Council of Scientific and Industrial Research, Islamabad

#### Name of Administrative Ministry / Department:

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- To develop know-how for the use of indigenously available raw material for its industrial use.
- To take part in the development of scientific and technological requirement of the country to curtail imports.
- To undertake export oriented R&D industrial based projects.
- To resolve the problems faced by the public and private sector. To extend assistance to the university researchers and help the educational institutions.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
20	21	42	7	90

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	2	53	3	1	2

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	20	5

**c) Any Other Achievements**

- Training acquired.
- Equipment repaired.
- Short duration projects completed.

**Pakistan Council of Scientific and Industrial Research Laboratories Complex, Karachi**

**Postal Address:**

Off University Road, Karachi

**Telephone:** 042-8142895-8

**Fax:** 042-8141833-35

**E-mail:** klcpcsir2khi.paknet.com.pk

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research, Islamabad

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Effective utilization of national resources
- Self-reliance through import substitution.
- Development of Export-oriented technologies
- Development of simple technologies for self-employment & rural uplift.
- Responding to urgent and emergent situation of national concern.
- Imaginative predisposition to futuristic needs in science and technology
- help to entrepreneurs/industries through:
  - a. Process development.
  - b. Consultancies
  - c. Sponsored Research
  - d. Instrumentation
  - e. Routine Services

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
28	8	159		195

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1*	4*	40	102	0	0	0

\*Collaborative work

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
2	1	6

**(c) Any Other Achievements**

Revenue generated through lease of processes, advisory/consultancy, analytical services and production activity



**Pakistan Council of Scientific and Industrial Research Laboratories,  
Lahore**

**Postal Address:**

Ferozpur Road, Lahore-54600

**Telephone:** 042-5757323

**Fax:** 042-5877433

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Development of new processes, products and technologies aimed specially at import substitution
- Designing, fabrication, installation and commissioning of new plants and machinery
- Development of processes for substitution of imported products.
- Identification, analysis and evaluation of raw materials.
- Identification, analysis and evaluation of finished and semi-finished products.
- Pre-investment studies, techno-economic feasibility reports, technical appraisal and validation.
- Standardisation and calibration of instruments, weights and measures.
- To tackle the problems related to quality control and quality assurance.
- Consultancy/assistance on technical aspects of transfer of technology.
- Repair and maintenance of expensive and delicate equipment and instruments.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
48	0	113	45	206

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	14*	0	37	79	5	0

\* Collaborative research

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	5	4

**(c) Any Other Achievements**

Quality control & quality assurance work for National industries.

**Pakistan Council of Scientific and Industrial Research Laboratories,  
Quetta**

**Postal Address:**

Mastung Road, near Mian Gundy, G.P.O. Box No. 440880, Quetta

**Telephone:** 081-440880

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Systematic evaluation, utilization of indigenous raw materials, intermediates and end product leading to innovation of technologies in minerals and food.
- To conduct research and development on the problems faced by the relevant industrial sector.
- To plan the establishment of new science based industries which would help to improve the export performance of the country.
- To adopt measures for the application and utilization of research results.
- Indigenous technical development through adaptation, modification and improvement of the existing technologies to suit the local conditions.
- To test bench scale findings on pilot plant.
- To provide advisory service to the clients in private and public sector industries.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	5	0	9

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	1	5	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	2	0

### (c) Any Other Achievements

Testing, evaluation and advisory facilities have been created in the fields of food and mineral technology, which were availed by a host of local entrepreneurs.

## Pakistan Machine Tool Factory

### Postal Address:

PMTF Road, Off National Highway, Karachi-75030, Karachi

**Telephone:** 021-5082451-4

**Fax:** 021-5082450

**E-mail:** md@pmtfl.com

**Website:** [www.pmtfl.com](http://www.pmtfl.com)

### Parent Organization:

Pakistan State Engineering Corporation

### Name of Administrative Ministry / Department:

Ministry of Industries and Production, Islamabad

### Main Objectives:

- To work for development and growth of precious engineering products particularly in fields, e.g.
  - Machine tools manufacturing and development.
  - Special product manufacturing and development.
  - Gears/transmission components manufacturing and development.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	71	0	72

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
1	2	2

### (c) Any Other Achievements

New product development

## PERAC Research and Development Foundation

### Postal Address:

7B-Korangi Industrial Area Adjacent to NRL, Karachi-74900

**Telephone:** 021-5054668-72

**Fax:** 021-5064988- 5054670

### Parent Organization:

PERAC Research and Development Foundation

### Name of Administrative Ministry / Department:

Ministry of Petroleum & Natural Resources, Islamabad

### Main Objectives:

- To carry out R&D on development project for import substitution.
- To provide analytical services to chemical petroleum refining and petroleum chemical industries.
- To provide environmental pollution testing and suggesting measures to improve these.
- To develop new value added products based on wastes intermaterial and bye-products of petroleum industries.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	1	1	3

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	1	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

### (a) Any Other Achievements

Nil

## Synthetic Fibre Development & Application Centre

### Postal Address:

230 Korangi Industrial Area, Karachi

**Telephone:** 021-5064112-3      **Fax:** 021-5066392

### Parent Organization:

Synthetic Fibre Development & Application Centre, Karachi

### Name of Administrative Ministry / Department

Ministry of Industries & Production, Islamabad

### Main Objectives:

- Promote manmade fibre & its application in textile.
- Extending testing facilities in fibre, textile and allied industries.
- Extending testing facilities through testing dyed textiles stuff on eco parameters.
- Human resources development extending professional training in fibre, textiles and allied industries through various short courses.
- To import four years bachelor of engineering in textiles.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	5	9	14

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

<b>Manpower Produced</b>		<b>Publications</b>				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any Other Achievements**

Nil

## Metallurgy and Material Sciences

### Institute of Material Sciences and Research,(Pakistan Steel)

**Postal Address:**

P. O. Box. 5429, Bin Qasim, Karachi

**Telephone:** 021-7733696

**Fax:** 021-750156

**Parent Organization:**

Pakistan Steel

**Name of Administrative Ministry / Department:**

Ministry of Industries & Production, Islamabad

**Main Objectives:**

- Research and development corresponding to Iron and Steel.
- Material Science education (M. Sc. Engg) and knowledge dissemination
- Supporting & collaborating other R&D organizations in R&D activities.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	6	0	10	16

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	12	0	0	0

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Quality improvement of Pakistan Steel products.

**Mineral and Metallurgy Research Centre,  
PCSIR Laboratories Complex**

**Postal Address:**

Sharah-e-Jalaluddin Roomi, Lahore-54600

**Telephone:** 042-5877433

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research, Islamabad

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- To undertake R&D work on minerals available in Pakistan and products from these minerals such as chemicals and industrial products.
- Advisory services to industries in private and public sector.
- Trouble-shooting of industry.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	28	0	30

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil



## Ocean Resources & Marine Sciences

### **Applied Biology and Marine Resources Research Centre**

**Postal Address:**

PCSIR, Laboratories Complex, Karachi

**Telephone:**021-8142895-8, 8141833-35

**Fax:** 021-8141832, 8141847

**Parent Organization:**

Pakistan Council of Scientific and Industrial Research

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

**Marine Resources Section:**

- Studies on marine resources of the country for their maximum and sustainable utilization by:
- Prevention of the post harvest losses of the fishery commodities and aspects of quality control.
- Development of value added products from fishery commodities and aspects of quality control.
- Enhancement in production of fishery commodities through aquaculture.
- Providing advisory/consultancy and analytical services.
- To study and evaluate different processes (freezing, refrigeration, heat processing, dehydration and other recent methods) for preservation of different foodstuffs.
- To develop different food products, from simple food items to more sophisticated nutraceutical foods.
- To provide training facilities for food technologists to meet the requirements of the existing food industries.

**Applied Biology Section:**

- Curative and quarantine measures of mycotoxins and myco-toxin free food and feed.

- Pest control through indigenous resources.
- To develop biofertilizers and biopesticides.
- Control of nematodes for protection of cash crops.
- Cultivation and introduction of exotic plants through tissue culture techniques.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
5	7	28	4	44

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	8	37	1	0	2

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
1	8	2

#### (c) Any Other Achievements

1. Revenues are being generated by lease of processes, advisory & consultancy services, analytical and production activity.

## Aquaculture and Fisheries Research Institute

### Postal Address:

National Agricultural Research Center, Park Road, Chak Shehzad P.O. N.I.H, Islamabad

**Telephone:** (051) 9255012 Ext: 3119/3065      **Fax:** 051-9255034

### Parent Organization:

Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food Agriculture & Livestock, Islamabad

### Main Objectives:

- Problem-solving, production oriented research for sustainable enhanced fish production in ponds including breeding, nutrition, fish health and farming systems.

- Research on ecological basis and management of fisheries in water reservoirs and mini-dams including ecosystem and population dynamics, resource assessment.
- Freshwater prawn culture technology.
- To study propagation, importance and the ways of sound conservation and use of important inland fishes.
- Seek to promote interaction and cooperation among fisheries scientists and develop linkages both within and outside the country.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	3	4	0	10

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	9	18	6	6	14

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	6	0

#### (c) Any Other Achievements

Nil

### Directorate of Fisheries

#### Postal Address:

Shami Road, Peshawar

Telephone: 091-9212096

Fax: 091-279851

#### Parent Organization:

Directorate of Fisheries

#### Name of Administrative Ministry / Department:

Department of Forestry, Fisheries & Wildlife, NWFP

**Main Objectives:**

- Development of farm fisheries both in public & private sector.
- Conservation of fisheries resources of the province.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	10	6	16

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Directorate of Fisheries, Sindh****Postal Address:**

Block-50, Old Pakistan Secretariate Saddar, Karachi

**Telephone:** 021-9206532

**Parent Organization:**

Directorate of Sindh Fisheries

**Name of Administrative Ministry / Department:**

Department of Agriculture, Livestock & Fisheries, Sindh

**Main Objectives:**

- To establish research unit on marine side to undertake research work in development of marine and brackish fisheries sector.
- To take steps to operate the existing pilot shrimp farm complex with the help of entrepreneurs.

- To develop fin/shell fish hatcheries (mud crabs, shrimp, oyster culture, Palla fish and lates).
- To develop disease diagnostic wing in the marine sectors.
- To develop pen and cage culture in creeks.
- To undertake research and introduce brackish species (Palla and fresh water prawn).
- Registration of trawlers / boats operating in territorial waters of the province (excluding Karachi fish harbour).
- Issuance/renewal of licences to trawlers/boats in marine waters excluding Karachi fish harbour.
- Collection of statistics.
- Propose amendments/enforcement of fisheries ordinance and rules in marine/coastal sector.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	16	3	19

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Fisheries Research and Training Institute

### Postal Address:

P.O. Batapur, G.T. Road, Lahore

**Telephone:** 042-6543685

**Fax:** 042-6543720

**E-mail:** muhammadnaeem@yahoo.com

**Parent Organization:**

Fisheries Research and Training Institute

**Name of Administrative Ministry / Department:**

Department of Fisheries, Govt. of the Punjab

**Main Objectives:**

- Formulation of low cost balanced and supplementary fish feed.
- Fish breeding, selection and mass rearing.
- Fish diseases and their prevention.
- Pond engineering and dynamics.
- Fish production as a component of an integrated farming system.
- Carp aquaculture.
- Carp breeding technology.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	1	10	7	21

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	14	0	1	6

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Fish feed and extrusion apparatus developed through the collaboration of PCSIR laboratories, Lahore

## Fish Seed Hatchery

**Postal Address:**

Rawal Town, Islamabad

**Telephone:** 051-9220365

**Fax:** 051-2840513

**E-mail:** [yamin@isb.paknet.com.pk](mailto:yamin@isb.paknet.com.pk)

**Parent Organization:**

Fish Seed Hatchery

**Name of Administrative Ministry / Department:**

Department of Fisheries, Govt. of the Punjab.

**Main Objectives:**

- Fish seed production and supply.
- Research in the field of fisheries
- Fish disease control.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	1	2	5

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	3	2	4	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	1

**(c) Any Other Achievements**

Cure of fish diseases, consultancy to fish farms and training.

## Fisheries Wing

### Postal Address:

Chella Band, Muzaffarabad, Azad Kashmir

**Telephone:** 058810-42281

**Fax:** 058810-44298

### Parent Organization:

Fisheries Wing

### Name of Administrative Ministry / Department:

Tourism, Wildlife, Archaeology and Fisheries, Govt of Azad Jammu and Kashmir

### Main Objectives:

- To build up the institutional and technical capabilities of Fisheries Department.
- Disseminate the technical know how of warm water fish culture as well as fish seed production technology among the farmers.
- Provide extension services to private sector fish farmers.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	10	5	15

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	5	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil



## Marine Fisheries Department

**Postal Address:**

Fish Harbour, West Wharf, Karachi

**Telephone:** 021-2312923, 2316535-38

**Fax:** 021-2316539

**E-mail:** DGMFD2001@hotmail.com

**Parent Organization:**

Marine Fisheries Department

**Name of Administrative Ministry / Department:**

Ministry of Food Agriculture & Livestock, Islamabad

**Main Objectives:**

- Exploitation and management of fisheries and other living resources in the exclusive economic zone of Pakistan.
- Conduction of exploratory fishing surveys and biological research on various aspects of fisheries.
- Study of occurrence, life history and distribution of commercially important fish species.
- Management and improvement of fishing fleet.
- Introduction of newer fishing techniques and improvement of traditional fishing gears methods.
- Training of fisherman in various discipline including modern fishing techniques, engine maintenance, fish processing and quality control.
- Liaison with various national and international agencies.
- Collation, analysis, interpretation and publication of fisheries statistical data.
- Advice federal and provincial matters relating to fisheries.
- Provide quality control service for export and domestic consumption of fish.
- Provide technical assistance and promotion of fish processing industry.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	2	13	0	15

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## National Institute of Oceanography

### Postal Address:

St-47, Block 1, Clifton, Karachi-75600

**Telephone:** 021-9251172-78

**Fax:** 21-9251179

**E-mail:** [niopk@cubexs.net.pk](mailto:niopk@cubexs.net.pk)

### Parent Organization:

National Institute of Oceanography

### Name of Administrative Ministry/Department

Ministry of Science and Technology, Islamabad

### Main Objectives:

- To undertake mission oriented multi-disciplinary research in physical, chemical, biological and geological oceanography in Pakistan's maritime zones.
- To undertake oceanographic surveys at the international, national, regional and sub-regional levels.
- To undertake training programmes in various fields of oceanography for the development of indigenous manpower and expertise;
- To establish a National Oceanographic Data Centre (NODC) to serve as a national repository for all oceanographic data/information. concerning Pakistan's maritime areas;
- To provide necessary advice to and collaborate with Government and other national agencies engaged in maritime activities.

- to coordinate and maintain liaison with international organizations/institutes for arranging training/experts services; procurement of specialised instruments and equipment; transfer of marine technology: and development of cooperative research programmes
- To hold seminars/workshops/symposia at national, international, regional and sub-regional levels.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	6	19	2	36

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	16	37	6	4	68

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Provided scientific advice on oceanographic matters to government, private and public sectors. Conducted EIAs for national project.

## Physical Planning & Housing

### Building Research Station

**Postal Address:**

Near Quaid-i-Azam Campus, University of the Punjab, Lahore

**Telephone:** 042-5864040/5858234

**Fax:** 042-5869590

**E-mail:** [brs@brain.net.pk](mailto:brs@brain.net.pk)

**Parent Organization:**

Building Research Station

**Name of Administrative Ministry / Department:**

Department of Communication and Works, Punjab

**Main Objectives:**

- To carry out applied research in the field of building construction with the primary objective of reducing cost of building construction.
- To provide facility for geo-technical investigation of building construction sites for various departments in public and private sectors.
- To provide facility for mix design for concrete as required by various departments or individual constructors. Testing of various building materials and products from public and private sectors e.g. bricks, concrete, steel, coarse and fine aggregates, mortars, pipes, pre-cast and pre-stressed units etc. is also carried out as an extensive activity at BRS.
- BRS is also playing a significant role towards quality assurance of building construction in C&W Department through site inspections and sampling.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
0	2	5	3	10

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	2	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Council for Works and Housing Research

### Postal Address:

F-40, Hub River Road, SITE, Karachi

Telephone: 021-2577236

Fax: 021-2577235

E-mail: [cwhr@khi.comsats.net.pk](mailto:cwhr@khi.comsats.net.pk) Website: [www.cwhr.gov.pk](http://www.cwhr.gov.pk)

### Parent Organization:

Council for Works and Housing Research

### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

### Main Objectives:

- To initiate, promote and guide the scientific research having bearing on problem connected with all types of civil engineering structures such as buildings, roads, bridges, dams harbours, treatments plants etc and economical utilization of construction materials or with any other allied matters referred the Council by the federal government, public sector and private sector.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
1	3	21	7	32

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

<b>Manpower Produced</b>		<b>Publications</b>				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	4	0	1	0	01

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
2	3	8

**(c) Any Other Achievements**

Nil.

## Science Policy Research

### Pakistan Council for Science & Technology

**Postal Address:**

Sharah-e-Jamuriat, Sector G-5/2, Islamabad

**Telephone:** 051-9205157

**Fax:** 051-9205171

**E-mail:** pcst@isb.comsats.net.pk

**Website:** [www.pcst.org.pk](http://www.pcst.org.pk)

**Parent Organization:**

Pakistan Council for Science and Technology

**Name of Administrative Ministry / Department:**

Ministry of Science and Technology, Islamabad

**Main Objectives:**

- Advice to the government on S& T policy matters.
- To act as ‘Think Tank’ for facilitating decision making by the government.
- Scientometric and futuristic studies in S&T.
- Preparation of state-of-the-art reports on S&T issues.
- Maintain databank on S&T indicators.
- Coordination between public sector S&T and R&D organizations.
- International liaison.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
3	1	6	3	13

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	10	25	8	7	32

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
N.A	N.A	N.A

**(c) Any Other Achievements**

- i. PCST after consensus building drafted agenda for 2<sup>nd</sup> and 3<sup>rd</sup> meeting of National Commission for Science and Technology (NCST) held on 2<sup>nd</sup> May 2000 and 1<sup>st</sup> December 2001 under the Chairmanship of Chief Executive of Pakistan. The agenda was discussed in the meetings of Executive Committee of the National Commission for Science and Technology (ECNCST)
- ii. National Biotechnology Commission established for promotion of biotechnology.
- iii. S&T projects prioritized for 10Years Perspective Development Plan.
- iv. Promotion of awareness about Intellectual Property & recommendations for establishment of Intellectual Property Authority.
- v. Evaluation of Scientific Research.
  - o Peer Review of 228 R&D Organization and 300 S&T departments of universities in Pakistan.
  - o Numerical rating of research scientists and organizations (two studies published, one is under printing).
- vi. 12 Experts Committees /Think Tanks have been constituted who are to provide policy guide-lines and identify priority projects in the areas; Renewable Energy/Energy, Agriculture, Information Technology/Telecommunication, Biotechnology/Genetic Engineering, Water Resources Development/Management, Environment/ Conservation/ Earth Sciences, Electronics, Materials/New Materials, Industrial Research/Demand Driven R&D System, Technical and Higher Education, S&T Policy Studies, Engineering & Manufacturing
- vii. Promotion of scientific research was encouraged by special science & technology allowance to scientists.
- viii. PCST granted research productivity allowance to scientists involved in high quality research.
- ix. Actively involved in the establishment of Pak.US S&T collaboration.
- x. The technical officers of PCST were trained in S&T policy and R&D management by an expert of Policy Research in Engineering Sciences (PREST) U.K. Three officers trained in leading institutions of U.K and Sweden.
- xi. 22 papers/lectures presented at national & international conference/workshops by the Chairperson, PCST.



## Scientific and Technological Services

### Agricultural Communication Institute

**Postal Address:**

NARC, Chak Shahzad, Park Road, Isalmabad

**Telephone:** 051-9255036

**Fax:** 051-9255034

**Parent Organization:**

National Agricultural Research Center/Pakistan Agricultural Research Council

**Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture and Livestock, Islamabad

**Main Objectives:**

- To disseminate the information generated by the scientist to the farmers, policy makers and agri business.

**Manpower Engaged in R&D (2000)\***

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\*Included in NARC

**R&D Output (1998-2000)\***

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

\*Included in NARC

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

The institute since its establishment has contributed in updating the NARC library, maintaining agricultural data base, providing reference material to the provincial scientist, agricultural universities as demanded by them.

## Agricultural Training Institute

### Postal Address:

NARC, Chak Shahzad, Park Road, Islamabad

**Telephone:** 051-9255036

**Fax:** 051-9255034

### Parent Organization:

National Agricultural Research Center/Pakistan Agricultural Research Council

### Name of Administrative Ministry / Department:

Ministry of Food, Agriculture and Livestock, Islamabad

### Main Objectives:

- To provide training to the agriculture scientist, farmers and extension workers to keep them updated in modern knowledge in their areas of interest,
- To strengthen the linkage with the provincial research institute, scientists, growers, NGOs through seminars, workshops.

### Manpower Engaged in R&D (2000)\*

\*Included in NARC

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\*Included in NARC

### R&D Output (1998-2000)\*

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

During the year 1988-99 six hundred participants attended/participated in various courses.

## Center for Environmental Protection Studies

### Postal Address:

CEPS Laboratories, Ferozpur Road, Lahore

**Telephone:** 042-5877433

### Parent Organization:

Pakistan Council of Scientific and Industrial Research

### Name of Administrative Ministry / Department:

Ministry of Science and Technology, Islamabad

### Main Objectives:

- Development of technologies for industrial wastes treatment and designing of treatment plants
- Preparation of environmental impact statements
- Carrying out environmental impact assessment
- Evaluation/characterization of materials and waste
- Carrying out environmental related surveys; cleaner production analysis
- Provision of technical expert guidance on environment related problems and issues in national and international prospect (climate convention/change, ozone depletion) and to help in chalking out action plans on environmental management as desired by Government of Pakistan and public and private sectors
- Preparation of environmental management related documents
- Technical guidance to Government of Pakistan in setting/revision of national environment quality standards and monitoring of environmental pollution.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM Equivalent	Others	Total
2	0	7	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	3	4	0	3

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	1	0

**(c) Any Other Achievements****Climatological Data Processing Center****Postal Address:**

Karachi

**Parent Organization:**

Pakistan Meteorological Department

**Name of Administrative Ministry / Department:**

Ministry of Defence, Islamabad

**Main Objectives:**

- Production of computer-aided statistical models e.g temperature, climatic variations, rainfall variations.

**Manpower Engaged in R&D (2000)\***

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\*included in Pakistan Meteorological Department

**R&D Output (1998-2000)\*****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

\* included in Pakistan Meteorological Department

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

The study of long-term temperature and rainfall changes for Pakistan is under way through computer-aided charts and diagrams.

## Directorate of Forecasting and Climatology

**Postal Address:**

Karachi

**Parent Organization:**

Pakistan Meteorological Department

**Name of Administrative Ministry / Department:**

Ministry of Defence

**Main Objectives:**

- Coordination in matters relating to Meteorology and Climatology between PMD and the relevant national organizations and international agencies like WMO, UNEP ESCAP Panel on Tropical Cyclones and SAARC Meteorological Research Center (SMRC), etc.

**Manpower Engaged in R&D (2000)\***

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\* included in Pakistan Meteorological Department

**R&D Output (1998-2000)\***

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

\* included in Pakistan Meteorological Department

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Directorate of Maintenance

**Postal Address:**

Karachi

**Parent Organization:**

Pakistan Meteorological Department

**Name of Administrative Ministry / Department:**

Ministry of Defence, Islamabad

**Main Objectives:**

- Repair and maintenance of instruments/equipment installed at network observing stations of the department.
- Manufacture of conventional meteorological instruments and their spare parts, etc though meteorological workshop.
- Reception and dissemination of Met. Data globally under Global Telecommunication System (GTS) from and to Regional Met. Communication Centers though RTT, Teleprinters, Satellite Dedicated Links, etc.

**Manpower Engaged in R&D (2000)\***

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\* included in Pakistan Meteorological Department

**R&D Output (1998-2000)\*****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

\* included in Pakistan Meteorological Department

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Flood Forecasting Division****Postal Address:**

Lahore

**Parent Organization:**

Pakistan Meteorological Department

**Name of Administrative Ministry / Department:**

Ministry of Defence, Islamabad

**Main Objectives:**

- Flood Forecasting.
- River Stream flow forecasting
- Water management at Dams especially during Monsoon.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

On account of the valuable information regarding heavy rains in the Jhelum river catchments provided by the WSR at Islamabad, FFD was able to forecast heavy flash flood at Mangla. Heavy loss of life and property due to sudden release of about 10,90000 cusecs of water could have been avoided. In August 1997, because of early warning of heavy rains/flash floods at Mangla by PMD and its better management by WAPDA saved the country from the flood damages estimated at Rs. 5.000 billion.

**Mineral and Environment Testing Laboratory****Postal Address:**

164-C, Industrial Estate, Jamurd Road, Peshawar

**Telephone:** 091-9217229      **Fax:** 091-9211605**Parent Organization:**

Mineral and Environment Testing Laboratory, Sarhad Development Authority, Peshawar

**Name of Administrative Ministry / Department:**

Ministry of Industries, Commerce, Minerals, Transport and Labour, NWFP

**Main Objectives:**

- To provide facilities of chemical analysis, petrographic and mineralogy studies to the SDA own Minerals Exploration and Mining Projects in N.W.F.P.
- Research and Development work in terms of processing and upgradation of mineral deposit in Pakistan by bench scale/pilot plant test studies.
- To provide the above facilities to other Government Departments, and private companies/firms involved in mineral exploration, exploitation and mining activities in the country.
- Research and development work for the abatement of environmental pollution caused by the industrial activities.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS (Engr) equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM equivalent	Others	Total
0	2	6	5	13

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	9	0	0	0

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	7	0

**(c) Any Other Achievements**

- METL has established a wide range of analytical, petrographic, microscopic and processing techniques to significantly facilitate any type of Mineral Exploration and Mining Project in Pakistan.
- Adequate environmental testing facilities have been created to assist the industries in their obligation of environment self-monitoring and reporting under Environmental Act and also to play its role in the abatement of environmental pollution caused by industrial activities.
- Based on the environmental analytical data generated by METL, some of the



industrial units have been advised/guide for making in house arrangements for recycling of their effluents.

## National Agromet Center

### Postal Address:

Islamabad

### Parent Organization:

Pakistan Meteorological Department

### Name of Administrative Ministry / Department:

Ministry of Defence

### Main Objectives:

- Developing coordination and liaison with national and provincial agricultural agencies and authorities of water sector to achieve best results from collaborative research and operational work.
- Compilation of research work on crop-weather relationship on regional basis and its publication as well as dissemination to agricultural authorities
- Issuance of agromet forecast for the benefit of farmers and other related agencies.

### Manpower Engaged in R&D (2000)\*

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\* included in Pakistan Meteorological Department

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## National Physical and Standards Laboratory

### Postal Address:

16, Sector- H-9, Islamabad

**Telephone:** 051- 9257462-7

**Fax:** 051- 9258162

**E-mail:** npsllab@comsats.net.pk

### Parent Organization:

Pakistan Council of Scientific Industrial Research (PCSIR)

### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

### Main Objectives:

- Realization, maintenance and dissemination of the basic and derived units of measurement.
- Testing of various standards, instruments and their verification/calibration.
- Production of secondary and working standards.
- Up-gradation of the present measurement techniques through indigenous research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	19	3	28

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## **Pakistan Science Foundation**

### **Postal Address:**

Constitution Avenue, Islamabad

**Telephone:** 051- 9203044

**E-mail:** psfsecy@isb.paknet.com.pk

**Fax:** 051- 9202468

**website:** www.psf.gov.pk

### **Parent Organization:**

Pakistan Science Foundation

### **Name of Administrative Ministry / Department:**

Ministry of Science & Technology, Islamabad

### **Main Objectives:**

- The establishment of comprehensive scientific and technological information and dissemination centres.
- The promotion of basic and fundamental research in the universities and other institutions on scientific problems relevant to the socio-economic development of the country.
- The utilization of the results of the scientific and technological research including pilot plant studies to prove the technical and economic feasibility of process found to be promising on a laboratory scale.
- The establishment of science centres, clubs, museum herbaria and planetaria.
- The promotion of scientific societies, associations and academies engaged in spreading the cause of scientific knowledge in general or in the pursuit of a specific scientific discipline or technology in particular.
- The organization of periodical science conferences, symposia and seminars.
- The exchange of visits of scientists and technologists with other countries.
- The grant of awards, prizes and fellowships to individuals engaged in developing processes, products and inventions of consequence to the economy of the country.
- Special scientific surveys not undertaken by an other organization and collection of scientific statistics related to the scientific effort of the country.
- **The Foundation shall also:**
  - Review the progress of scientific research sponsored by it and evaluate the results of such research.

- Maintain a National Register of highly qualified and talented scientists of Pakistan, including engineers and doctors, in or outside the country and to assist them, in collaboration with the concerned agencies in finding appropriate employment.
- Establish liason with similar bodies in other countries.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	3	14	24	46

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	11	31	17	-	-

#### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Pakistan Scientific and Technological information Center

#### Postal Address:

Quaid-I-Azam University Campus, P.O.Box 1217, Islamabad

Telephone: 051-9201340-41

Fax: 051- 9207211

E-mail: [pastic@isb.pol.com.pk](mailto:pastic@isb.pol.com.pk)

Web-Site: [www.pastic.gov.pk](http://www.pastic.gov.pk)

#### Parent Organization:

Pakistan Science Foundation (PSF)

#### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

#### Main Objectives:

- To procure, process and disseminate scientific and technological information to the researchers.

- To interact with regional and international information agencies/networks.
- To develop inter-library cooperation, resource sharing at national level.
- To train information personnel in contemporary techniques and methods of information handling.
- To develop and strengthen the national science reference library.
- To provide bibliographic and translation service.
- To compile Directory of S & T periodicals of Pakistan, union catalogue of S & T serials and bulletin of technology information.
- To publish an abstracting and indexing journal entitled “Pakistan Science Abstract”.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	10	4	19

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	3	0	0	4

#### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
N.A	N.A	N.A

#### (c) Any Other Achievements

- Provision of training in library automation and information handling
- Provision of hardware and software services to other organization
- Provision of information services to the scientific community such as document supply, Bibliography and literature survey

## Pakistan Museum of Natural History

### Postal Address:

Garden Avenue, Shakarparian, Islamabad

Telephone: 051-9219938

Fax: 051- 9221864

E-mail: [nathist@pmnh.isb.sdnpk.org](mailto:nathist@pmnh.isb.sdnpk.org)

Web site: <http://psf.gov.pk>

**Parent Organization:**  
Pakistan Science Foundation

**Name of Administrative Ministry / Department:**  
Ministry of Science & Technology, Islamabad

**Main Objectives:**

- To collect, preserve and carry out research on all natural history specimens found in Pakistan.
- To display natural history of Pakistan in the form of exhibits and dioramas so as to educate general public and students about our natural wealth.
- To publish natural history books, monographs, research articles, popular literature, brochures and pamphlets etc. for the promotion of scientific research and public awareness.
- To establish liaison with similar institutions both within and outside Pakistan.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	3	6	64	82

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	3	0	0	4

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
N.A	N.A	N.A

**(b) Any Other Achievements**

- i) Ph.D., M. Phil. and M. Sc. students of various Universities/Colleges are provided guidance and research facilities to complete their research work
- ii) PMNH scientists and designers has provided technical help for the setting up of the following museums:
  - National Museum of Science & Technology, Lahore
  - Maritime Museum, Karachi
  - Science Centre, Faisalabad
  - Children Complex; Lahore.

## Pakistan National Accreditation Council

### Postal Address:

Evacue Trust build 4<sup>th</sup> Floor, Near Marriot Hotel, Islamabad

**Telephone:** 051- 9209507-9

**Fax:** 051- 9209510

### Parent Organization:

Pakistan National Accreditation Council

### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

### Main Objectives:

- Accreditation of certification bodies against ISO 62 for quality Management system (QMS), i.e ISO-9000
- Accreditation of testing and calibration laboratories against ISO-17025
- Accreditation of product certification bodies against ISO guides 65
- Registration of auditors, training courses and raining course provider in the relevant fields
- Promotion of quality improvement practices in the country

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- i. Development manual, procedures and other documents and accreditation services launched
- ii. Conducted 2 courses on laboratory quality management and lab assessment

- i. Assessment of 2 certification bodies completed and accreditation awarded
- ii. Pre-assessment of 4 labs. undertake
- iii. So far around 135 seminars/courses have been held on different topics in various cities in collaboration with other stakeholders

## **Pakistan Standards and Quality Control Authority**

### **Postal Address:**

Pakistan Secretariat, Block No.77, Saddar, Karachi

**Telephone:** 021-9206260-61

**Fax:** 021-9206263

**E-mail:** psqcadg@super.net.pk

### **Name of Administrative Ministry / Department:**

Ministry of Science & Technology, Islamabad

### **Parent Organization:**

Pakistan Standards and Quality Control Authority

### **Main Objectives:**

- Establishment of national standards.
- Testing and assesment of industrial raw materials and finished products to establish their quality, grade and composition with refrence to national or international specifications.
- To assist the metal and metallurgical industries of Pakistan by solving their technical problems, increasing and improving productivity through transfer of technology by decreasing waste and to save foreign exchange.

### **Manpower Engaged in R&D (2000)**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS(Engr) equivalent</b>	<b>M.Sc./B.E./BS(Engr) MBBS/DVM equivalent</b>	<b>Others</b>	<b>Total</b>
2	0	44	41	87



## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2	1	1	23	0	11

### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
2	12	0

### (c) Any Other Achievements

Nil

### Quality Control Centre (Former Central Testing Laboratories)

#### Postal Address:

PITAC Compound, Ferozpur Road, Lahore

**Telephone:** 042-5862153/5862154

**Fax:** 042-5862154

#### Parent Organization:

Pakistan Standards and Quality Control Authority

#### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

#### Main Objectives:

- Testing of industrial and agricultural materials and products for quality, grade composition with reference to standard specifications.
- Testing and assesment of industrial raw materials and finished products for developepment and modernization of industry.
- Assistance to govt. agencies in the text of tariff polices, export rebates and determination of excise and custom duty.

#### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	10	31	44

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Standards Development Centre

### Postal Address:

PITAC Compound, Ferozuddin Road, Lahore

Telephone: 042-5885377/5885477

Fax: 042-5885477

### Parent Organization:

Pakistan Standards and Quality Control Authority

### Name of Administrative Ministry / Department:

Ministry of Science & Technology, Islamabad

### Main Objectives:

- Establishment of national standards.
- Testing and assesment of industrial raw materials and finished products to establish their quality, grade and composition with reference to National or International Specifications.
- To assist the metal and metallurgical industries of Pakistan by solving their technical problems, increasing and improving productivity through transfer of technology by decreasing waste and to save foreign exchange.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	15	18	116	152

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

### (b) Patents / Processes / Products:

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Technical Services Center (Former Metal Industry Research and Development Centre)

### Postal Address:

125-A, Industrial Area, Kot Lakhpat, Lahore

**Telephone:** 042-5118022-5111804

**Fax:** 042-5122829

**E-mail:** MIRDC@Sol.net.pk

### Parent Organization:

Pakistan Standards and Quality Control Authority

### Name of Administrative Ministry / Department:

Ministry of Science and Technology, Islamabad

### Main Objectives:

- To assist and coordinate activities of various bodies for the full exploitation of Pakistan' mineral wealth through improved metallurgical processing and industrial production of metals and alloys and their transformed products.
- To assist the metal working industry through technical advice and assistance in product improvement, technological advancement and increased productivity.
- To promote the development of metallurgical techniques and skills in the country through the transfer of technology and expertise in the metallurgical fields.
- To promote dissemination of technical data, and flow of information in the metallurgical fields, and in doing so, provide information on latest technological innovations and processes to the industrial units of the country.

- To provide technical advice to the Government in the establishment of new metallurgical industries, and upgrading of the existing plants.
- To create favourable conditions for the establishment of institutional facilities where development work on metallurgical subjects and problems can be carried out.

### **Manpower Engaged in R&D (2000)**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS(Engr.) equivalent</b>	<b>M.Sc./B.E./BS(Engr) MBBS/DVM equivalent</b>	<b>Others</b>	<b>Total</b>
0	9	2	61	72

### **R&D Output (1998-2000)**

#### **(a) R&D Manpower / Scientific Publications:**

<b>Manpower Produced</b>		<b>Publications</b>				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	66	66	0	66

#### **(b) Patents / Processes / Products:**

<b>Patents Registered</b>	<b>Processes and Products Improved/Developed</b>	<b>Processes and Products Commercialized</b>
3	3	5

#### **(c) Any Other Achievements**

It (former MIRDC) has direct financial impact in foreign exchange through local development (import substitutes) and saving of valuable foreign exchange.

## **Transfer Technology Institute**

### **Postal Address:**

NARC, Chak Shahzad, Park Road, Islamabad

**Telephone:** 051-9255036

**Fax:** 051-9255034

### **Parent Organization:**

National Agricultural Research Center/Pakistan Agricultural Research Council

### **Name of Administrative Ministry / Department:**

Ministry of Food, Agriculture and Livestock, Islamabad

### **Main Objectives:**

- To disseminate the tested technologies at research stations to the farmers, which were unaware of these technologies

- To establish linkages with the line departments for utilization of technologies generated at NARC on the farmer's fields.

### Manpower Engaged in R&D (2000)\*

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\*Included in NARC

### R&D Output (1998-2000)\*

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

\*Included in NARC

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- Various courses relating to agriculture, animal health and production, farm mechanization, vertebrate pest control, honey bee making and spray applications were arranged for the activists from various NGOs.
- The institute also arranged exhibition on World Food Day, arrange farmers day at NARC and takes part on campaign like tree plantation, safe use of pesticides to avoid health hazards in creating awareness among farmers.

## Space, Meteorology and Geophysics

### Directorate of Regional Meteorological Center

**Postal Address:**

Karachi

**Parent Organization:**

Pakistan Meteorological Department

**Name of Administrative Ministry / Department:**

Ministry of Defence, Islamabad

**Main Objectives:**

- Management and supervision of Meteorological observation located in Balochistan and Sindh provinces.
- Issuance of daily, weekly and seasonal weather forecasts to print and news media.
- Detection, tracking forecasting of tropical storms, tropical cyclones, storm, surges, depressions and intense weather system.
- Issuance of Coastal areas and Marine Forecasts.

**Manpower Engaged in R&D (2000)\***

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\* included in Pakistan Meteorological Department

**R&D Output (1998-2000)\***

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

\* included in Pakistan Meteorological Department

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## **Geophysical Centre**

**Postal Address:**

Post Box No. 2, Brewery Road, Quetta

**Telephone:** 081-853032

**Fax:** 081-853032

**Parent Organization:**

Pakistan Meteorological Department

**Name of Administrative Ministry / Department:**

Ministry of Defence / Aviation Division, Rawalpindi

**Main Objectives:**

- To analyze the seismograms, prepare the data and send it to the main analyses centre G.C. Quetta. The data are also used in preparation of seismic zone map of Pakistan, town planning, construction of dams, roads, airports, etc. and it also can be used in mitigation and counter measures of disaster of earthquake for safety to human lives, properties of citizen by preparation and modification of building codes of different seismic zone of Pakistan accordingly.
- To produce continuous data of the main transient field and to utilize these data for scientific investigation and geological surveys. Research in Geomagnetism envisages the utilization of the data collected by magnetic observatory in the country for better understanding of the electrical and magnetic condition of our environment. The data so collected also supplements the efforts of the geologists in the exploration and tapping of under ground minerals, oil and water resources on the one hand and on the other caters to the requirements of Survey Department in the preparation of national isogonics charts whose vital importance for navigation purpose is so well known.
- For reduction of prospecting and field survey results the geomagnetic observatory supplies the daily variation data to Geological Survey, Survey of Pakistan, Oil and Gas Corporation, Universities of country and other agencies in the country.
- Laboratory facilities at the institute are made available to Survey of Pakistan and Geological Survey for comparison, calibration and standardization of their magnetic equipment. In the past Post-graduate geological students of the

Punjab University had received elementary practice training in the handling and maintenance of geomagnetic instruments at Quetta observatory. Similar facilities can be provided to students of other universities. The solar data is used in the solar energy utilization, solar energy values are used for the analysis to assess its potential in the region. By using the data designing of the thermal devices can be achieved. The data is also used in the photovoltaic engineering, thermal loads and natural illumination of buildings, estimation of radioactive environment of plant, amount of the snow melt and evaporation from reservoirs.

- Ozone station was established for monitoring the stratospheric ozone of the region, the data of it will be very helpful for the patients who have been victimized by the ultraviolet radiation. The data can also be used in the various field of medicine. While establishing a major industry a full use of this data can be made, so that the amount of chloro fluoro carbon in the atmosphere could be maintained below the dangerous level.

#### **Manpower Engaged in R&D (2000):**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS (Engr.) Equivalent</b>	<b>M.Sc./B.E./BS (Engr) MBBS/DVM Equivalent</b>	<b>Others</b>	<b>Total</b>
2	0	5	10	17

#### **R&D Output (1998-2000)**

##### **(a) R&D Manpower / Scientific Publications:**

<b>Manpower Produced</b>		<b>Publications</b>				
<b>M.Phil.</b>	<b>Ph.D.</b>	<b>International Journals</b>	<b>National Journals</b>	<b>Review Articles</b>	<b>Books</b>	<b>Others</b>
0	0	0	0	0	0	0

##### **(b) Patents / Processes / Products:**

<b>Patents Registered</b>	<b>Process and Products Improve /Developed</b>	<b>Process and Products Commercialized</b>
0	0	0

##### **(c) Any Other Achievements**

Supply of data to researchers.



## Geological Survey of Pakistan

### Postal Address:

Sariab Road, P.O.Box 15, Quetta

**Telephone:** 081-9211032/9211041

**Fax:** 081-9211018/9211361

**E-mail:** qta@gspgov.pk

**Website:** www.gsp.gov.pk

### Parent Organization:

Geological Survey of Pakistan

### Name of Administrative Ministry / Department:

Ministry of Petroleum and Natural Resources, Islamabad

### Main Objectives:

- Geological mapping and geo-scientific surveys.
- Basic and applied research.
- Environmental investigation for an accurate understanding of the country's geological resources and its prudent management.

### Manpower Engaged in R&D (2000):

Ph.D.	M.Phil./ME/ MS (Engr.) Equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM Equivalent	Others	Total
13	5	146	0	163

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	52	25	8	3	35

#### (b) Patents / Processes / Products:

Patents Registered	Process and Products Improve /Developed	Process and Products Commercialized
0	0	0

#### (c) Any Other Achievements

GSP does not produce M.Phil. and Ph.D. However, research work of GSP students leading towards these degrees is carried out in the department.

## **Geosciences Laboratory**

**Postal Address:**

P.O. Box 1461, Islamabad

**Telephone:** (051) 9255139-40

**Fax:** (051) 9255136

**Parent Organization:**

Geological Survey of Pakistan

**Name of Administrative Ministry / Department:**

Ministry of Petroleum & Natural Resources, Islamabad

**Main Objectives:**

- Basic and applied research in geology particularly in the fields of Petrology, Geochemistry, pale magnetism and exploration and Environmental Geochemistry.
- Supportive and adaptive research for the GSP's mapping and exploration programme.
- Responsive research studies, investigations and analysis on the request of the earth sciences departments/organizations, private and public sectors, mining companies and industries.
- Research and the exploration-oriented agrochemical, geophysical and other thematic surveys in geologically perspective area of the country.
- Metallogenic zonation and mineral deposit modeling to assist in accelerated mineral exploration in the country.
- Standardization of analytical procedures and research for the developments of new methods and techniques of rock and mineral analyses and preparation of geological standard reference materials (SRM).
- Building a reference collection of important Pakistani rocks and minerals with their standard chemical analyses and petrological/minerological determinations.
- International collaboration and integrated and multidisciplinary collaborative research with Pakistani and foreign scientists in areas of special interest/significance in Pakistan.
- Organization of mono- and multi-disciplinary training programmes and other technical activities aimed at enhancing professional skills and capabilities of GSP/Geo Lab. researchers and other Pakistani geoscientists.
- Geoscience, consultancy and contractual work.

- Publication, information and data management.

### Manpower Engaged in R&D (2000):

Ph.D.	M.Phil./ME/ MS (Engr.) Equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM Equivalent	Others	Total
9	0	11	0	20

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	12	55	0	7	50

#### (b) Patents / Processes / Products:

Patents Registered	Process and Products Improve /Developed	Process and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Lectures and courses

## Institute of Meteorology and Geophysics

#### Postal Address:

P.O.Box No.8454, Met.Complex,University Road, Karachi

#### Parent Organization:

Pakistan Meteorological Department

#### Name of Administrative Ministry / Department:

Ministry of Defence, Rawalpindi

**Telephone:** 021-8112884

**Fax:** 021-8112885

**E-mail:** pmdimg@khi.paknet.com.pk

**Website:** www.met.gov.pk

#### Main Objectives:

- Training of meteorological personnel i.e. meteorological personnel of PAF, Navy and brother muslim countries.

### Manpower Engaged in R&D (2000):

Ph.D.	M.Phil./ME/ MS (Engr.) Equivalent	M.Sc./B.E./BS (Engr) MBBS/DVM Equivalent	Others	Total
2	2	9	7	20

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products:

Patents Registered	Process and Products Improve /Developed	Process and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Pakistan Meteorological Department

#### Postal Address:

HQs Office, P.O.Box No.1214, Sector H-8, Islamabad

#### Parent Organization:

Pakistan Meteorological Department

#### Name of Administrative Ministry / Department:

Ministry of Defence, Rawalpindi

**Telephone:** 051-9257314

**Fax:** 051-4432588

**E-mail:** pmisba@isb.paknet.com.pk

**Website:** www.paknet.com

#### Main Objectives:

- Safety of civil aviation operations, VVIP flights and marine activities.
- Mitigation of natural disasters such as tropical cyclones, heavy rains, floods, earthquakes, droughts, etc due to meteorological, hydrological, agrometeorological and geophysical phenomena;
- Socio-economic development of the country based on climatic and agroclimatic potential of different areas.

- Boosting up agricultural productivity of the country by providing agromet services to the farming community.
- To investigate the behavior of the atmosphere and exploiting this knowledge for short and long term weather predictions.
- To provide meteorological, hydrological and geophysical data to the scientists, architects and planners.

### Manpower Engaged in R&D (2000):

Ph.D.	M.Phil./ME/ MS (Engr.) Equivalent	M.Sc./B.E./BS (Engr)/ MBBS/DVM Equivalent	Others	Total
1	5	140	0	146

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	5	11	0	0

#### (b) Patents / Processes / Products:

Patents Registered	Process and Products Improve /Developed	Process and Products Commercialized
0	2	0

#### (c) Any Other Achievements

Improved flood forecasting, improved weather forecasting. Developmmt of cloud seeding technology. Harvesting wind energy potential.

## Pakistan Space and Upper Atmosphere Research Commission

#### Postal Address:

P.O.Box. No.8402, Karachi-75270

#### Parent Organization:

Pakistan Space and Upper Atmosphere Research Commission

#### Name of Administrative Ministry / Department:

Strategic Plans Division, Ministry of Defence, Islamabad

**Telephone:** 021-8150765-79

**Fax:** 021-8144928

**E-mail:** suparco@digicom.net.pk

**Web-site:** www.suparco.gov.pk

**Main Objectives:**

- R & D promotion of application of space science and technology for the socio-economic development of Pakistan

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
12	80	157	63	312

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	36	7	4	0	3

**(b) Patents / Processes / Products:**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	18	1

**(c) Any Other Achievements**

Services are provided in the form of satellite remote sensing data to large number of national and private organizations. Environmental monitoring services are also provided.

**Regional Meteorological Center****Postal Address:**

Lahore

**Parent Organization:**

Pakistan Meteorological Department

**Name of Administrative Ministry / Department:**

Ministry of Defence, Islamabad

**Main Objectives:**

- Issuance of daily, weekly and seasonal weather forecasts to print and news media.
- Flight documentation at all the national and international airports under its jurisdiction along- with individual met. briefing to pilots.
- Detection of depression and intense weather system

- Standardization of observatory instruments through calibration with regional standards.
- Opening of new observatories as per increasing demand of civil and defence aviation.

### Manpower Engaged in R&D (2000)\*

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

\* included in Pakistan Meteorological Department

### R&D Output (1998-2000)\*

#### (a) R&D Manpower / Scientific Publications:

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

\* included in Pakistan Meteorological Department

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Transport & Communication

### National Transport Research Centre

**Postal Address:**

Street No: 6, Sector H-8/2, Islamabad

**Parent Organization:**

National Transport Research Centre

**Name of Administrative Ministry / Department:**

Ministry of Communications, Islamabad

**Main Objectives:**

- To carry out research studies required for sound transportation planning and road engineering.
- To implement/execute pilot demonstration projects to establish the viability of the research efforts undertaken in the Centre.
- To organize training courses, seminars and symposia on various aspects of transportation planning, design, construction, operation and maintenance.
- Help other institutions to develop indigenous expertise in the field of highway engineering and transportation.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	8	5	8	21

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	36

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil



## Pakistan Railway Academy

**Postal Address:**

Walton, Lahore

**Name of Administrative Ministry / Department:**

Ministry of Railway, Islamabad

**Parent Organization:**

Ministry of Railway

**Telephone:** 042- 9220487

**Fax:** 042- 9220564

**Main Objectives:**

- To impart pre-service and in-house training of Railway staff and officers.
- To advise the Railway administration on issues related with railway operations.
- To undertake Operational Research on matter referred by railway administration.
- To conduct training courses for participants from foreign railways of the Middle East & Africa.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	4	0	5

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications:**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved/Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Road Research and Material Testing Institute

### Postal Address:

Punjab Highway Department Research Campus, Near Punjab University,  
Postal Code # 54590, Lahore

Telephone: 042-5883192

Fax: 042-5885459

E-mail: [rrmti@usa.net](mailto:rrmti@usa.net)

### Parent Organization:

Road Research and Material Testing Institute

### Name of Administrative Ministry / Department:

Punjab Highway Department, Punjab

### Main Objectives:

- Soil survey and sampling.
- Testing of roads building materials.
- Structural design of new pavements.
- Design of overlays for existing pavements.
- Quality assurance of works executed by Punjab highway department and private sector.
- Evaluation of existing roads, investigations into causes of distress and recommendations for improvement/remedial measures.
- Asphalt concrete in design.
- Cement concrete mix design.
- Determination of bearing capacity of bridge foundations.
- Assistance to regional labs. in quality control.
- Applied research studies.
- Training of field staff on concept of road construction and quality control.
- Query sources approval.
- Updating specifications.
- Any other special assignment entrusted by the Government of Pakistan.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	5	2	8

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications:**

<b>Manpower Produced</b>		<b>Publications</b>				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	6	0	0	0

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved/Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any Other Achievements**

Nil

## Higher Education and Research

### Agricultural Sciences

#### Department of Agriculture Economics

**Postal Address:**

NWFP Agriculture University, Peshawar

**Telephone:** 091-9216518      **Fax:** 091-9216520

**Main Objectives:**

- Teaching and research

#### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	5	2	8

#### R&D Output (1998-2000)

##### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	2	0	0	0

##### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

##### (c) Any Other Achievements

Nil

#### Department of Animal Nutrition

**Postal Address:**

NWFP Agriculture University, Peshawar

**Telephone:** 091-9216572-9/Ext. 381      **Fax:** 091-5701809

**E-mail:** habib.nutr@brain.net.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	3	4	0	7

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
16	0	1	14	4	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

**(c) Any Other Achievements**

- Revision of curriculum, improvements in research and teaching activities.
- Participation in international and national seminars, symposium and workshops.
- Extending technical help to line departments and NGOs in formulation, evaluation, and implementation of R&D activities.

**Department of Agricultural Chemistry****Postal Address:**

N.W.F.P Agricultural University, Peshawar

**Telephone:** 091-9216903

**Fax:** 091-841933

**E-mail:** drhamidshah@yahoo.com

**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	10	0	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	8	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Entomology

#### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 091-9216469

Fax: 091-9216470

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	5	0	6

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	1	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Food Science and Technology****Postal Address:**

NWFP Agriculture University, Peshawar

**Telephone:** 091-9216558

**Fax:** 091-9213052

**Main Objectives:**

- Provide academic excellence to B.Sc(Hons.),M.Sc(Hons) and Ph.D. students.
- To conduct research on post harvest handling and processing of food.
- Provide advisory services to the people interested in the art of preservation of food.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	4	0	8

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2	1	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

- Provided advisory services to the people interested in the art of preservation of food.
- Prepared different types of fruits squashes and sold on commercial basis.

## Department of Horticulture

### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 091-9216518

Fax: 091-9216520

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	4	0	0	11

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	2	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Livestock Management and Production

### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 091-9216518

Fax: 091-9216520

### Main Objectives:

- Teaching and research



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	4	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	1	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Established a livestock farm for holstein cattle and nili-ravi buffalo at the university.

### Department of Poultry Science

#### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 091-9216518 Fax: 091-9216520

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	5	0	6

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	2	20	0	1	3

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Develop a model poultry farm economic that includes various components and can predict changes in cost of production, cost benefit ratio and other production parameters for commercial boiler, layers and rural poultry.

## Department of Human Nutrition

### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 091-9216557

Fax: 091-9216520

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	2	0	0	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	10	2	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Plant Breeding & Genetics****Postal Address:**

NWFP Agriculture University, Peshawar

**Telephone:** 091-9216892      **Fax:** 091-9216520**Main Objectives:**

- Teaching and research.
- To disseminate the improved technology
- To uplift the life standard of farmers in NWFP through the development of high yield crops.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	2	0	0	10

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	2	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
1	0	0

**(c) Any Other Achievements**

Nil

## Department of Plant Pathology

### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 9216552

Fax: 091-9216520

E-mail: ssk1@psh.paknet.com.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	10	15	0	27

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10	0	2	18	3	2	10

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Training in mushroom cultivation and spawn production

## Department of Plant Protection

### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 091-9216518

Fax: 091-9216520

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	2	0	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
25	0	0	5	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Soil and Environmental Sciences

#### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 9216548

Fax: 9216520

E-mail: zahirsh@brain.net.pk

#### Main Objectives:

- Imparting education in soil and environmental sciences at B.Sc,M.Sc and Ph.D. levels.
- Conducting basic and applied research.
- Identify the farmers problems and provide technical advise for its solutions.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	1	0	0	11

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	10	58	0	1	20

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Worked to impart quality education & research.

## Department of Water Management

### Postal Address:

NWFP Agriculture University, Peshawar

**Telephone:** 091-9216544

**Fax:** 091-9216544

**E-mail:** jamalkhan@brain.net.pk

### Main Objectives:

- Development and implementation of comprehensive teaching programme i.e B.Sc and M.Sc(Hons.) in Water Management.
- To conduct applied research with main focus on the practical problems of Water Management.
- Outreach activities (dissemination of research findings and training of farmers, field staff etc.)

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	5	0	0	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
36	0	3	25	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (b) Any Other Achievements

Nil

## Department of Weed Science

### Postal Address:

NWFP Agriculture University, Peshawar

Telephone: 091-9216542, 9216572-9/Ext.3052 Fax: 091-9213052

E-mail: [kbmarwat@hotmail.com](mailto:kbmarwat@hotmail.com)

### Main Objectives:

- Students training in the field of weed science
- Outreach activities with farmers.
- Applied research on farmer's field.
- To prepare weed control package for various crops.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	1	0	3

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Faculty of Nutrition Sciences****Postal Address:**

NWFP Agriculture University, Peshawar

**Telephone:** 091-9216556      **Fax:** 091-9216520**Main Objectives:**

- Teaching and research .
- Outreach and activities.
- Publications of research findings.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	0	6	0	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	18	12	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil



## Department of Agricultural Economics

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-771363 Fax: 0221-765300

### Main Objectives:

- Teaching to undergraduate and graduate students.
- Academic research to complete M.Sc thesis.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	11	1	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	20	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Agronomy

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-765870 Fax: 0221-765300

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	3	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	5	1	14	35	2	1

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Anatomy and Histology

#### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 02233-5869

Fax: 02233-5300

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	5	5	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	7	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Animal Breeding & Genetics****Postal Address:**

Sindh Agriculture University, Tandojam

**Telephone:** 0221-771197**Fax:** 0221-765300**Main Objective:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	7	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	6	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Animal Nutrition

### Postal Address:

Sindh Agriculture University, Tandojam

**Telephone:** (0221)765870      **Fax:** 0221-765300

### Main Objectives:

- Teaching of animal nutrition courses
- Research for the degree of M.Sc, M.Phil. and Ph.D.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	2	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	0	13	12	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Animal Reproduction

### Postal Address:

Sindh Agriculture University, Tandojam

**Telephone:** 0221-765870      **Fax:** 0221-765300

### Main Objectives:

- Teaching at graduate and postgraduate level.
- Research at graduate and postgraduate level.

- Out research services to the farmer's community in the field of animal reproduction.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3	3	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	5	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Basic Engineering

#### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-5870319

Fax: 0221-765300

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	5	0	6

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	10	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Dairy Technology

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-765870

Fax: 0221-765300

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	2	3	6

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Entomology

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-765870/Ext-380

Fax: 0221-765300

### Main Objectives:

- Teaching students at undergraduate and postgraduate level.
- Research at undergraduate and postgraduate level.
- Advisory services to farmers.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	2	45	0	57

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
131	0	0	24	10	3	7

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Farm Power and Machinery

### Postal Address:

Faculty of Agri. Engg., Sindh Agriculture University, Tandojam

Telephone: 0221-765870-247

Fax: 0221-765300

**Main Objectives:**

- Teaching and research. Give advice on various aspects of higher education & research engineering to landlords and farmers.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	4	0	8

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	5	3	4	0	0	1

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2	0

**(c) Any Other Achievements**

Planning to offer Agro-technical course for the farmer's and youth in order to produce self employed manpower. The course include

- Tractor operators course
- Technicians course
- Course on mechanization

**Department of Farm Structure****Postal Address:**

Faculty of Agricultural Engineering, Sindh Agriculture University, Tandojam

**Telephone:** 02233-5300

**Fax:** 02233-765300

**Main Objectives:**

- Teaching and research.



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	6	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
4	0	2	15	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

#### (c) Any Other Achievements

Nil

## Department of Horticulture

#### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: (0221) 765870 Ext.410

Fax: 0221-765300

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	7	0	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	10	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Land & Water Management.****Postal Address:**

Sindh Agriculture University, Tandojam

**Telephone:** (0221)765869

**Fax:** (221)765300

**E-mail:** vcsau@hotmail.com

**Main Objectives:**

- Surveying, leveling, conservation engineering, hydrological science, salt affected/ water logged soils, water quality, water management, soil water relationship.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	1	0	4

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	1	0	11	1	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Livestock Management

### Postal Address:

Sindh Agriculture University, Tandojam

**Telephone:** (02233)765870/Ext.202

**Fax:** 02233-765300

### Main Objectives:

- Teaching DVM/M.Sc(Hons.) classes.
- Research for the degrees of M.Sc,M.Phil. & P.hD. and out research programmes.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	2	0	3

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
21	0	0	9	0	4	5

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Microbiology

### Postal Address:

Sindh Agriculture University, Tandojam

**Telephone:** 0221-765870

**Fax:** 0221-765300

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	0	0	2

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	13	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Parasitology

#### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-765870/212

Fax: 0221-765300

#### Main Objectives:

- Teaching and research.
- Guide to postgraduate students for award of Ph.D. degrees.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	30	0	32

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2	7	62	0	2	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Plant Breeding and Genetics

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 02233-5870

Fax: 02233-5300

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	1	8	0	14

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	3	0	48	4	5	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Plant Pathology**

**Postal Address:**

Sindh Agriculture University, Tandojam

**Telephone:** 0221-348

**Fax:** 0221-765300

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	2	7	0	10

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
13	0	2	7	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Plant Physiology and Biochemistry**

**Postal Address:**

Sindh Agriculture University, Tandojam-70060

**Telephone:** 0221-765870/Ext.352

**Fax:** 0221-765300

**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	2	3	0	11

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	40	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Plant Protection

#### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-765870

Fax: 0221-765300

#### Main Objectives:

- Teaching and research at graduate & postgraduate level.
- Outreach services to the farmer community in the field of plant protection.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	6	0	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	1	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Poultry Husbandry

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-765870

Fax: 0221-765300

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	2	0	9	12

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	1	9	0	0	1



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Rural Sociology****Postal Address:**

Faculty of Agricultural Sciences, Sindh Agriculture University, Tandojam

**Telephone:** (02233)5870 Ext.633**Fax:** 0221-765300**Main Objectives:**

- Teaching graduate and postgraduate students.
- Research.
- Advisory services.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E.BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	0	3

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	2	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Soil Science

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-765780

Fax: 0221-765300

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	6	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	10	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Surgery and Obstetrics

### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221-5415

Fax: 0221-765300

### Main Objectives:

- Training of manpower.
- Research in the field of surgery.
- Provide veterinary health and advisory services to the farmers.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	3	0	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	3	0	0	4

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Veterinary Medicine

#### Postal Address:

Sindh Agriculture University, Tandojam

Telephone: 0221- 765870

Fax: 0233-765300

#### Main Objectives:

- Teaching and extension services related to animal health.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	2	0	2

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	13	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Veterinary Pathology

### Postal Address:

Sindh Agriculture University, Tandojam

### Telephone:

Fax: 0221-765300

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	1	0	2

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	5	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Veterinary Physiology and Biochemistry**

**Postal Address:**

Sindh Agriculture University, Tandojam

**Telephone:** 0221-765870

**Fax:** 0221-765300

**Main Objectives:**

- Teaching graduate and postgraduate students.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	3	0	4

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	6	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Agricultural Economics**

**Postal Address:**

University of Agriculture, Faisalabad

**Telephone:**041-30281-89,Ext.286

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching and research at undergraduate and postgraduate level.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	11	1	12

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	13	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Agricultural Education****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-170/390

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	2	0	3

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	36	0	2	100

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

In addition to the M.Sc graduate produced, 199 B.Sc (Hons) & 76 (B.Ed) graduates were produced.

## Department of Agricultural Entomology

### Postal Address:

Department of Agricultural Entomology, University of Agriculture, Faisalabd

**Telephone:** 041-9200161-9/Ext 271, 431      **Fax:** 041-647846

### Main Objectives:

- Teaching to B.Sc.(Hons.), M.Sc.(Hons.) Agri. and Ph.D. courses.
- Research leading to above-mentioned degrees as well as independent research by the teacher.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	0	6	0	15

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	9	7	150	41	1	8

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	5	0

### (c) Any Other Achievements

Nil

## Department of Agricultural Marketing

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70/406

**Fax:** 041-9200183

**E-mail:** drkmustafa@hotmail.com

**Website:** www.uaf.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	3	0	4

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	20	5	1	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(C) Any Other Achievements**

Nil

**Department of Agriculture Extension****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-69/489**Fax:** 041-619825, 9200186**E-mail:** dr-tanvial@yahoo.com**Website:** chagext@wol.net.pl**Main Objectives:**

- Teaching and research.
- Extension services

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	5	0	0	8

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	5	15	2	9	1

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

**(c) Any Other Achievements**

1. Consultancy services being provided to Public organizations and various Non Government Organizations.

## Department of Agronomy

### Postal Address:

University of Agriculture, Faisalabad

Telephone: 041-9200161-70

E-mail: [agronomyuaf@hotmail.com](mailto:agronomyuaf@hotmail.com)

Fax: 041-647846, 9200187

Website: [www.uaf.edu.pk](http://www.uaf.edu.pk)

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
17	9	0	0	26

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	21	6	99	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- The faculty in the department of Agronomy is engaged in imparting training and creating awareness among the farmers about the use of innovations/modern production technologies in crop production. Popular articles are contributed by the faculty in the Zarii Digest, which is largely circulated in Faisalabad Division.
- Short course in Seed Technology are offered in summer semester by the faculty. The courses are of four weeks duration and the medium of instructions is Urdu. Pakistan Society of Agronomy (PSA) has also been

established and the objective is to provide a forum for intellectual interactions among the teachers, researchers and scientists in Agronomy related disciplines. It will help improving teaching and research activities in the country.

## Department of Animal Breeding & Genetics

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70/Ext. 416    **Fax:** 041-647846

**Website:** www.uaf.edu.pk

### Main Objectives:

- To teach undergraduate and postgraduate classes of animal breeding & genetics.
- To conduct research in the field of population genetics and cytogenetics.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr)/ equivalent	M.Sc./B.E./ BS(Engr)/ MBBS/DVM equivalent	Others	Total
5	1	1	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
6	1	11	22	4	5	1

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- Farmers guidance
- Development of animal breeding and genetics policy

## Department of Animal Nutrition

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70/Ext.460

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

### Main Objectives:

- Teaching and research at undergraduate/postgraduate levels.
- Technical assistance to the food industry and progressive farmers to solve the nutrition problems.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	0	4	0	10

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	7	15	35	18	4	10

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	1

#### (c) Any Other Achievements

Nil

## Department of Animal Reproduction

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70 Ext.437,613646

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Undergraduate & postgraduate teaching.
- Research on various aspects of animal reproduction.
- Clinical diagnostic and extension work and services to farmers/livestock owners.
- Training of in-service veterinary and para veterinary staff.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
8	0	1	0	9

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	10	35	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1( Semen technology)	1( Buffalo & cattle semen)

**(c) Any Other Achievements**

Trained 94 in-service stock assistants and 3 veterinarians in A.I from all over the country, including Azad Kashmir, during 1998-2000

**Department of Clinical and Medicine Surgery**

**Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** (041)30281-89/Ext..436.

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Undergraduate and postgraduate teaching.
- Research on various aspects of animal medicine and surgical problems.

- Clinical diagnostic and extension work and services to farmers/livestock owners.
- Training of para-veterinary staff.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	4	2	0	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
52	0	14	35	10	1	1

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2	0

#### (c) Any Other Achievements

Fifteen thousand animals treated at outdoor veterinary hospital.

### Department of Continuing Education

#### Postal Address:

Department of Education and Extension, Division of Education & Extension  
University of Agriculture, Faisalabad

**Telephone:** 041-9200186, 9200161-70/Ext483

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

#### Main Objectives:

- Teaching and research.
- Extension.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	3	0	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	42	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	9	0

#### (c) Any Other Achievements

Training facilities provided to the rural masses.

### Department of Cooperation and Credit

#### Postal Address:

University of Agriculture, Faisalabad

Telephone: 041-9200161-69/Ext. 392

Fax: 041-647846

Website: [www.uaf.edu.pk](http://www.uaf.edu.pk)

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	2	0	3

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	8	52	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Crop Physiology****Postal Address:**

University of Agriculture, Faisalabad-38040

**Telephone:** 9200161-70/385**Fax:** 041-647846**E-mail:** shahzadbasra@hotmail.com**Website:** www.uaf.edu.pk**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	2	0	0	5

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	0	7	17	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0



**(c) Any Other Achievements**

Nil

**Department of Farm Machinery & Power**

**Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 9200161-170/Ext.335

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching and research both at postgraduate/undergraduate level.
- Short term training programme for on job trainees.
- Collaboration with national/international academic/research institutes.
- Collaboration with industrial sector.

**Manpower Engaged in R&D (2000)**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS(Engr) equivalent</b>	<b>M.Sc./B.E./BS(Engr) MBBS/DVM equivalent</b>	<b>Others</b>	<b>Total</b>
6	4	0	0	10

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

<b>Manpower Produced</b>		<b>Publications</b>				
<b>M.Phil.</b>	<b>Ph.D.</b>	<b>International Journals</b>	<b>National Journals</b>	<b>Review Articles</b>	<b>Books</b>	<b>Others</b>
0	2	8	26	0	0	36

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	3 (In process)	0

**(c) Any Other Achievements**

Nil

## Department of Farm Management

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-30281-89

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	0	0	3

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Fibre Technology

### Postal Address:

University of Agriculture, Faisalabad,

**Telephone:** 041-9200161-9 Ext. 242

**Fax:** 041-647846

**E-mail:** fibertechnology@yahoo.com

**Website:** www.uaf.edu.pk

### Main Objectives:

- Teaching.
- Research in fibre and textile technology.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	7	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	40	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Food Technology

#### Postal Address:

University of Agriculture, Faisalabad

Telephone: 041-647846

Fax: 041-647846

Website: www.uaf.edu.pk

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	7	0	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	40	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	1

**(c) Any Other Achievements**

Development of new liaison with other food industries of the country.

**Department of Forestry, Range Management and Wildlife.****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:**

**Fax:** 041-647846

**E-mail:** Khan353@yahoo.com

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching forestry, range management and wildlife at B.sc, M.Sc(Hons.) and Ph.D. level.
- Conducting research in the above three disciplines.
- Extension services to the farmers.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	5	0	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	6	12	62	12	22	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	4	0

**(c) Any Other Achievements**

Short courses on nursery practice and taxidermy of birds

**Department of Horticulture****Postal Address:**

University of Agriculture, Faisalabad-3840

**Telephone:** 041-9200161-70/Ext. 324

**Fax:** 041-9200187, 647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	50	63	0	123

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2	2	6	0	2	15

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1 (Rose essential oil process)	1 (Rose essential oil)

**(c) Any Other Achievements**

Nil

## Department of Irrigation and Drainage

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:**041-9200161      **Fax:**041-647846      **E-mail:**  
awanqa@fsd.paknet.com.pk      **Website:** www.uaf.edu.pk

### Main Objectives:

- To teach course at undergraduate and post-graduate level leading to the degree of B.Sc (Hons) and Ph.D. in the field of agricultural engineering
- To conduct research on issues related to the field of irrigation and drainage.
- To develop and use model for water resources planning and management with Remote Sensing and GIS.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	4	0	0	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
45	0	9	39	4	1	20

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Generation of research data and issues.

## Department of Livestock Management

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70/415

**Fax:** 041-647846

**Website:** [www.uaf.edu.pk](http://www.uaf.edu.pk)

### Main Objectives:

- Teaching undergraduate and postgraduate courses.
- Offering short courses.
- Postgraduate research in livestock management.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	3	0	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	3	10	30	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Physiology and Pharmacology

### Postal Address:

Faculty of Veterinary Science, University of Agriculture, Faisalabad

**Telephone:** 041 624607

**Fax:** 041-647846

**E-mail:** [nawazn@paknet4.ptc.pk](mailto:nawazn@paknet4.ptc.pk)

**Website:** [www.uaf.edu.pk](http://www.uaf.edu.pk)

**Main Objectives:**

- Teaching graduate and postgraduate students.
- Postgraduates and Ph.D. teaching and research in Physiology & Pharmacology.
- Training veterinary assistant diploma course students.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	20	0	21

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	14	28	12	4	6

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Plant Breeding and Genetics****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70/320

**Fax:** 041-647846

**E-mail:** piak@brain.net.pk

**Website:** www.uaf.edu.pk

**Main Objectives:**

- To teach courses on plant breeding and genetics, biotechnology and genetic engineering at undergraduate and postgraduate levels.
- To supervise M.Sc and Ph.D. student for their research .
- To train manpower for breeding varieties of different crop.



- To generate genetic information required for the development of new genotypes in various crops.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
11	0	2	0	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	3	7	25	2	2	3

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	Numbers of genotypes of cotton, wheat pulses and oilseed crops are developed, the material is under advance testing	0

#### (c) Any Other Achievements

Services are rendered to the farmers on the cultivation of crop varieties and to the Ministry of Agriculture for making plans and policies on various aspects of crop production in the province.

## Department of Plant Pathology

### Postal Address:

University of Agriculture, Faisalabad-38040

**Telephone:** 041-9200161-70, 627098/208

**Fax:** 041-647846

**E-mail:** mushroomking021@yahoo.com

### Main Objectives:

- Teaching and research at undergraduate and postgraduate level.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	0	3	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
26	6	3	93	2	2	4

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	2

#### (c) Any Other Achievements

1. Developed plant disease diagnostic laboratory.

## Department of Poultry Husbandry

#### Postal Address:

University of Agriculture, Faisalabad

Telephone:041-30281-89 Ext.-214

Fax: 041-647846

Website: www.uaf.edu.pk

#### Main Objectives:

- Teaching and research both at undergraduate and postgraduate levels.
- Extension services and technical guidance to the poultry farmers.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	1	0	0	5

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	13	26	1	2	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Rural Sociology

### Postal Address:

University of Agriculture, Faisalabad

Telephone: 30281/370

Fax: 041-647846

Website: www.uaf.edu.pk

### Main Objectives:

- Teaching and research at undergraduate and postgraduate level.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	4	0	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Structures & Environmental Engineering****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:**041-9200161-7 Ext. 434

**Fax:** 041-9200183

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching agricultural engineering (environmental engineering) to graduate & post graduate students.
- Research on environmental problems.
- Development of energy saving machinery.
- Research on agricultural engineering problems.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	3	0	6	13

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	18	9	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
1	0	0

**(c) Any Other Achievements**

Nil

## Department of Veterinary Anatomy

### Postal Address:

Department of Veterinary Anatomy, University of Agriculture, Faisalabad-38040

**Telephone:** 041-9200161-70/422

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

### Main Objectives:

- To train undergraduate and post graduate students in Veterinary Anatomy.
- To train the veterinary assistants.
- To conduct research in the field of veterinary anatomy.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	3	1	0	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	5	6	10	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Veterinary Microbiology

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-30281-89-428

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	3	0	0	5

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
15	0	10	35	2	1	29

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Veterinary Parasitology****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-30281 Ext.424

**Fax:** 041-647846

**E-mail:** zafaruaf@yahoo.com

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching D.V.M and Ph.D. courses.
- Research on parasites and parasitic diseases.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	0	2	0	5

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	3	17	28	2	2	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

- i.. Developed helminth control package for Faisalabad division.
- ii. Recommended anthelmintics to control parasites of sheep.

## Department of Veterinary Pathology

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-30281-89      **Fax:** 041-647846

**Website:** www.uaf.edu.pk

### Main Objectives:

- Under graduate and postgraduate studies of D.V.M.
- Research on various aspects of disease diagnosis.
- Conduction of various laboratory diagnosis and post-mortem.
- Short courses for field veterinarian and para-veterinarian.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	0	0	0	6

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	7	36	1	1	8

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Zoology and Fisheries****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-30281-89 Ext. 298 **Fax:** 041-647846**Website:** www.uaf.edu.pk**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	1	2	0	10

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
15	2	4	48	9	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Water Management Research Center****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-9200201**E-mail:** luaf98@yahoo.com**Fax:** 041-647846**Website:** www.uaf.edu.pk



**Main Objectives:**

- To conduct research in the field of water management through an interdisciplinary approach.
- To develop appropriate water management technologies through research verification and demonstration on farmers fields.
- To offer training facilities in different aspects of water management for the personnel of agriculture extension and on farm water management of all the provinces.
- To develop and offer postgraduate courses in water research in the field of water management.
- To organize seminars/symposia pertinent to research in the fields of water management.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	6	0	9

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2	7	14	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	3	0

**(c) Any Other Achievements**

- Outreach programme consisted the activities as meeting with farmers owning the lands in the vicinity of Maduana distributry, Faisalabad. The farmers were told about the methods of measuring water flow in the water channels and their fields visited in view of suggesting modern technology for boosting crop yields in the area.

ii. Extension services to the farmers in the vicinity of Maduana, Faisalabad.

## Department of Agronomy

### Postal Address:

University of Arid Agriculture, Murree Road, Rawalpindi

**Telephone:** 051-9290151-2

**Fax:** 051-9290150

**Website:** www.uaar.edu.pk

### Main Objectives:

- To produce trained manpower in agronomy.
- To conduct research in agronomic issues of rainfed areas.
- To provide advisory service to farming community.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	4	0	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	3	17	3	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Advisory service to farming community of rainfed areas.

## Department of Entomology

### Postal Address:

University of Arid Agriculture, Muree road, Rawalpindi

**Telephone:** 9051-290151-52

**Fax:** 051-9290150

**Website:** www.uaar.edu.pk

### Main Objectives:

- To produce trained manpower in entomology.
- To offer undergraduate/postgraduate courses.
- To conduct research in the field of entomology.
- To extend advisory services to the community.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
3	1	0	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
14	0	2	22	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Advisory services.

## Department of Food Technology

### Postal Address:

University of Arid Agriculture, Muree Road, Rawalpindi

**Telephone:** 051-9290151-56(106)

**Fax:** 051-9290150

**Website:** www.uaar.edu.pk

### Main Objectives:

- To train the manpower according to the requirements of food industries/research organizations.
- To develop appropriate methods to improve the preservation techniques of foods/vegetables.
- Evaluation of indigenous methods of food product manufacturing and their improvement.
- Dissemination of developed technology to the end users.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	4	0	0	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
21	2	7	25	5	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	9	0

#### (c) Any Other Achievements

1. Train manpower according to the requirement of food Industry.
2. Establishment of food processing, research & training laboratory, UAAR.

## Department of Horticulture

### Postal Address:

University of Arid Agriculture, Murree Road, Rawalpindi

Telephone: 9290151-2/105

Fax: 9290150

Website: www.uaar.edu.pk

### Main Objectives:

- To produce trained manpower in horticulture.
- To offer undergraduate/postgraduate programmes.
- To conduct research in the field of horticulture.
- To extend advisory services to the community.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	3	0	0	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	7	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Advisory services.

## Department of Plant Breeding and Genetics

### Postal Address:

University of Arid Agriculture, Murree Road, Rawalpindi

Telephone: 9290151-2

Fax: 9290160

Website: www.uaar.edu.pk

### Main Objectives:

- Teaching various courses of plant breeding & genetics and biotechnology at undergraduate and postgraduate level.
- Conduct research for improvement of yield, quality and resistance against disease, insect and drought in cereal, oilseed and pulse crops
- To extend advisory services to the farming community for better crop productivity.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	4	0	2	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
20	6	8	20	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Plant Pathology

### Postal Address:

University of Arid Agriculture, Murree Road, Rawalpindi

Telephone: 051-9290151-52/143

Fax: 051-9290160

Website: www.uaar.edu.pk

### Main Objectives:

- To produce trained manpower in plant pathology.
- To offer undergraduate/postgraduate courses.
- To conduct research in various disciplines of plant pathology.
- To extend advisory services to the community.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3	0	0	6

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
6	0	12	14	0	2	2

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Soil Science, Soil & Water Conservation

### Postal Address:

University of Arid Agriculture, Murree Road Rawalpindi

Telephone: 9290151-152

Fax: 9290160

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	7	11	0	22

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10	0	10	20	0	0	0

**(b) Any Other Achievements**

Advisory service.

**Department of Anatomy and Histology****Postal Address:**

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	5	7	12

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	2	0	0	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Animal Nutrition****Postal Address:**

University of Veterinary and Animal Sciences, Lahore

**Telephone:** 042-9211476

**Fax:** 042-9211461

**E-mail:** uvas@softel.net.pk

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	1	15	20

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	9	0	0	3

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

- Floating fish feed has been prepared for the first time in Pakistan and the technology has been shared with Agro-FF industry which currently is manufacturing fish feed for improved fish production in the country

- ii. Early weaning diets for cattle and buffaloes calves have been developed. These diets are being used by military farms throughout the country.
- iii. Anti-coccidial product is being marketed by the local industry for use in commercial poultry.
- iv. Feed-lot fattening studies have been carried out and fattened animals are being exported by local businessmen with the technical guidance of the department.

## Department of Animal Product Technology

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	1	0	1

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Clinical Medicine and Surgery

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: uvas@softel.net.pk

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	3	16	22

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
20	1	0	25	0	0	2

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- A new paramphistome species has reported in the world literature. The species is named as pervaizashraf parbi but has still not been accepted
- Theilaria infection in sheep and goat has also been reported for the first time in Pakistan
- Prevalence of different species of leptospira has been reported in animals and human in Pakistan.
- Prevalence of various animal diseases as well chemo-therapy of infectious diseases have been reported.
- Economic losses due to various livestock diseases have been reported

## Department of Livestock Production

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	2	0	0	3

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	5	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Microbiology

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

### Main Objectives:

- Teaching and research

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	1	1	8	15

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10	3	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

- i. Isolation and characterization of local isolates of veterinary pathogens have been done.
- ii. Immunopharmacology studies have shown immunosuppressive properties in some of the commonly used anticoccidial drugs.
- iii. Efficacy of different disinfectants under local conditions have been studied.
- iv. Role of probiotic in immuno-regulation as well as passive immunity studies for different viral infections have been carried out.

## Department of Parasitology

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	2	0	7	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10	0	2	19	0	0	4

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

- i. Prevalence of different parasites in livestock and poultry have been reported
- ii. Immunoprophylaxis against coccidia has been studied

### Department of Pathology

#### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	1	6	11

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
25	0	0	6	0	0	5

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

- i. Pathology of various diseases of livestock and poultry have been studied and findings reported in the literature.

## Department of Pharmacology

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr)/ equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	2	4	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	4	0	0	5

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

- i. Carry out drug efficacy trials for the veterinary pharmaceutical industry
- ii. Shown antiviral activity of opanchia (a herbal plant) in eggs against newcattle disease virus.
- iii. Bioavailability of ampicillin in humans has been documented
- iv. Carried out evaluation of indigenous drugs.

**Department of Physiology and Biochemistry****Postal Address:**

University of Veterinary and Animal Sciences, Lahore

**Telephone:** 042-9211476

**Fax:** 042-9211461

**E-mail:** uvas@softel.net.pk

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	0	2	7	14

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	6	0	0	3

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

- i. Studies have been conducted on the effect of poly-unsaturated fat feeding on meat and eggs cholestrol level in commercial poultry



## Department of Poultry Production

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: uvas@softel.net.pk

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	0	4	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
8	0	1	1	0	11	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Preventive Medicine & Public Health

### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: uvas@softel.net.pk

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	0	3	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Theriogenology

#### Postal Address:

University of Veterinary and Animal Sciences, Lahore

Telephone: 042-9211476

Fax: 042-9211461

E-mail: [uvas@softel.net.pk](mailto:uvas@softel.net.pk)

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	1	10	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
5	0	1	7	0	0	0

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any Other Achievements**

- i. The department has successfully developed a selection index for buffalo and cattle bulls for use in the artificial insemination.
- ii. Biometric observation on different reproductive organs of buffalo has been standardized.
- iii. Postpartum ovarian activities following prostaglandin and GnRH treatment have been reported.

## Biological Sciences/Biotechnology

### Institute of Pure and Applied Biology

**Postal Address:**

Bahauddin Zakariya University, Multan

**Telephone:** 061-9210053

**Fax:** 061-9210098

**Website:** www.bzu.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
13	0	1	0	14

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
23	5	10	23	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Education and research.

### Department of Biological Sciences

**Postal Address:**

Quaid-i-Azam University, Islamabad

**Telephone:** 051-2829279

**Fax:** 051-4444322

**Main Objectives:**

- Teaching and research.
- Awarding M.Sc, M.Phil. and Ph.D. degrees in various disciplines.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
12	0	1	5	18

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
140	25	13	22	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Biotechnology****Postal Address:**

Sindh Agriculture University, Tandojam

**Telephone:** 0221-765869      **Fax:** 0221-765300

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	2	0	4

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Botany****Postal Address:**

Sindh Agriculture University, Tandojam

**Telephone:** 0221-765869**Fax:** 0221-765300**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
11	3	4	0	18

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	4	8	10	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Zoology****Postal Address:**

Sind Agriculture University, Tandojam

**Telephone:** 0221-765869**Fax:** 0221-765300**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	3	9	0	17

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	1	0	12	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Botany****Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70 Ext..462**Fax:** 041-647846**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching graduate and postgraduate classes.
- Carrying out research on different disciplines of plant sciences for the fulfillment of M.Sc, M.Phil. & Ph.D. degrees.
- Teaching undergraduate courses to different sister departments of the university.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	2	1	11	17

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
26	4	3	8	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Biochemistry****Postal Address:**

University of Arid Agriculture, Muree road, Rawalpindi

**Telephone:** 9290151

**Fax:** 9290160

**Website:** www.uar.edu.pk

**Main Objectives:**

- Teaching and research.



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent		Others	Total
4	2	0	0	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	7	3	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Botany

#### Postal Address:

University of Arid Agriculture, Muree road, Rawalpindi

Telephone: 051-9290151-2

Fax: 051-9290160

Website: [www.uaar.edu.pk](http://www.uaar.edu.pk)

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	1	1	0	5

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	19	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Zoology

### Postal Address:

University of Arid Agriculture, Muree road, Rawalpindi

Telephone: 051-9290151-2

Fax: 051-9290160

Website: [www.uar.edu.pk](http://www.uar.edu.pk)

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	1	0	0	4

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	20	0	0	10

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Botany

### Postal Address:

University of Azad Jammu & Kashmir, Muzaffarabad

Telephone: 05881-44505 Fax: 058810-44717

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	8	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Zoology

### Postal Address:

University of Azad Jammu & Kashmir, Muzaffarabad

Telephone: 05881-44505 Fax: 058810-44717

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	7	0	10

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	5	16	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Botany

#### Postal Address:

Department of Botany, University of Balochistan, Quetta

Telephone: 081-9211288      Fax: 081-9211277

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	3	6	0	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	15	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

**(c) Any Other Achievements**

Nil

**Department of Zoology****Postal Address:**

University of Balochistan, Quetta

**Telephone:** 081-921188**Fax:** 081-9211277**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr)/ MBBS/DVM Equivalent	Others	Total
1	9	4	0	14

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	2	0	12	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Institute of Biochemistry****Postal Address:**

University of Balochistan, Sariab Road, Quetta

**Telephone:** 081-9211261**Fax:** 081-9211277**Website:** www.uobcjb.net

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	1	5	0	12

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
5	4	15	10	2	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Centre of Excellence in Marine Biology****Postal Address:**

University of Karachi, Karachi-75270

**Telephone:** 021- 4969185

**Fax:** 021-4978960

**Main Objectives:**

- To engage in goal-oriented high-level teaching & research and to train research workers.
- To establish M.Phil., Ph.D., and other programmes in the relevant disciplines in accordance with the standards and requirements of the university.
- To promote cooperation, interdisciplinary relationship, with other teaching and research establishments.

- To arrange conferences, seminars and refresher course for the development of teaching & research and to conduct teaching and research in such particular disciplines as is assigned to it by federal government.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	5	0	0	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
15	1	4	25	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Producing high level manpower in the field of marine biology.

## Department of Biochemistry

### Postal Address:

University of Karachi, Karachi, 75270

Telephone: 021-479011/92-21-4965936

Fax: 021-9243203

Website: www.ku.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	16	2	0	19

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
8	0	15	50	10	1	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Botany

### Postal Address:

University of Karachi, Karachi-75720

Telephone: 021-479001/2298

Fax: 021-9243203

Website: www.uk.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
20	0	4	0	24

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
48	0	4	55	0	1	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Genetics****Postal Address:**

University of Karachi, Karachi-75720

**Telephone:** 021-479001/2298**Fax:** 021-9243203**Website:** www.uk.edu.pk**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	6	0	10

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	3	2	8	0	0	1

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Microbiology

### Postal Address:

University of Karachi, Karachi-75720

Telephone: 021-479001/2298

Fax: 021-9243203

Website: www.uk.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	0	20	0	28

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
40	40	16	54	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Physiology

### Postal Address:

University of Karachi, Karachi-75720

Telephone: 021-479001/2298

Fax: 021-9243203

Website: www.uk.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	0	8	0	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	16	0	12	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Zoology

#### Postal Address:

University of Karachi, Karachi-75720

Telephone: 021-479001/2298

Fax: 021-9243203

Website: www.uk.edu.pk

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
20	0	2	0	22

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	14	9	44	0	1	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Institute of Marine Science

### Postal Address:

University of Karachi, Karachi-75270

Telephone: 021-9243131/2378

Fax: 021-9243203

E-mail: mfatima@ims.ku.edu.pk

### Main Objectives:

- To carry out multidisciplinary teaching and research in applied marine sciences (marine ecology, geology and chemistry)
- To offer degree courses of M.Sc(first years), M.Sc(second years), and research leading to M.Phil.. and Ph.D. degrees.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	8	0	0	9

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
8	1	0	10	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Trained and skilled manpower can be generated for shell fish processing industry, and other industries related to marine resources

**Marine Reference Collection and Resource Center****Postal Address:**

University of Karachi-75270

**Telephone:** 9243680

**Fax:** 9243680

**E-mail:** [gbkizmi@softwhome.net](mailto:gbkizmi@softwhome.net)

**Website:** www.mrcrc.kn.edu.pk

**Main Objectives:**

- Exploration of marine resources
- Collection of marine fauna and flora
- Maintenance of collection
- Identification,documentation, registration and cataloging
- Research guidance

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	2	2	0	6

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	0	7	28	1	1	53

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Educational benefits i.e, lectures, exhibitions, article, students visits

**Department of Biotechnology****Postal Address:**

University of Peshawar, Peshawar

**Telephone:** 091-9216469      **Fax:** 091-9216470

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	0	0	3

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Botany

### Postal Address:

University of Peshawar, Peshawar

Telephone: 921670-20/ 3042

Website: www.upesh.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	4	1	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	2	2	10	10	0	2

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Zoology

### Postal Address:

University of Peshawar

Telephone: 091-9216754,9216701-20

Fax: 091-9216470

Website: www.upesh.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	1	0	0	7

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Centre of Excellence in Molecular Biology****Postal Address:**

University of the Punjab, 87-west canal road, Thokar Niaz Baig, Lahore

**Telephone:** 042-5421235

**Fax:** 042-5421316

E-mail: camb1@wol.net.pk

**Main Objectives:**

- Teaching and training to generate a cadre of manpower specifically trained in molecular biology and recombinant DNA technology.
- Molecular biology research on specific problems in agriculture, health & medicine, industry, energy and environmental sector.
- Creation of repository of DNA modifying enzymes, cloning vector, novel bacterial strains and other such molecular tools for ready availability and use by various research group at Centre.
- Organization of national and international seminars and conference for in-depth discussion on knowledge in gene cloning and recombinant DNA technology



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr)/ MBBS/DVM equivalent	Others	Total
12	10	19	0	41

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
68	24	12	15	1	0	9

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
2	0	0

#### (c) Any Other Achievements

Nil

### Department of Botany

#### Postal Address:

University of the Punjab, Lahore

Telephone: 042-9211612      Fax: 042-9231097

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr)/ MBBS/DVM equivalent	Others	Total
7	0	5	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
9	18	5	22	0	0	36

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Zoology****Postal Address:**

University of the Punjab, Lahore

**Telephone:** 042-9211612      **Fax:** 042-9231097**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	0	3	0	13

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	20	12	23	0	0	36

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Institute of Biochemistry and Biotechnology****Postal Address:**

University of the Punjab, Lahore

**Telephone:** 042-9211612      **Fax:** 042-9231097

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	2	0	4

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	3	2	15	0	0	1

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Botany****Postal Address:**

University of Sindh, Jamshoro

**Telephone:** 0221-771681-9 Ext-2007

**Fax:** 0221-771372

**Website:** www.usindh.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr)/ MBBS/DVM equivalent	Others	Total
11	3	4	0	18

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
7	5	0	8	10	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Fresh Water Biology and Fisheries.

### Postal Address:

University of Sindh, Jamshoro-76080, Sindh

Telephone: 0221-771681/Ext.2025

Fax: 0221-771372

Website: www.usindh.edu.pk

### Main Objectives:

- Teaching & research leading to B.Sc(Hons),M.Sc,M. Phil and Ph.D. degrees.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	1	1	0	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	2	3	27	0	3	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Zoology****Postal Address:**

Department of Zoology, University of Sindh, Jamshoro

**Telephone:** 0221-771681-9/Ext:2060**Fax:** 0221-771372**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	4	9	0	20

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
4	0	0	12	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Chemical and Pharmaceutical Sciences

### Department of Chemistry

**Postal Address:**

Bahauddin Zakariya University, Multan-60800

**Telephone:**(061)9210083,9210071-4 (Ext.)326      **Fax:** (061) 9210068,9210098

**E-mail:** chemistry@bzu.edu.pk

**Website:** www.bzu.edu.pk/chemistry

**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
14	5	0	3	22

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	6	39	30	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
3	0	0

#### (c) Any Other Achievements

Nil

### Department of Chemistry

**Postal Address:**

Gomal University, D.I.Khan

**Telephone:** 0961-750370

**Fax:** 0961-750255

**Main Objectives:**

- To train and produce manpower in different disciplines of Chemistry which ultimately lead to award of M.Phil./Ph.D. degrees.
- To conduct research in different areas of Chemistry related to the needs of the country.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
15	0	4	0	20

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	2	3	12	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Chemistry

#### Postal Address:

Islamia University, Bahawalpur

Telephone: 0621-84730

Fax: 0621-80372

E-mail: mlatifmirza@yahoo.com

Website: www.bzu.edu.pk

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
11	2	2	0	15

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	4	4	19	0	1	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Chemistry

### Postal Address:

Quaid-i-Azam University, Islamabad

Telephone: 051-2829279

Fax: 051-4444322

### Main Objectives:

- Teaching and research.
- Awarding M.Sc, M.Phil. and Ph.D. degrees in various disciplines.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
12	0	1	5	18

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
40	6	13	22	0	0	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Chemistry****Postal Address:**

Shah Abdul Latif University, Khairpur

**Telephone:** 0792-551914**Fax:** 0792-551795**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	2	8	0	19

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	0	7	36	3	2	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Chemistry

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-69 /326

**Fax:**041-647846

**E-mail:** akhan24pk@yahoo.co.in

**Website:** www.uaf.edu.pk

### Main Objectives:

- Teaching of postgraduate (M.Sc, M.Phil., Ph.D.) students.
- Research for the fulfillment of M.Sc, M.Phil., Ph.D. degrees.
- Teaching of undergraduate students from sister departments.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	1	3	12	24

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
26	4	2	52	0	2	5

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Chemistry

### Postal Address:

University of Azad Jammu & Kashmir, Muzaffarabad

**Telephone:** 05881-44505

**Fax:** 058810-44717

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	2	4	0	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	6	5	1	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Chemistry****Postal Address:**

University of Balochistan, Sariab Road, Quetta

**Telephone:** 081-9211261

**Fax:** 081-9211277

**Website:** www.uobcjb.net

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	0	17	0	24

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Applied Chemistry & Chemical Technology

### Postal Address:

University of Karachi, Karachi

Telephone: 021-9243131-36 Ext.2279

Fax: 021-9243203

Website: www.dacct.pk

### Main Objectives:

- To produce B.Sc. (Hons) and M.Sc. in applied chemistry.
- To produce bachelor of chemical technology (BCT) in evening program.
- To conduct research for M.Phil. & Ph.D.
- To create co-ordination between the department and the industries.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	1	50	0	58

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	0	4	10	6	0	8

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**H.E.J. Research Institute of Chemistry**  
**International Center for Chemical Sciences**

**Postal Address:**

University of Karachi, Karachi-75270

**Telephone:** 92-21-9243224, 9243211      **Fax:** 92-21-9243190-91

**E-mail:** hej@cuber.net.pk

**Main Objectives:**

- Provide education and research training in chemical and biochemical sciences and related disciplines at postgraduate levels (M.Phil./Ph.D.
- Conduct frontier research in the field of chemical sciences, pharmacology, biotechnology and related disciplines
- Provide state of the art analytical services to industries and R&D institutions in Pakistan.
- Human resource development in the field of chemical and biochemical sciences and allied fields

**Manpower Engaged in R&D (2000)**

D.Sc.	Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
03	13	6	4 (Engg)	120	139

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
5	18	100	20	20	10	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
22	0	0

**(c) Any Other Achievements**

Development of new liasion with some 200 industries

- Total Impact Factor of Scientific Publications of HEJ Faculty (based on PCST Publication, "Leading Scientists of Pakistan, 1999) 1197
- Current Impact Factor (Approximately ) (Based on Scientific Papers Published until July, 2000) more than 1500
- Largest number of Ph.D. produced in Pakistan i.e 240
- Analytical services to Pakistan Customs, EPA and other civic agencies.
- Analytical and spectroscopic facilities to other universities and R&D institutions.
- Over 1500 research publications in international science journals.
- Over 85 books, written or edited by the faculty members of the institutes.
- Majority of faculty members are recipients of international and national awards.
- Focal point training of Foreign researchers, from Turkey, Bangladesh, Nepal, Sri Lanka, Cameron, Iran, Sudan, Kazakhstan, Uzbekistan, Nigeria etc.
- Training Center for 20 German students every year.
- World Health Organization (WHO) collaborating center for Pesticides Analysis.

**Department of Chemistry****Postal Address:**

University of Peshawar, Peshawar

**Telephone:** 091-921652-20/3033

**E-mail:**chemistryuop@yahoo.com

**Fax:** 091-9216652

**Website:**chemistry-uop.8m.net

**Main Objectives:**

- Teaching and research at graduate and postgraduate levels.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
21	2	0	0	23

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
11	11	10	100	4	2	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## National Centre of Excellence in Physical Chemistry

### Postal Address:

University of Peshawar, Peshawar-25120

Telephone: 091-9216766

Fax:091-9216766

Website: www.upesh.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	0	1	0	11

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
14	7	17	16	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	3	0

**(c) Any Other Achievements**

Services to local industries.

## Institute of Chemistry

**Postal Address:**

University of the Punjab, Lahore

**Telephone:** 042-9211612      **Fax:** 042-9231097

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
11	2	2	0	15

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
25	14	7	18	25	1	36

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil



## Center of Excellence in Analytical Chemistry

### Postal Address:

University of Sindh, Jamshoro

**Telephone:** 0221-771379  
**E-mail:** director@ceacsu.com

**Fax:** 0221-771560  
**Website:** www.ceacsu.com

### Main Objectives:

- To engage in advance teaching and research in analytical chemistry.
- To establish M.Phil. and PhD programmes in analytical chemistry.
- To produce skilled manpower in the field of analytical chemistry.
- To provide in-service training on recent analytical techniques to college/university teachers, industrial personnel of various institutions and industries.
- To arrange conferences, seminars and refresher courses for the development of teaching and research.
- To promote cooperation interdisciplinary relationship with other teaching and research establishments in the country.
- To provide advisory and analytical services to local industries.
- To provide country-wide comprehensive consultancy and reference service to analytical laboratories.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	12	0	0	20

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
6	8	19	35	0	0	2

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

**(c) Any Other Achievements**

Quality assurance of raw materials, chemical investigations of deliration and other related service have been offered to different industries.

**M.A.Kazi Institute of Chemistry****Postal Address:**

University of Sindh, Jamshoro

**Telephone:** (0221)-771681/2030 Ext.

**Fax:** 0221-771372

**Website:** www.usindh.edu.pk

**Main Objectives:**

- Teaching and Research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
21	0	6	3	30

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	3	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Pharmacy

### Postal Address:

Bahauddin Zakariya University, Multan

**Telephone:** 061-220157,224371-4(Ext.334)      **Fax:** 061-9210098

**Website:** www.bzu.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	4	1	30	45

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
30	0	1	8	1	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Basic Medical Science

### Postal Address:

Faculty of Pharmacy, Gomal University, D.I.Khan

**Telephone:** 0961-750362      **Fax:** 0961-750284

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	1	1	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	2	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Pharmaceutical Chemistry

#### Postal Address:

Faculty of Pharmacy, Gomal University, D.I Khan

Telephone: 0961-450632,750284

Fax: 0961-750255

#### Main Objectives:

- Teaching and research at B.Pharmacy, M.Phil. and Ph.D. level.
- To create linkage between university and industry.

#### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	0	1	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others

2	0	0	5	0	0	0
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**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Pharmaceuticals**

**Postal Address:**

Gomal University, D. I Khan

**Telephone:** 0961-750362,750284

**Fax:** 0961-750255

**Main Objectives:**

- Train Pharmacy graduates at B.Pharmacy level.
- Supervision to M.Phil. research students in Pharmacy.
- Organizing training of students in pharmaceutical industries.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	4	1	0	8

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	0	2	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Pharmacognosy**

**Postal Address:**

Gomal University, D.I Khan

**Telephone:** 0961-750362,750284

**Fax:** 0961-750255

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	0	0	3

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	0	1	2	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Pharmacy**

**Postal Address:**

Islamia University, Bahawalpur

**Telephone:** 0621-9250231

**Fax:** 0621-9250232

**Main Objectives:**

- To teach students of B.Pharmacy and M. Pharmacy.
- To register and supervise the M. Phil and Ph.D. scholars.

**Manpower Engaged in R&D (2000)**

<b>Ph.D.</b>	<b>M.Phil./ME/ MS(Engr) equivalent</b>	<b>M.Sc./B.E./BS(Engr) MBBS/DVM equivalent</b>	<b>Others</b>	<b>Total</b>
4	9	0	0	13

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2	4	27	0	2	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Pharmacology****Postal Address:**

Sindh Agriculture University, Tandojam

**Telephone:** 0221-765870**Fax:**0221-765300**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	0	0	1

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0



**(c) Any Other Achievements**

Nil

**Department of Pharmacology**

**Postal Address:**

Faculty of Pharmacology, University of Karachi

**Telephone:** 021-9243195      **Fax:** 021-9243203

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	4	0	0	7

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
4	2	5	25	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Institute of Pharmacy**

**Postal Address:**

University of Sindh, Jamshoro

**Telephone:** 0221-771681-90(Ext.)2087      **Fax:** 0221-771376

**Website:** www.usindh.edu.pk

**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	8	3	0	19

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
10	0	11	16	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

# Computer Sciences

## Department of Computer Science

### Postal Address:

Bahauddin Zakariya University, Multan

Telephone: 061-9210134

Fax: 061-9210068-9210098

mail: [info@bzu.edu.pk](mailto:info@bzu.edu.pk)

Website: [www.bzu.edu.pk](http://www.bzu.edu.pk)

### Main Objectives:

- To impart information technology education at graduate and postgraduate level.
- Research in the field information technology area.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	8	0	0	10

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	3	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Computer Science

### Postal Address:

Quaid-I-Azam University, Islamabad

Telephone: 051-2277009

Fax: 051-2821397

E-mail: csqau@isb.paknet.com.pk

Website: www.csqau.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	1	3	1	8

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	4	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Computer Science**

**Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-624898-30281-85

**Fax:** 041-647846

**Website:** www.uaf.edu.pk

**Main Objectives:**

- Teaching postgraduate students.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	1	4

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	4	4	4	4

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Computer Sciences

### Postal Address:

University of Balochistan, Quetta

Telephone: 081-9211288

Fax: 081-9211277

Website: www.uob.cjb.net

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	0	4

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Computer Science**

**Postal Address:**

University of Peshawar, Peshawar

**Telephone:** 091-9216469

**Fax:** 091-9216470

**Website:** www.upesh.edu.pk

**Main Objectives:**

- Human resource development.
- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	1	5

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Earth Sciences

### Cholistan Institute of Desert Studies

**Postal Address:**

Cholistan Institute of Desert Studies(CIDS), P.O.Box 146, Bahawalpur

**Telephone:** 0621-9250341

**Fax:** 0621-9250232

**E-mail:** vciub@mul.paknet.com.pk

**Main Objectives:**

- Conservation, restoration and management of species ( flora & fauna) and medicinal plants.
- To combat aridity and desertification of Cholistan Desert.
- To improve the degrading habitats of range bio-resources for the livestock and to improve the environments through an out-reach programme of afforestation by donating the young plants to desert rangers and others.
- Alleviate the poverty and socio-economic condition of nomad pastoralists through agro-biological improvements of endemic species and their productivity potential.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	0	2	0	5

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	9	41	0	1	10

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Geography

### Postal Address:

Islamia University, Bahawalpur

Telephone: 0621-80331

Fax: 0621-80372

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	6	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	1	15	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Earth Sciences

### Postal Address:

Quaid-I-Azam University, Islamabad

Telephone: 051-2829136

Fax: 051-2821397

Website: www.qau.edu.com.pk

### Main Objectives:

- Teaching and research.



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	0	7	0	15

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
9	2	11	29	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

The department is running M.Sc., (morning and evening) programme, M.Phil. & Ph.D. students under-takes extensive laboratory and field work that includes data acquisition, computer processing, interpretation and modeling of subsurface geology. In the final semester of M.Sc, all the students have to do compulsory research as part of their thesis work. Projects are allotted and the students are supposed to submit a thesis, based on original research. The department has produced more than 300 graduates in Geophysics who are working in OGDC, WAPDA, FATA, SDA, Punjmin, Schlumberger, Mathtech, Lasmo, OMV, Orient, POL, PPI, Premier Oil and Several other national and international organizations. Department organizes special lectures and courses with the help of experts from oil and mineral industries and arranges visits to oil fields and different mines.

### Centre of Excellence in Mineralogy

#### Postal Address:

University of Balochistan, Sariab road, Quetta

Telephone: 081-9211285

Fax: 081-9211285

### Main Objectives:

- To engage in goal-oriented research and higher studies in the mineral sciences
- To train research worker and mineral science specialists
- To establish M.Phil. and Ph.D. programmes in mineral science in accordance with the standards and requirements of the University
- To promote cooperation in interdisciplinary relationship with other teaching and research establishments
- To arrange conferences, seminars, refresher courses and workshops for the development of teaching and research
- To conduct teaching and research in such particular disciplines as are assigned to it by Federal Government in consultation with university of Balochistan
- To contribute to the understanding of the mineralogy and geology of Pakistan, appropriate to the needs of the country and to project it through publications
- To develop facilities to offer consultancy services to mineral science organizations and private enterprises of Pakistan

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	1	0	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
22	02	5	15	10	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

#### (c) Any Other Achievements

Nil

## Department of Geography

### Postal Address:

University of Balochistan, Sariab Road, Quetta

Telephone: 081-9211261

Fax: 081-9211277

Website: www.uob.jb.net

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	6	0	6

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Geology

### Postal Address:

University of Balochistan, Quetta

Telephone: 081-9211288

Fax: 081-9211277

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3	3	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	12	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Geography, Urban & Regional Planning

#### Postal Address:

University of Peshawar

Telephone: 091-9216681

Fax: 091-9216470

Website: www.upesh.edu.pk

#### Main Objectives:

- To produce postgraduate manpower in geology.
- To enhance the more useful role of geography in changing environment
- To provide valuable assistance in the field of urban and regional planning.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	2	0	0	5

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	0	0	1	0	1	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Geology

### Postal Address:

University of Peshawar, Peshawar

Telephone: 091-9216744

Fax: 091-9216470

Website: www.upesh.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
12	5	0	0	17

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Geography**

**Postal Address:**

University of the Punjab, Lahore

**Telephone:** 042-9211612      **Fax:** 042-9231097

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	4	2	10

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Geography

### Postal Address:

University of Sindh, Jamshoro

**Telephone:** (0221)-771681/2030 Ext.

**Fax:** 0221-771372

**Website:** www.usindh.edu.pk

### Main Objectives:

- Teaching and Research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	7	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Geography

### Postal Address:

University of Karachi, Karachi-75720

**Telephone:** 021-479001/2298

**Fax:** 021-9243203

**Website:** www.uk.edu.pk

### Main Objectives:

- Teaching and research.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	5*	0	7

\*Including visiting members

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
5	3	13	15	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Geology

### Postal Address:

University of Karachi, University Road, Karachi, 75270

Telephone: 021-4967551 Fax: 021-4992685

Website: www.ku.edu.pk

### Main Objectives:

- Teaching and research at graduate and postgraduate levels.
- To produce graduates in Geology and Petroleum Technology to meet the demands of trained manpower.
- To provide M.Phil. and PhD in the above fields to promote natural resources and young geoscientists of the country.



### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	0	8	0	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	3	5	52	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Engineering & Technology

### Department of Basic Sciences

**Postal Address:**

Balochistan University of Engineering & Technology, Khuzdar

**Telephone:** 0871-412834

**Fax:** 0871-413197

**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	8	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Electrical Engineering

**Postal Address:**

Balochistan University of Engineering & Technology, Khuzdar

**Telephone:** 0871-412752

**Fax:** 0871-413197

**E-mail:** ch\_it2001@yahoo.com

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	5	5	10

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Mechanical Engineering****Postal Address:**

Balochistan University of Engineering & Technology, Khuzdar

**Telephone:** 0871-412752

**Fax:** 0871-413197

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	7	5	13

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Architecture

### Postal Address:

Mehran University of Engineering & Technology, Jamshoro-76062

Telephone: 0221-772293-772082

Fax: 0221-771382

E-mail: [DARCHMUET@hotmail.com](mailto:DARCHMUET@hotmail.com)

### Main Objectives:

- To produce quality students at Bachelors, Masters, M.Phil. & Ph.D. levels.
- To conduct problem oriented research.
- To engage in applications of the results of research in the field(extension activities)
- To collaborate with end users organizations.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent B.Arch	Others	Total
0	0	14	1	15

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	3	2	1	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2	2

### (c) Any Other Achievements

Department has actively participated in generating overall income of the university.

## Department of Basic Sciences and Related Studies

### Postal Address:

Mehran University of Engineering & Technology, Jamshoro-76062

Telephone: 0221-771197

Fax: 0221-771382

E-mail: abaloch@muet.edu.pk

Website: www.muet.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	1	11	2	6

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	5	5	2	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Chemical Engineering****Postal Address:**

Mehran University of Engineering &amp; Technology Jamshoro-76062

**Telephone:**0221-771642**Fax:**0221-771262**E-mail:** Chem-eng-muet-edu-pk02@yahoo.com**Website:** www.muet.edu.pk**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3	9	0	15

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	18	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of City & Regional Planning

### Postal Address:

Mehran University of Engineering & Technology, Jamshoro

Telephone: 0221-771642

Fax: 0221-771382

Website: www.muett.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	1	0	3

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Electrical Engineering

### Postal Address:

Mehran University of Engineering & Technology, Jamshoro-76062,

Telephone: 0221-771351

Fax: 0221-771382

Website: www.muett.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	7	11	1	22

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	4	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Industrial Engineering and Management****Postal Address:**

Mehran University of Engineering & Technology, Jamshoro-76062

Telephone:0221-771247

Fax:0221-771382

Website: www.muett.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	7	3	10



## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	3	15	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Irrigation and Drainage

### Postal Address:

Mehran University of Engineering & Technology, Jamshoro-76062

Telephone: 0221-771197

Fax: 0221-771382

Website: www.muett.edu.pk

### Main Objectives:

- To produce quality engineers at Bachelors, Masters, M.Phil. & Ph.D. levels.
- To conduct problems oriented research.
- To engage in applications of the results of research in the field(extension activities)
- To collaborate with end users organizations.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3	0	1	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	8	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Mechanical Engineering

### Postal Address:

Mehran University of Engineering & Technology, Jamshoro-76062

Telephone: 0221-771197

Fax: 0221-771382

Website: www.muett.edu.pk

### Main Objectives:

- To conduct problems oriented research.
- To engage in applications of the results of research in the field extension activities.
- To collaborate with end users organizations.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	17	0	20

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	0	0	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Metallurgy& Materials Engineering****Postal Address:**

Mehran University of Engineering & Technology Jamshoro-76062

**Telephone:** 0221-771425      **Fax:** 0221-771382

**E-mail:** metal@hyd.paknet.com.pk      **Website:** www.muett.edu.pk

**Main Objectives:**

- To produce quality engineers at Bachelors, Masters, M.Phil. & Ph.D. levels.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3	6	0	12

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	20	2	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	3	0

**(c) Any Other Achievements**

Commissioning of laboratory training of the students and teachers and provide research facilities in the following areas:

- Heat treatment of Steel

- ii. Mechanical testing of materials
- iii. Metallography
- iv. Electro metallurgy
- v. Foundry engineering
- vi. Manufacturing process

## Department of Mining Engineering

### Postal Address:

Mehran University of Engineering & Technology, Jamshoro-76062

**Telephone:** 0221-771197

**Fax:** 0221-771382

**Website:** www.muett.edu.pk

### Main Objectives:

- To produce good quality engineers at Bachelors, Masters, M.Phil. & PhD levels.
- To conduct problems oriented research.
- To engage in applications of the results of research in the field (extension activities)
- To collaborate with end users organizations.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
2	1	0	0	3

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	6	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

The mining and related industry of Sindh province has a facility of analyzing coal minerals at cheaper rates at the department that has reliable system.

**Department of Textile Engineering****Postal Address:**

Mehran University of Engineering & Technology, Jamshoro-76062,

**Telephone:**0221-771425

**Fax:** 0221-771382

**Website:** www.muett.edu.pk

**Main Objectives:**

- To conduct problems orient research.
- To engage in applications of the results of research in the field (extension activities).
- To collaborate with end users organizations.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
1	1	5	0	7

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	16	4	2	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Institute of Environmental Engineering and Management**

**Postal Address:**

Mehran University of Engineering & Technology, Jamshoro-76062

**Telephone:** 0221-771182

**Fax:**0221-771382

**E-mail:** ieem93@hotmail.com

**Website:** www.muett.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	0	0	1

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	4	0

**(c) Any Other Achievements**

Students got trained and had experience to complete their research projects.

**Institute of Information Technology**

**(1) Computer Sciences & Software Engineering Department**

**(2) Electronic & Telecommunication Engineering Department**

**Postal Address:**

Mehran University of Engineering & Technology, Jamshoro-76062

**Telephone:** 0221-771352, 772274,772276  
**E-mail:** aqkrajput@hotmail.com

**Fax:** 0221-771382  
**Website:** www.muett.edu.pk

**Main Objectives:**

- To produce quality engineers at Bachelors, Masters, M.Phil. & Ph.D. levels.
- To conduct problems oriented research.
- To engage in applications of the results of research in the field (extension activities)
- To collaborate end users organizations.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	4	2	0	11

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	30	1	5	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Institute of Petroleum and Natural Gas**

**Postal Address:**

Mehran University of Engineering & Technology, Jamshoro-76062

**Telephone:** 0221-771241  
**Website:** www.muett.edu.pk

**Fax:** 0221-771382

**Main Objectives:**

- To produce quality engineers at Bachelors, Masters, M.Phil. & PhD levels.
- To conduct problems oriented research.
- To engage in applications of the results of research in the field (extension activities)
- To collaborate with end users organizations.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	8	0	11

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	4	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**National College of Textile Engineering  
(Presently University of Textile Engineering)**

**National College of Textile Engineering****Postal Address:**

P.O Manawala Sheikupura Road, Faisalabad

**Telephone:** 041-753741

**Fax:** 041-751714

**E-mail:** ntu@fsd.paknet.com.pk

**Name of Administrative Ministry/Department**

Ministry of Industries & Production



**Main Objectives:**

- Teaching of textile technology/textile engineering
- Scientific research in textile technology
- Furthering & promoting the textile industry

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3	17	1	24

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	5	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**College of Aeronautical Engineering****Postal Address:**

PAF Academy, Risalpur

**Telephone:** (0923) 631391-97

**Fax:** (0923) 631351

**Main Objectives:**

- Administration of Bachelor of Engineering Curriculum in Aerospace & Avionics Engineering discipline.
- MS in Aerospace & Avionics Engineering discipline.
- Research & development.
- Professional continuing education.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E.BS(Engr) MBBS/DVM equivalent	Others	Total
11	24	0	0	35

### &D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	21	6	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	7	1

#### (c) Any Other Achievements

Nil

### College of Electrical and Mechanical Engineering

(Department of Computer Engineering.EME )

#### Postal Address:

College of EME, Peshawar Road, Rawalpindi, 46000

**Telephone:** 561-30931(Head of Department)

**Fax:** 5474306

#### Main Objectives:

- To provide education for the BE,MS and Ph.D. degrees in the discipline of Computer Engineering to the students to meet the following objectives:
  - Meet the requirements of local industry.
  - Provide requisite academic background to pursue postgraduate studies at the international level.
  - Have design and development training coupled with management and economic background to successfully pursue his career as young engineer or even as an entrepreneur.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	3	9	13

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	20

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## College of Electrical and Mechanical Engineering

(Department of Mechanical Engineering)

#### Postal Address:

College of EME, Peshawar Road, Rawalpindi, 46000

**Telephone:** 561-30931(Head of Department)

**Fax:** 5474306

#### Main Objectives:

- To provide education for the BE,MS and Ph.D. degrees in the discipline of mechanical engineering to the students to meet the following objectives:
- Meet the requirements of local industry.
- Provide requisite academic background to pursue postgraduate studies at the international level.
- Have design and development training coupled with management and economic background to successfully pursue his career as young engineer or even as an entrepreneur.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	7	16	0	26

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	0	0	0	17

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Institute of Environmental Science and Engineering

### Postal Address:

Tamiz-ud-Din Road, Lalkurti, Rawalpindi

Telephone: 051-9271597-9

Fax: 051-9271597

E-mail: [iese@isb.paknet.com.pk](mailto:iese@isb.paknet.com.pk)

Web-Site: [www.nust.edu.pk](http://www.nust.edu.pk)

### Main Objectives:

- Develop an internationally recognized post graduate programme in environmental engineering.
- To find indigenous solutions to local problems.
- Provide cost effective engineering solutions to national environmental issues.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	3	0	0	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	7	10	0	0	3

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
1	4	0

### (c) Any Other Achievements

- i. Offering short course/training/organizing seminars on various environmental issues.
- ii. Offering consultancy services to local industry

## Institute of Information Technology

### Postal Address:

Tamiz-ud-Din Road, Lalkurti, Rawalpindi

**Telephone:** 051-9271597-9

**Fax:** 051-9271597

**E-mail:** nust@isb.paknet.com.pk

**Web-Site:** www.nust.edu.pk

### Main Objectives:

- Generate highly qualified and skilled human resource in the field of information technology.
- Impart undergraduate and post graduate level education in the field of information technology.
- Conduct research and development and provide consultancy services.
- To develop into a role model for high-level information technology and R & D in Pakistan.
- To be a centre of excellence in the field of information technology housing state of the art facilities

- Provide cost effective engineering solutions to national environmental issues.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
33	64	0	0	97

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	4	7	20	5	0	3

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Institute of Management Sciences

#### Postal Address:

Tamiz-ud-Din Road, Lalkurti, Rawalpindi

**Telephone:** 051-9271597-9

**Fax:** 051-9271610

**Website:** www.nust.edu.pk

#### Main Objectives:

- To conduct certificate, undergraduate and postgraduate management programmes.
- To organize executive corporate and training programmes.
- To carryout research in areas of social sciences and business management.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	3	6	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Military College of Engineering

#### Postal Address:

Risalpur Cantonment, Risalpur

Telephone: 0923 – 6812-3500/3504

#### Main Objectives:

- Civil engineering training to graduate and postgraduate level.
- Control, supervise and coordinate the functioning of NIT and School of MES.
- Impart combat and civil engineering training

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
4	3	1	0	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Military College of Signals

### Postal Address:

Humayun Road, Rawalpindi

Telephone: 561 – 30580

Fax: 051-9271502

### Main Objectives:

- To impart quality education at UF/PG level to students from both defence forces and civil sector.
- To contribute in R&D at national level.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM Equivalent	Others	Total
8	17	10	0	35

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0



**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any Other Achievements**

- i. It is dealing with high level studies in the fields to telecomm, comm. Security, computer science, electronic warfare, information warfare, cyber warfare and all related fields of information technology. R&D is a required feature in the curriculum of undergraduate/postgraduate course. R&D is also undertaken by the faculty members in a limited sphere

**National Institute of Transportation**

**Postal Address:**

NIT, Risalpur Cantonment, Risalpur

**Telephone:** 0923-631211      **Fax:** 0923-631594

**Main Objectives:**

- Develop competent scientific and technical manpower having international level skills to meet the country's need in transportations sector.
- Provide integrated teaching and research facility for postgraduate work leading to award of Master's and Doctoral degree.
- Provide short-term diploma training courses on specilaized areas of transportation to various defence and othe national organizations and private agencies.
- Undertake short-term certificate courses in areas needing urgent attention.
- Provide engineering reseach support to the problems identified by defence and other national organizations.
- Arrange international seminars, workshops and symposiums in areas of special national interest.
- Collaborate with international orgainzations at later stage to provide training and research support at interntional level, especially for Muslim and other friendly countries.
- To provide forum of exchange of knowledge in the field of transportation infrastructure amongst the elite, both within and outside Pakistan to work as think tank, share expertise and suggest long term measures to indentify and resolve the issues/challenges being confronted.
- Provide teaching support to the related courses in the ongoing under graduate programme at the Military College of Engineering.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3+18*	0	2	12	35

\*Part time.

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	9	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Pakistan Navy Engineering College

#### Postal Address:

Habib Rahmatullah Road, Karachi

Telephone: 021-56633001,56633008

Fax: 021-4930187

#### Main Objectives:

- To impart high quality engineering education and to produce engineers that meet the requirements of NUST/Naval Headquarters.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
10	28	12	0	50

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	8	1	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

PNEC has completed a number of R&D projects for PN fleet and other units of Pakistan Navy has contributed significantly in modification/up-gradation of naval systems and equipments. The R&D activities at PNEC have saved a substantial amount of foreign exchange for the national exchequer.

## Department of Architecture and Planning

### Postal Address:

NED University of Engineering & Technology, Karachi

**Telephone:** 9243261-68 Ext-2382

**Fax:** 9243255

**E-mail:** coccd@neduet.edu.pk

**Website:** www.neduet.edu.pk

### Main Objectives:

- To provide instructions and training at undergraduate level and assess the transfer of knowledge by conducting examination.
- To supervise, maintain and carry out research activities.
- To establish linkages within the universities and other similar organizations.
- To provide advisory services on architecture and planning issues to public and government agencies.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	5	3	0	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	6	1	1

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Provide resources and academic assistance to national professional bodies such as Institute of Architects, Pakistan.

## Department of Civil Engineering

### Postal Address:

NED University of Engineering & Technology , Karachi

**Telephone:** 021-9243261-68, Ext: 2205 **Fax:** 021-9243255

**E-mail:** [civilchr@neduet.edu.pk](mailto:civilchr@neduet.edu.pk)

**Website:** [www.neduet.edu.pk](http://www.neduet.edu.pk)

### Main Objectives:

- To provide instructions and training at undergraduate and post graduate levels and assess the transfer of knowledge by conducting examinations.
- To supervise, evaluate and carry out research.
- To establish and maintain linkage within the universities and other similar organizations.
- To establish and maintain links with the industry and provide technical support in providing solutions to their problems and in the development projects.
- To provide advisory and consultancy services to public and/or private sector and/or individuals.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	11	15	0	30

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	0	2	1	0	0	5

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

To help professionals in civil engineering and related fields to update their knowledge and skills by organizing continuing engineering education courses.

## Department of Electrical Engineering

### Postal Address:

NED University of Engg & Technology, University Road, Karachi-75270

**Telephone:** 021-9243261-68 Ext:2207

**Fax:** 021-9243255

**E-mail:** ced@neduet.edu.pk

**Website:** www.neduet.edu.pk

### Main Objectives:

- Undergraduate teaching.
- M.Sc. and Ph.D. research programmes.
- Development of laboratories.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	0	0	2

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	0	1	0	11

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Environment Engineering

### Postal Address:

NED University of Engineering & Technology, Karachi

**Telephone:** 021-9243261-68 Ext- 2211 **Fax:** 021-9243255

**E-mail:** chenv@neduet.edu.pk

**Website:** www.neduet.edu.pk

### Main Objectives:

- To provide instructions and training at undergraduate and postgraduate levels and assess the transfer of knowledge by conducting examinations.
- To supervise, maintain and carry out research.
- To establish and maintain linkages within the universities and other similar organizations.
- To establish and maintain links with the industry and provide technical support in providing solutions to their problems and in the development projects.

- To provide advisory services on environmental issues to public and the government agencies.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	6	3	0	11

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	7	1	0	5

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Mechanical Engineering

#### Postal Address:

NED university of Engineering & Technology, University Road, Karachi-75270

**Telephone:** 021-9243261-68 Ext-2206    **Fax:** 021-9243255

**Website:** www.neduet.edu.pk

#### Main Objectives:

- Teaching undergraduate BE(Mech) & postgraduate MS(Mech) students.
- Teaching MSc by research; Ph.D. program initiated with one student at present.
- Post-Doctoral research on parametric identification of Non Linear Systems (Mechanical Vibration)
- R&D through BE projects.
- Training and short courses through Continuing Engineering Education Centre of NED, UET.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	0	0	0	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	3	0	0	1	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Several research projects have been taken in the fields of desalination, manufacturing, energy storage, vibrations and heat projects.

## Internet Centre

### Postal Address:

Internet Centr, NED University of Engineering & Technology, Karachi

**Telephone:** 021-4969262-68, Ext..222

**Fax:** 021-4961934

**Website:** www.neduet.edu.pk

### Main Objectives:

- Linkage with universities and research organizations.
- Web site management.
- Interactive web-based teaching.
- Online training.
- Access to database.
- To conduct Master of Information Sciences programme.
- Access to info agencies.



- Linkage with libraries.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	0	0	0

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
N.A	N.A	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Agriculture Engineering

#### Postal Address:

NWFP University of Engineering & Technology, Peshawar

Telephone: 091-9216500

Fax: 091-9216663

E-mail: taj\_marwat@yahoo.com

Website: www.nwfpuetp.edu.pk

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	9	0	0	11

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	82	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Civil Engineering

### Postal Address:

NWFP University of Engineering & Technology, Peshawer

Telephone: 091-9216498

Fax:091-9216663

Website: www.uetp.edu.pk

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	14	1	0	18

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	65

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Electric and Electronics Engineering****Postal Address:**

NWFP University of Engineering &amp; Technology

**Telephone:** 091-9216498 **Fax:** 091-9216663**Website:** www.uetp.edu.pk**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	7	1	0	15

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	6

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Mechanical Engineering

### Postal Address:

NWFP University of Engineering & Technology, Peshawar

Telephone: 091-9216499

Fax: 091-9216663

E-mail: mechanical-enggpk@yahoo.com

Website: www.nwfpuetp.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	12	6	0	23

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	8	67	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Pakistan Institute of Engineering and Applied Sciences

### Postal Address:

Nilore(at Lehtrar Road), Islamabad

Telephone: 9290273-4

Fax: 9223727

E-mail: insti@paknet.ptc.pk

### Main Objectives:

- Teaching and research.

## Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
37	26	10	104	183

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
179	01	36	41	-	11	-

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Electrical Engineering

### Postal Address:

Quaid-e-Awan University of Engineering, Sciences & Technology,

Nawabshah-Sindh

**Telephone:** 0241-9370366

**Fax:** 0241-9370367-9370375

**E-mail:** i. [mahmood@quest.edu.pk](mailto:mahmood@quest.edu.pk)

**Website:** [www.quest.edu.pk](http://www.quest.edu.pk)

ii. [decquest@yahoo.com](mailto:decquest@yahoo.com)

### Main Objectives:

- To impart quality education in electrical engineering.
- To conduct quality research in relevant fields.
- To disseminate knowledge to interior of Sindh.
- To provide expertise and skill.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	4	0	4

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	10	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Mechanical Engineering

### Postal Address:

Quaid-e-Awan University of Engineering Sciences & Technology  
Nawabshah-Sindh, Pakistan

**Telephone:** 0241-9370366

**Fax:** 0241-9370367-9370375

**Website:** www.quest.edu.pk

### Main Objectives:

- To impart quality education in mechanical engineering.
- To conduct quality research in relevant fields.
- To disseminate knowledge to interior of Sindh.
- To provide expertise and skill.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr)/ MBBS/DVM equivalent	Others	Total
4	5	8	0	17

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	10	0	2	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Centre of Excellence in Water Resources Engineering

#### Postal Address:

University of Engineering & Technology, G.T. road,Lahore

Telephone: 042-6822558 Fax: 042-6822024

Email: centre@xcess.net.pk

#### Main Objectives:

- To impart postgraduate level teaching.
- To conduct goal oriented research in water resources.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	3	0	0	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
33	1	24	48	0	2	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Architecture

### Postal Address:

University of Engineering & Technology, Lahore

Telephone: 6829233

Fax: 6822566

Website: nwfp.uetp.edu.pk

### Main Objectives:

- Education of architecture at graduate and postgraduate level.
- Promotion of research activities.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	3	2	0	14

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	5	2	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Chemical Engineering****Postal Address:**

University of Engineering &amp; Technology, Lahore-54890

**Telephone:** 6829288**Fax:** 042-6822566**Website:** www.uet.edu.pk**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
12	3	3	0	18

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	13	60	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Chemistry

### Postal Address:

University of Engineering & Technology, Lahore-54890

Telephone: 6829239

Fax: 042-6822566

Website: www.uet.edu.pk

### Main Objectives:

- To run M.Sc applied and M.Phil. Chemistry programmes.
- To impart instructions in Chemistry courses of B.Sc(Engg) degree programmes.
- To carry out postgraduate research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	2	3	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
8	0	0	10	1	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of City & Regional Planning

### Postal Address:

City & Regional Planning Department, University of Engineering & Technology,  
Lahore

Telephone: 042-6829203

Fax: 042-6822566

E-mail: shabih52@hotmail.com

Website: www.uet.edu.pk

**Main Objectives:**

- Teaching B.Sc & M.Sc, city and regional planning courses. Guiding M.Sc & Ph.D. research.
- Research pertaining to urban & regional planning.
- Consultancy and advisory services in the areas of housing, transport & development planning & urban environmental planning.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	5	9	0	16

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	4	8	0	0	4

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Development of curriculum for B.Sc. & M.Sc.

Development of a new system of town planning in Pakistan under the new devolution plan.

**Department of Civil Engineering****Postal Address:**

University of Engineering & Technology, Lahore

**Telephone:** 042-6829265,6822566

**Fax:** 042-6822566

**Website:** www.uet.edu.pk

**Main Objectives:**

- Teaching and research.
- Consultancy and testing

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	7	0	3	18

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Electrical Engineering****Postal Address:**

University of Engineering & Technology, Lahore-54890

**Telephone:** 042-6829229, 6827501

**Fax:** 042-6822566

**E-mail:** chairmanee@uet.edu.pk

**Website:** www.uet.edu.pk

**Main Objectives:**

- Teaching and research

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
14	18	5	0	37

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	5	10	5	2	2

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	2	2

### (c) Any Other Achievements

Nil

## Department of Mathematics

### Postal Address:

University of Engineering & Technology, Lahore-54890

Telephone: (042)6829210

Fax: 042-6822566

Website: www.uet.edu.pk

### Main Objectives:

- Teaching at graduate and postgraduate levels
- Research work in Ph.D.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	4	6	0	14

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
4	0	0	12	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Mechanical Engineering****Postal Address:**

University of Engineering &amp; Technology, Lahore

**Telephone:** 042-6829265**Fax:** 042-6822566**Website:** www.uet.edu.pk**Main Objectives:**

- Teaching B.Sc. courses in Mechanical, Industrial & Manufacturing and Mechatronics Engineering;
- Teaching M.Sc. courses in Thermal Sciences, Manufacturing, Engineering Management, Mechatronics and Ph.D. courses in Mechanical Engineering.
- Research & development through B.Sc., M.Sc and Ph.D. research projects.
- Short courses in computer applications and quality management, etc.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	7	0	3	18

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	2	7	5	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Metallurgical Engineering****Postal Address:**

University of Engineering &amp; Technology, G .T. Road, Baghban Pura, Lahore

**Telephone:** 042-6829207**Fax:** 042-6822566**Website:** www.uet.edu.pk**Main Objectives:**

- Teaching at the undergraduate and post graduate level.
- Research and development.
- Testing and consultancy.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	3	3	0	13

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Mining & Geological Engineering

### Postal Address:

University of Engineering & Technology, Lahore

**Telephone:** 042-6829212

**Fax:** 042-6822566

**Website:** www.uet.edu.pk

### Main Objectives:

- Teaching and research.
- Advisory services.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	6	0	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	3	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Petroleum & Gas Engineering

### Postal Address:

University of Engineering & Technology, Lahore

**Telephone:** 042-6829271

**Fax:** 042-682256

**Website:** www.uet.edu.pk



**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	3	6	0	9

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
8	0	0	2	2	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Physics****Postal Address:**

University of Engineering & Technology, Lahore-54890

**Telephone:** 042-6829204

**Fax:** 042-6822566

**Website:** www.uet.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	4	4	0	11

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
23	2	10	3	0	0	16

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Department of Civil Engineering

### Postal Address:

University of Engineering & Technology, Taxila

Telephone:0596-9314225

Fax:0596-9314226

### Main Objectives:

- To impart education in engineering to undergraduate and postgraduate classes.
- To conduct quality research in relevant fields.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	8	0	12

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0		0		0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Mechanical Engineering****Postal Address:**

University of Engineering &amp; Technology, Taxila

**Telephone:**0596-9314225**Fax:**0596-9314226**Main Objectives:**

- To impart education in engineering to undergraduate and postgraduate classes.
- To conduct quality research in relevant fields.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	4	4	5	18

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
12	0	0	10	0	2	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Electronics

### Postal Address:

University of Peshawar, Peshawar

**Telephone:** (091) 9216734

**E-mail:** [electronics@upesh.com](mailto:electronics@upesh.com)

**Fax:** 091-9216470

**Website:** [www.upesh.edu](http://www.upesh.edu)

### Main Objectives:

- Teaching and research.
- Academic leadership in electronics for graduates and undergraduate studies in NWFP.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	5	0	7

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	2	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Mathematical Sciences

### Center for Advanced Studies in Pure and Applied Mathematics

**Postal Address:**

Bahauddin Zakariya University, Multan

**Telephone:** 061- 9210070      **Fax:** 061-9210098

**Website:** www.bzu.edu.pk

**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
6	1	1	0	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
76	4	10	5	0	2	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Mathematics

**Postal Address:**

Gomal University, D.I.Khan

**Telephone:** 0961-750279      **Fax:** 0961-750255

**Main Objectives:**

- Teaching at M.Sc/M.Phil. level.
- Research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	0	5	0	6

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Mathematics****Postal Address:**

Islamia University, Bahawalpur

**Telephone:** (0621)9258231

**Fax:** 0621-9250232

**Main Objectives:**

- To teach M.Sc. students.
- To engage staff and students in research activities.
- To register and guide M.Phil../Ph.D. scholars.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	4	0	6

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	1	20	10	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Mathematics

### Postal Address:

Quaid-I-Azam University, Islamabad

Telephone: 051-2829189

Fax: 051-4444322

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
13	0	0	0	13

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
82	24	20	100	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Human resources development in mathematics.

## Department of Mathematics

### Postal Address:

Shah Abdul Latif University, Khairpur

Telephone: 0792-551914

Fax: 0792-551795

### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	5	0	7

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	2	0	0	0



**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Mathematics****Postal Address:**

University of Azad Jammu &amp; Kashmir, Muzaffarabad

**Telephone:** 05881-44505**Fax:** 058810-44717**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	0	6	0	10

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	2	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Department of Mathematics

### Postal Address:

University of Balochistan, Quetta

Telephone: 081-9211288

Fax: 081-9211277

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	4	6	0	11

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
8	0	0	0	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Mathematics

### Postal Address:

University of Karachi, Karachi-75720

Telephone: 021-479001/2298

Fax: 021-9243203

Website: www.uk.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	0	16	0	21

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
25	3	0	2	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Mathematics

#### Postal Address:

University of Peshawar, Peshawar

Telephone: 091-9216749 & 9216701-20 Ext.3034 Fax: 091-9216570

E-mail: [mathematics@upesh.edu](mailto:mathematics@upesh.edu)

Website: [www.upesh.edu](http://www.upesh.edu)

#### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	2	2	0	8

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

<b>Manpower Produced</b>		<b>Publications</b>				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
4	0	0	6	4	0	0

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any Other Achievements**

Nil

## Physics

### Department of Physics

**Postal Address:**

Bahauddin Zakariya University, Multan, 6080

**Telephone:** (061)224371-74

**Fax:** 061-9210098

**Website:** www.bzu.edu.pk

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	1	1	3	13

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	2	0	5	21	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

### Department of Physics

**Postal Address:**

Gomal University, D.I.Khan

**Telephone:** 0961-750363

**Fax:** 0961-750255

**Main Objectives:**

- Teaching/research at M.Sc/M.Phil. level.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	11	3	0	19

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
5	0	7	2	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Center for Advance Studies in Physics****Postal Address:**

P.O. Box 1750, Church Road, Lahore-54000

**Telephone:** 042-9211589

**Main Objectives:**

- Post graduate research and training in different fields of physics.
- To provide basic training of vacuum technology, setup of atomic and nuclear physics experiments and fundamental research in these fields.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	3*	9*	7*	22*

\* including part time

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	2	13	20	0	0	11

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Physics

#### Postal Address:

B.J Campus Islamia University, Bahwalpur

Telephone: 0621-9250330

Fax: 0621-9250232

#### Main Objectives:

- Teaching and research.

#### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
8	0	2	0	10

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	1	0	10	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Physics**

**Postal Address:**

Quaid-I-Azam University, Islamabad

**Telephone:** 051-2829279

**Fax:** 051-4444322

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
17	0	0	0	17

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
30	12	0	0	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil



## Department of Physics

### Postal Address:

University of Agriculture, Faisalabad

**Telephone:** 041-30281-89 Ext.365

**Fax:** 041-9200183

**Website:** www.uaf.edu.pk

### Main Objectives:

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	3	4	0	8

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	10	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	1	0

#### (c) Any Other Achievements

Nil

## Department of Physics

### Postal Address:

University of Balochistan, Quetta

**Telephone:** 081-9211288

**Fax:**081-9211267

### Main Objectives:

- To conduct M.Sc programme of study.

- To conduct M.Phil. and Ph.D. programme for university and college teachers.
- To conduct scientific activities like seminar / conferences etc.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	3	4	0	12

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
5	2	5	5	3	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Physics

#### Postal Address:

University of Peshawar, Peshawar

**Telephone:** (091)9216727

**Fax:** 091-9216470

**E-mail:** Physics@upesh.edu

**Website:** www.upesh.edu.pk

#### Main Objectives:

- Teaching and research.
- Academic leadership in the subject of Physics at graduate and undergraduate levels.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	1	2	0	8

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
11	0	3	9	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Nil

## Centre for High Energy Physics

### Postal Address:

University of the Punjab, Quaid-e-Azam Campus, Lahore

Telephone: 042-5863932

Fax: 042-5868313

### Main Objectives:

- To carry out M.Phil. and Ph.D. programmes in high-energy physics and to undertake collaborative research with the advanced work.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	2	4	0	10

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
12	15	7	6	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Physics****Postal Address:**

University of the Punjab, Lahore

Telephone: 042-5863926

Fax: 042-5881012

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
9	1	0	0	10

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	3	18	18	0	4	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

## Statistics

### Department of Statistics

**Postal Address:**

Bahauddin Zakariya University, Multan

**Telephone:** 9210087

**Fax:** 9210098

**Website:** www.bzu.edu.pk

**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
7	0	2	0	9

### R&D Output (1998-2000)

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	6	3	15	0	1	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

### Department of Statistics

**Postal Address:**

Islamia University, Bahawalpur

**Telephone:** 0621-9250321

**Fax:** 0621-9250232

**E-mail:** ve iub@hotmail.com

**Main Objectives:**

- Postgraduate teaching & research.
- Development of curriculum for M.Sc, M.Phil. & Ph.D. studies.
- Consultancy and guide to other research organizations in the area.
- Short courses to increase computer literacy.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
4	1	5	0	10

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	18	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Statistics****Postal Address:**

Quaid-I-Azam University, Islamabad

**Telephone:** 051-2272564**Fax:** 051-2821397**Website:** www.qau.edu.com.pk**Main Objectives:**

- Teaching and research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	1	2	0	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	15	15	2	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Statistics

#### Postal Address:

Shah Abdul Latif University, Khairpur

Telephone: 0792-551914

Fax: 0792-551795

#### Main Objectives:

- Teaching and research

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	12	0	14

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	4	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Statistics****Postal Address:**

Sindh Agriculture University, Tandojam

Telephone:0221-765869

Fax: 0221-765300

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	9	0	9

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	5	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Statistics****Postal Address:**

University of Balochistan, Quetta

Telephone: 081-9211288

Fax: 081-9211277



**Website:** www.uob.cjb.net

**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	1	13	0	14

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
1	0	0	36	0	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil

**Department of Statistics**

**Postal Address:**

University of Karachi, Karachi-75720

**Telephone:** 021-479001/2298

**Fax:** 021-9243203

**Website:** www.uk.edu.pk

**Main Objectives:**

- To teach statistics at graduate/postgraduate levels.
- To conduct research.
- To prepare manpower in information science.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	6	1	0	9

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
3	0	0	0	0	1	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

### Department of Statistics

#### Postal Address:

University of Peshawar, Peshawar

Telephone: 091-9216742

Fax: 091-9216470

Website: www.upesh.edu.pk

#### Main Objectives:

- To produce undergraduate and postgraduates with specialization in statistics.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
5	8	0	0	13

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	7	12	0	0	0

### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved/ Developed	Processes and Products Commercialized
0	0	0

### (c) Any Other Achievements

Awareness in masses,

## Department of Statistics

### Postal Address:

University of Sindh, Jamshoro

Telephone: 0221-771681/2067

Fax: 0221-771376

Website: www.usindh.edu.pk

### Main Objectives:

- Teaching at graduate/postgraduate levels.
- Research in statistics.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
3	13	1	1	18

## R&D Output (1998-2000)

### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	2	4	40	0	0	0

**(b) Patents / Processes / Products**

<b>Patents Registered</b>	<b>Processes and Products Improved /Developed</b>	<b>Processes and Products Commercialized</b>
0	0	0

**(c) Any Other Achievements**

Nil

## Mathematics, Statistics and Computer Science

### Department of Mathematics, Statistics and Computer Science

**Postal Address:**

NWFP Agriculture University, Peshawar

**Telephone:** 091-9216520

**Fax:** 091-9213052

**Main Objectives:**

- To improve the higher education & research in Pakistan in general and of the province in particular through teaching, research and out-reach activities to uplift the life standard through the latest available in the field of higher education & research.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
1	1	3	0	5

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	2	5	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Department of Statistics, Mathematics and Computer Science

### Postal Address:

University of Arid Agriculture, Muree Road, Rawlpindi

**Telephone:** 051-9290151-152 (109)

**Fax:** 051-9290160

**Website:** www.uaar.edu.pk

### Main Objectives:

- To equip the students with subject of statistics for analyzing the data.
- To train the students in computer science so that they meet the requirements of today.
- Community services.

### Manpower Engaged in R&D (2000)

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E.BS(Engr) MBBS/DVM equivalent	Others	Total
0	0	3	0	3

### R&D Output (1998-2000)

#### (a) R&D Manpower / Scientific Publications

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
0	0	0	15	0	0	0

#### (b) Patents / Processes / Products

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

#### (c) Any Other Achievements

Nil

## Mathematics and Statistics

### Department of Mathematics and Statistics

**Postal Address:**

University of Agriculture, Faisalabad

**Telephone:** 041-9200161-70/357**Fax:** 041-647846**E-mail:** biometry@hotmail.com**Website:** www.uaf.edu.pk**Main Objectives:**

- Teaching and research.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
0	2	6	0	8

**R&D Output (1998-2000)****(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
4	0	0	2	1	0	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

The department of Mathematics and Statistics is engaged in providing support to all other departments of the university through teaching course in Mathematics and Statistics. It also helps faculty members and researchers from different departments of the university in planning their research experiments/studies and later on for analyzing and interpreting the results. Hence the department is serving in a big way to the researchers of the university. Consultancy and data analysis help to professionals of allied institutions in Faisalabad e.g. NIBGE, NIAB, AARI and PMC etc.

## Mathematics and Computer Science

### Institute of Mathematics and Computer Science

**Postal Address:**

University of Sindh, Jamshoro

**Telephone:** (0221)-771681/2030 Ext.

**Fax:** 0221-771372

**Website:** www.usindh.edu.pk

**Main Objectives:**

- Teaching at graduate and postgraduate level.
- Research in mathematics and computer sciences.
- Promote the interest in mathematics and computer sciences.

**Manpower Engaged in R&D (2000)**

Ph.D.	M.Phil./ME/ MS(Engr) equivalent	M.Sc./B.E./BS(Engr) MBBS/DVM equivalent	Others	Total
2	0	12	0	14

**R&D Output (1998-2000)**

**(a) R&D Manpower / Scientific Publications**

Manpower Produced		Publications				
M.Phil.	Ph.D.	International Journals	National Journals	Review Articles	Books	Others
2	2	1	10	0	5	0

**(b) Patents / Processes / Products**

Patents Registered	Processes and Products Improved /Developed	Processes and Products Commercialized
0	0	0

**(c) Any Other Achievements**

Nil