

**10**

**STANDING COMMITTEE  
ON AGRICULTURE  
(1996-97)**

**ELEVENTH LOK SABHA**

**MINISTRY OF AGRICULTURE**

**(DEPARTMENT OF AGRICULTURAL  
RESEARCH & EDUCATION)**

**DEMANDS FOR GRANTS (1997-98)**

**TENTH REPORT**



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**LOK SABHA SECRETARIAT  
NEW DELHI**

April, 1997/Chaitra, 1919 (Saka)

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*Presented to Lok Sabha on 11.4.1997*  
*Laid in Rajya Sabha on 22.4.1997*



LOK SABHA SECRETARIAT  
NEW DELHI

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COMPOSITION OF THE STANDING COMMITTEE ON  
AGRICULTURE (1996-97)

Shri Santosh Kumar Gangwar — *Chairman*

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| 5. Shri Anil Kumar      | — <i>Reporting Officer</i>  |

## PREFACE

I, the Chairman, Standing Committee on Agriculture having been authorised by the Committee to submit the Report on their behalf, present this Tenth Report on Demands for Grants of the Ministry of Agriculture (Department of Agricultural Research and Education) for the year 1997-98.

2. The Standing Committee on Agriculture was re-constituted on 1st August, 1996. One of the functions of the Standing Committee as laid down in Rule 331E of the Rules of Procedure and Conduct of Business in Lok Sabha is to consider the Demands for Grants of the concerned Ministries/Departments and make a report on the same to the Houses. The report shall not suggest anything of the nature of cut motions.

3. The Committee took evidence of the representatives of the Ministry of Agriculture (Department of Agricultural Research and Education) on 2nd April, 1997. The Committee wish to express their thanks to the Officers of the Ministry of Agriculture (Department of Agricultural Research and Education) for placing before them, the material and information which they desired in connection with the examination of Demands for Grants of the Ministry for the year 1997-98 and for giving evidence before the Committee.

4. The Committee considered and adopted the Report at their sitting held on 10th April, 1997.

NEW DELHI;  
10 April, 1997  
20 Chaitra, 1919 (Saka)

SANTOSH KUMAR GANGWAR,  
*Chairman,*  
*Standing Committee on Agriculture.*

## **CHAPTER I**

### **INTRODUCTION**

#### **Department of Agricultural Research and Education**

1.1 The Department of Agricultural Research and Education (DARE) of the Ministry of Agriculture provides the necessary governmental linkages for the Indian Council of Agricultural Research (ICAR). The major functions of the DARE are:—

- \* To look after all aspects of agricultural research and education (including animal science and fisheries) involving coordination between the Central and State agencies;
- \* To attend to all matters relating to the Indian Council of Agricultural Research; and
- \* To attend to all matters concerning the development of new technology in agriculture, animal husbandry and fisheries including such functions as plant and animal introduction and exploration and soil and land use survey and planning.

#### **Indian Council of Agricultural Research**

1.2 The Indian Council of Agricultural Research (ICAR) is a Society registered under Societies Registration Act, 1860. Within the overall framework of Government policies, the ICAR is vested with full authority to determine basic strategies, formulate operational policies, developing necessary programmes and to ensure their implementation on sound technical and economic principles.

#### **Mandate of ICAR**

1.3 The Indian Council of Agricultural Research (ICAR) as an apex scientific organisation at national level, plays a crucial role in promoting and augmenting science and technology programmes relating to agricultural research, education and demonstration of new

technologies as first line extension activities. The mandate of ICAR is as follows:—

1. To plan, undertake, aid, promote and coordinate education, research and its application in agriculture, agroforestry, animal science, fisheries, home science and allied sciences.
2. To act as a clearing house for research and general information relating to agriculture, animal husbandry, home science, fisheries and allied sciences, through its publications and information system and instituting and promoting transfer of technology programmes.
3. To provide, undertake and promote consultancy services in the field of research, education, training and dissemination of information in agriculture, agroforestry, animal science, fisheries, home science and other allied sciences.
4. To look into the problems relating to broader areas of rural development concerning agriculture, including post-harvest technology by developing co-operative programmes with other organisations such as the Indian Council of Social Science Research, Council of Scientific and Industrial Research, Bhabha Atomic Research Centre, Universities etc.
5. To do other things considered necessary to attain the objectives of the Council.

### **Activity Spectrum of ICAR**

1.4 The Council performs research, education and first line extension service and other identified programmes with specific objectives. During VIII Five Year Plan, the following 194 plan schemes were implemented in addition to Foreign Aided Projects.

- \* 80 Institutes comprising 46 Central Institutes, 4 National Bureaux and 30 National Research Centres.
- \* 90 Projects including 10 Project Directorates and 80 All India Coordinated Research Projects/Network Programmes.
- \* 24 other Plan Projects including World Bank Aided Projects.

An abridged account of major activities of the ICAR is presented below.

### **Agricultural Research**

1.5 The Council plays a crucial role in promoting science and technology and its application in Agriculture. Primarily, fundamental and applied research in traditional and frontier area are undertaken by the Council to offer solutions to problems relating to conservation and management of resources, productivity improvement of crops, animals and fisheries etc. For formulating research policies and programmes, the ICAR has developed a national grid comprising of a chain of 46 Central Institutes, 4 Bureaux, 10 Project Directorates (PDS), 30 National Research Centres (NRCs) and 80 All India Coordinated Research Projects (AICRPs) with their centres located in different parts of the country. The coordinated research activities are not only multi-institutional but are also multi-disciplinary and multi-locational to cover whole spectrum of various situations and conditions. Above all, it is stated that the most important strength of these efforts lie in the national cooperative testing and minimising the rigours of the screening of varieties and technologies, before these are passed on to the farmers.

The ICAR claims at present that it is equipped with a strong agricultural research and educational system and the system has the ability and resilience to transform the agrarian economy through increased productivity, self sufficiency in food, fodder and other essential commodities with excellent export potential.

### **Agricultural Education**

1.6 The Council aids, promotes and coordinates agricultural education programmes at national level. The major thrust in this area was given from early 1960s when the first agricultural university was established in the country. Since then the Council has invested over Rs. 200 crore in developing the agricultural university system. The educational programmes are, by and large, carried out by 28 State Agricultural Universities (SAUs) of the country covering 16 major States. One Central Agricultural University (CAU) for NEH Region has also been established at Imphal to help and support the human resource development needs of the region. In addition to these, 4 National Institutes of the Council *viz.* Indian Agricultural Research Institute (IARI), Indian Veterinary Research Institute (IVRI), National Dairy

Research Institute (NDRI) and Central Institute of Fisheries Education (CIFE) have been granted the status of deemed to be universities. These institutes offer post graduate degree programmes in addition to undertaking researches in their respective areas.

### **Agricultural Extension**

1.7 The ICAR discharges the responsibility of transfer of technology through demonstration of latest agricultural technologies to farmers, extension functionaries of States Agricultural Departments and other non-governmental agencies interested in agricultural development. All the Technology Transfer Programmes of the Council have been brought under the canopy of integrated Krishi Vigyan Kendras (KVKs) for better coordination and support. A network of 261 KVKs is established in the country, which are imparting on-farm training in different aspects of agriculture, animal sciences, fisheries and allied vocations to youths, farm men and women and rural workers. These programmes get a back-up support through 8 Trainers' Training Centres to update knowledge of farm-worthy advancements made in research. These programmes are closely monitored by 8 Zonal Coordinators. During VIII Five Year Plan, ICAR has also piloted a new Institution Village Linkage Programme (IVLP) at 42 selected centres to increase exposure of applied and adaptive researchers to the production system at which their investigations are aimed.

### **Summary of Achievements made during the VIIIth Five Year Plan**

1.8 It is reported that the technological advances made during the VIII Plan under 44 sectoral programmes have helped to achieve the target of agricultural production in the country. Owing to the accelerated pace of varietal improvement front, more than 550 high-yielding varieties of different crops were developed. A number of them had the in-built resistance towards various biotic and abiotic stresses, providing much-needed insulation to crop production. Similarly, a number of improved breeds of cattle and poultry such as Frieswal and CARI-GOLD were evolved. In fisheries sector, around development continued with a compound growth rate of more than 10% in inland fisheries production. In farm implements and machinery, a number of improved prototypes were developed and have gone into commercial production capable of bringing the much needed timeliness, efficiency and effectiveness in farm operations.



## Summary of Problems and Prospects

1.9 Keeping in view the growth rate of population, income, demand of food, feed, seed for industrial and other uses, it is estimated that India would need around 215 million tonnes of foodgrains by the end of IX Plan. Keeping a food reserve for a contingency of 10 million tonnes and also a consistent export target of around 5 million tonnes by 2002, the total demand for foodgrains will be of 230 million tonnes. With the current foodgrains production of 195 million tonnes, we will have to add about 35 million tonnes by 2002. It is rather difficult to obtain this incremental production from the conventional Green Revolution area. For the second Green Revolution, it is necessary for making the grey areas green. Hence, major support for rainfed areas, especially in Eastern India and other unfavourable areas where technological, socio-economic and infrastructural bottlenecks exist, would be necessary. India will have to increase the production of rice and wheat by another 20 to 25 million tonnes in the next 5 years. Similarly, large increase is also needed in the production of coarse cereals, pulses, oilseeds, fodder, fuelwood, fruit, vegetables, milk, meat, eggs, fish and a wide range of industrial and plantation crops.

The above targets are to be achieved against the diminishing land resources, increasing biotic and abiotic stresses, declining factor productivity, rising inputs costs, loss of bio-diversity, natural resource shrinkage and degradation, climatic change, requirement of intellectual property rights, intensifying competitiveness (quality and cost) in international trade, widening economic inequality, decline in the growth rate of real investment in infrastructure besides burgeoning population.

There are immense opportunities for technological revolution in the field of molecular biology, biochemistry, physiology, system analysis, space science, revolution in informatics and liberalization of international markets, which need to be harnessed.

### 1.10 A Brief Note on Schemes by Sectors which were planned but could not be started during VIII Five Year Plan

Sector	Plan Schemes	EAP Schemes
Crop Science	AICRP on Biotechnology on Breeding for Biotic Stress	Indo-UK Collaborative Network- Project on Whitefly
Soil, Agronomy & Agroforestry	AICRP on Acid Soils AICRP on Land Use Planning	

Sector	Plan Schemes	EAP Schemes
Animal Science	Strengthening of Monitoring and training of scientists Vaccine and diagnostic technique/ livestock farming system	

### 1.11 Schemes which are Dropped out

Sector	Plan Schemes	EAP Schemes
Horticulture	Network project on Epidemiology & Integrated Management of Apple Scab CPRI, regional station, Darjeeling	

### 1.12 Schemes, Merged and Upgraded During IX Plan

Sector	Plan Schemes	EAP Schemes
Crop Science	Barley Network AICRP Under Utilised & Under Exploited Sugarbeet Network Project AICRP Tobacco AICRP Rodent Control Network Project on Economic Ornithology AICRP White Grubs Niger Project on Oilseeds	
Horticulture	<i>Merged</i> AICRP Post Harvest Technology AICRP Mushroom AICRP Cashew AICRP Medicinal & Aromatic Plant  <i>Upgraded</i> NRC-Arid Horticulture to Central Institute for Arid Horticulture PD-Vegetable Research to Central Veg. Research Institute NRC-Orchids to NRC Orchids & Floriculture	
Soil, Agronomy & Agroforestry	<i>Merged</i> AICRP Weed Control to NRC—Weed Science AICRP Long term Fertilizer & Soil Test Crop Response to AICRP on Integrated Plant Nutrient System AICRP—BNF to IISS AICRP—Tillage Requirement to proposed Institute of	

Sector	Plan Schemes	EAP Schemes
	<p>Sustainable Production System, Modipuram AICRP—Well &amp; Pumps to AICRP Water Management AICRP Agroforestry to NRC Agroforestry</p> <p><i>Upgraded</i> PD Cropping System Research to Indian Institute of Research on Sustainable Production System, Modipuram</p> <p>PD Water Management to ICAR Res. Complex for Eastern Region, Patna AICRP Agrometeorology to PD—Agroforestry ICAR Res. Complex Goa and Reg. Res. Station Canning of CSSRI to Network on Coastal Production System VPKAS, CSWCR&amp;TI and NEH Complex to Network for Mountaineous Production System</p>	
Animal Science	<p><i>Merged</i></p> <p>NBAGR &amp; NIAG merged into NBAGR</p> <p><i>Upgraded</i> AICRP FMD to NRC-FMD Network Embryo transfer technology to AICRP on embryo transfer technology AICRP Pigs to NRC-Pig AICRP Animal Disease Monitoring &amp; Surveillance to NRC Animal Disease Mon. &amp; Surve.</p>	<p><i>Phased Out</i></p> <p>ILTP Prod. of vaccine against FMD &amp; Seed pox</p> <p>ILTP of Immuno diagnostics against important animal disease</p> <p>ILTP dev. of drug from Medicinal Plants</p> <p>In-vitro bio synthetic of immuno colchicines</p>

### 1.13 New Schemes in IX Plan

Sector	Plan Schemes	EAP Schemes
Crop Science	<p>National facility of Plant Virus Research National Centre for Agriculturally important Micro Organisms</p>	
Horticulture	<p>IISR, Regional Station, Rajasthan AICRP on Solanaceous Vegetables AICRP on Cucurbit, Okra &amp; Root Veg. AICRP on Cole, Pea and Bean Veg.</p>	
Soil, Agronomy & Agroforestry	<p>Regional Station of CCSRI Karnal in Lucknow</p>	

Sector	Plan Schemes	EAP Schemes
Animal Science	<p>AICRP on Gastro-intestinal parasitism</p> <p>AICRP on newer feeds and preparation of complete feed</p> <p>AICRP on rumen microbial dynamics</p> <p>Network programme on haemorrhagic septicaemia</p> <p>Network on lignin bio degradation</p> <p>Network on fertility improvement using reproductive biotechnology</p> <p>Network on Crossbred animals for hills</p> <p><b>DBT Assisted Schemes</b></p> <p>NRC on Emerging Disease</p> <p>NRC on Zoonosis</p> <p>NRC for quality assurance of biological and drugs</p> <p>NRC Viral diseases</p> <p>Network on disease diagnosis &amp; diagnostic tech.</p> <p>Network on Salmonellosis</p> <p>National centre/facility on micro organism</p> <p>National centre for dairy culture</p> <p>MOET scheme for progeny evaluation</p>	
Fishery	<p>AICRP freshwater prawn culture at CIFA</p> <p>AICRP shellfish mariculture at CMFRI</p>	
Agril. Education	<p>Rural awareness work experience programme</p> <p>National talent scholarship</p> <p>Agril. Education media Res. Centre</p> <p>Strengthening Edn. Technology</p> <p>National Agril. Information &amp; Lib. Networking</p> <p>Support to Agril. Colleges not affiliated to SAUs</p> <p>Sabatical Leave</p> <p>Visiting Scientist Schemes</p> <p>Vocationalisation</p>	
Agril. Extension	<p>Establishment of 100 new KVKs</p> <p>Trainer's Training Centre on Vegetable Production</p> <p>Trainer's Training Centre on Rural System Analysis</p> <p>Establishment of Institute Village Linkage Programme</p> <p>Frontline Demonstration in various aspects of crop production</p>	

**Schemes which were continued in VIII Plan and will be continuing in IX Plan also along with new initiatives**

1.14 The programme-wise details of Plan schemes *viz.* institutes, bureaux, national research centres, AICRPs etc. is as under:

Sector	Programmes	Plan Schemes	Remarks
I. Crop Science	A Plant Genetic Resources	1. National Bureau of Plant Genetic Resources	It includes AICRP-UUEP.
		2. AICRP-Under-utilised & Under-exploited Plant	It is now integrated with NBPGR.
		3. AICRP—Arid Legumes	It is to be shifted to IIPR.
	B Food Crops	1. Indian Agricultural Research Institute	
		2. Central Rice Research Institute	
		3. Vivekanand Parvataiya Krishi Anusandhan Shala	
		4. Institute of Pulses Research	
		5. Directorate of Wheat Research	It now includes Network Barley
		6. N.R.C.—Sorghum	
		7. Project Directorate—Rice	
		8. AICRP—Chick Pea	
		9. AICRP—Pegion Pea	
		10. AICRP --Pulses (MULLARP)	
		11. PD—Maize	
		12. AICRP—Pearl Millets	
		13. AICRP—Small Millets	

Sector	Programmes	Plan Schemes	Remarks
		14. Network Barley	It is to be merged with PD—Wheat.
		15. AICRP—Sorghum	
C.	Forage Crops	1. Indian Grass land & Fodder Research Institute	
		2. AICRP—Forage Crops	
D.	Commercial Crops	1. Central Tobacco Research Institute	It includes AICRP—Tobacco.
		2. Indian Institute of Sugarcane Research	It includes Network—Sugarbeet.
		3. Central Institute of Cotton Research	
		4. Central Research Institute for Jute & Allied Fibres	
		5. Sugarcane Breeding Instt.	
		6. AICRP—Cotton	
		7. AICRP—Jute	
		8. AICRP—Tobacco	It is integrated with CTRI
		9. AICRP—Sugarcane	
		10. Network Scheme—Sugarbeet	It is merged with IISR.
E.	Oilseed	1. N.R.C.—Groundnut	
		2. N.R.C.—Soyabean	
		3. N.R.C.—Rapeseed & Mustard	
		4. Project Directorate—Oil-seeds	
		5. AICRP—Groundnut	
		6. AICRP—Rapeseed & Mustard	

Sector	Programmes	Plan Schemes	Remarks
	E. Plant Protection	1. N.R.C.—Integrated Pest Management 2. P.D.—Biological Control 3. AICRP—Honey Bees 4. AICRP—White Grub 5. AICRP—Agriculture Acarology 6. AICRP—Rodent Control 7. AICRP—Pesticide Residue 8. AICRP—Nematode 9. Network-Agriculture Ornithology	Renamed NW for Soil Arthropod     Renamed Vertebrate Pest Management    Merged in AICRP Rodents VPM
	G. Hybrid Research & Seed Development	1. Project on Promotion of Research & Development on Hybrid Seed in Selected Crops	
	H. Genetic Engineering & Biotechnology for Crop Improvement	1. NRC on DNA Fingerprinting 2. N.R.C. Biotechnology Centre for Crop Science	
	I. Seed Technology Research & Breeder Seed Production	1. National Seed Project including existing AICRP on Seed Borne Diseases	
	J. New Initiatives & EAP's Components	1. New Schemes (i) National Facility for Plant Virus Research (ii) National Centre for Agriculturally Important Micro Organisms 2. E.A.P.'s Component	
2. Horticulture	A. Fruits	1. Indian Institute of Horticultural Research (50%)	

Sector	Programmes	Plan Schemes	Remarks
		2. Central Institute of Horticulture for Northern Plain (90%)	
		3. ICAR Research Complex for Goa (10%)	
		4. N.R.C.—Citrus (90%)	
		5. N.R.C.—Grapes	
		6. AICRP—Tropical Fruits	
		7. AICRP—Sub-tropical Fruits	
		8. AICRP—Arid Fruits	
		9. Central Institute of Temperate Horticulture	
		10. N.R.C.—Arid Horticulture	To be upgraded to Instt.
		11. N.R.C.—Banana	
		12. AICRP—Apple Scab	Fund required for one year
B.	Vegetables	1. Indian Institute of Horticulture Research (30%)	
		2. N.R.C.—Mushroom	Includes AICRP-Mushroom
		3. P.D.—Vegetable	To be upgraded to Instt.
		4. Vegetable Seed Project	
		5. AICRP—Mushroom	Merged with NRC-Mushroom
		6. N.R.C.—Onion and Garlic	
C.	Potato & Tuber Crops	1. Central Potato Research Institute	
		2. Central Tuber Crops Research Institute	



Sector	Programmes	Plan Schemes	Remarks
		3. AICRP—Potato	
		4. AICRP—Tuber Crops	
D. Plantation Crops		1. Central Plantation Crops Research Institute	
		2. ICAR Research Complex for Goa (90%)	
		3. N.R.C.—Cashew	Includes AICRP-Cashew
		4. N.R.C.—Oilseed Palm	
		5. AICRP—Palms (Coconut)	
		6. AICRP—Cashew	
E. Spices		1. N.R.C.—Spices	
		2. AICRP—Spices	
F. Floriculture, Medicinal & Aromatic Plants		1. Indian Institute of Horticulture Research (10%)	
		2. N.R.C.—Orchids	
		3. N.R.C.—Medicinal & Aromatic Plants	Includes AICRP-M&AP
		4. AICRP—Floriculture	
		5. AICRP—Medicinal and Aromatic Plants	Merged with NRC-M&AP
		6. AICRP—Betelvine	
G. Post Harvest Technology of Horticultural Crops		1. Indian Institute of Horticulture Research (10%)	
		2. Central Institute of Horticulture for Northern Plains	
		3. NRC on Citrus (10%)	
		4. AICRP—Post Harvest Technology of Horticultural Crops	Includes other Project of PHT

Sector	Programmes	Plan Schemes	Remarks
		5. Project on PHT of Fruits and Vegetables	Merged with AICRP-PHT H.C.
	H. New Initiatives	1. New Schemes (i) IISR, Regional Station, Rajasthan (ii) AICRP on Solanaceous Vegetables (iii) AICRP on Cucurbit, Okra & Root Veg. (iv) AICRP on Cole, Pea and Bean Veg.	
3. Soil, Agronomy and Agro-Forestry	A. Resource Inventory	National Bureau of Soil Survey & Land Use Planning	
	B. Cropping System Research	1. Central Agriculture Research Institute for Andaman & Nicobar  2. ICAR Research Complex for NEH Region  3. N.R.C.—Agro-forestry  4. N.R.C.—Weed Science  5. P.D.—Cropping System Research  6. AICRP—Agri-meteorology  7. AICRP—Diaraland Improvement  8. AICRP—Agro-forestry  9. AICRP—Weed Control	
	C. Soil Management	1. Central Arid Zone Research Institute  2. Central Soil & Water Conservation Research & Training Institute  3. AICRP—Tillage Management of Indian Soils	

Sector	Programmes	Plan Schemes	Remarks
		4. AICRP—Management of Acid Soil	Not started
	D. Water Management	1. Central Soil Salinity Research Institute	
		2. Water Technology Centre for Eastern Region	
		3. P.D. Water Management	
		4. AICRP—Management of Salt Affected Soil	
		5. AICRP—Optimisation of Groundwater Utilization through Wells and Pumps	
	E. Nutrient Management	1. Indian Institute of Soil Science	
		2. Central Research Institute for Dryland Agriculture	
		3. AICRP—Dryland Agriculture	
		4. AICRP—Micro Nutrients	
		5. AICRP—Biological Nitrogen Fixation	
		6. AICRP—Micro Biological Decomposition	
		7. AICRP—Soil Test Crop Response	
		8. AICRP—Long-term Fertilizer Experiments	
	F. New Initiatives & E.A.P.'s Components	1. New Schemes Regional Station of CCSRI Kanpur in Lucknow	
		2. EAP's Component	

Sector	Programmes	Plan Schemes	Remarks
4. Agriculture Engineering	A. Farm Implements & Machinery	1. Central Institute of Agricultural Engineering	To be merged with AICRP-FIM
		2. AICRP—Power Tiller	
		3. AICRP—Farm Implements & Machinery	
		4. AICRP—Human Engineering and safety studies in Agriculture	
		5. Sub Centre of NRC Women in Agriculture	
	B. Post Harvest Engineering and Technology	1. Central Institute for Post Harvest Engg. & Technology	To be phased out in IX plan
		2. Central Institute for Research on Cotton Technology	
		3. Indian Lac Research Institute	
		4. Jute Technological Research Laboratory	
		5. AICRP—Application of Plastics in Agriculture	
		6. AICRP—Jaggery & Khandsari	
		7. AICRP—Harvest & Post Harvest Technology	
	C. Energy Management in Agriculture Engineering	1. AICRP—Renewable Energy Sources	Being strengthened with New Centres
		2. AICRP—Energy Requirement in Agricultural Sector	
		3. AICRP—Animal Energy	
	D. Drainage Engineering	AICRP—Agricultural Drainage	Integrated with PD-Water Management
	E. New Initiatives & E.A.P.'s Components	1. New Schemes	
		2. EAP's Component	

Sector	Programmes	Plan Schemes	Remarks
5. Animal Science	A. Animal Genetic Resources	1. National Institute of Animal Genetics	
		2. National Bureau of Animal Genetic Resources	
		3. Network-Animal Genetic Resources	
	B. Livestock Improvement	1. National Dairy Research Institute	
		2. Central Sheep and Wool Research Institute	
		3. Central Avian Research Institute	
		4. Central Institute of Research for Goats	
		5. Central Institute of Research on Buffaloes	
		6. National Institute of Animal Nutrition & Physiology	
		7. N.R.C. on Biotechnology (Part of NDRI)	
		8. N.R.C.—Camel	
		9. N.R.C.—Yak	
		10. N.R.C.—Mithun	
		11. N.R.C.—Equine	
		12. I.D.—Poultry	
		13. I.D.—Cattle	
		14. AICRP-Sheep	
		15. AICRP-Goat	
		16. AICRP-Buffalo	
		17. AICRP-Pig	

Sector	Programmes	Plan Schemes	Remarks
		18. AICRP-Agricultural By-Product	
		19. Network-Micronutrients	
		20. Network-Embryo Transfer	
		21. Network--Crop Based Animal Production System	
C	Livestock Product Technology	1. Dairy Processing (National Dairy Research Institute)	
		2. N.R.C.-Meat & Meat Product Technology	
		3. Central Sheep & Wool Research Institute	
		4. R & D Support for Process Upgradation of Indigenous Milk Products for Industrial Applications	
D	Animal Health	1. Indian Veterinary Research Institute	
		2. AICRP-Disease Monitoring & Surveillance	
		3. AICRP-Blood Proteins	
		4. AICRP on Foot & Mouth Disease	
		5. Strengthening of Monitoring Mechanism and Training of Scientists & Technicians	Not started
		6. N.R.C.-Biotechnology (Part of IVRI)	
E	New Initiatives & EAP's Components	1. New Schemes AICRP on Gastro-intestinal parasitism AICRP on newer feeds and preparation of complete feed	

Sector	Programmes	Plan Schemes	Remarks
		<p>AICRP on rumen microbial dynamics</p> <p>Network programme on haemorrhagic septicaemia</p> <p>Network on lignin bio degradation</p> <p>Network on fertility improvement using reproductive biotechnology</p> <p>Network on Crossbreed animals for hills</p> <p><b>DBT Assisted Schemes</b></p> <p>NRC on Emerging Disease</p> <p>NRC on Zoonosis</p> <p>NRC for quality assurance of biological and drugs</p> <p>NRC Viral diseases</p> <p>Network on disease diagnosis &amp; diagnostic tech.</p> <p>Network on Salmonellosis</p> <p>National centre/facility on micro organism</p> <p>National centre for dairy culture</p> <p>MOET scheme for progeny evaluation</p>	
		2. EAP's Component	
6. Fisheries	A. Capture Fisheries	<p>1. Central Marine Fisheries Research Institute</p> <p>2. Central Inland Capture Fisheries Research Institute</p>	
	B. Culture Fisheries	<p>1. Central Institute for Freshwater Aquaculture</p> <p>2. Central Institute of Brackish Water Aquaculture</p> <p>3. N.R.C.—Cold Water Fisheries</p> <p>4. ORP on Processing and Utilisation of Organic Waste in Aquaculture</p>	
	C. Fish & Fish Processing Technology	Central Institute of Fisheries Technology	
	D. Fish Genetic Resources	National Bureau of Fish Genetic Resources	
	E. Fisheries Education	Central Institute of Fisheries Education	

Sector	Programmes	Plan Schemes	Remarks
	F. New Initiatives & EAP's Components	1. New Schemes  AICRP freshwater prawn culture at CIFA AICRP shellfish mariculture at CMFRI  2. EAP's Component	
7. Agricultural Statistics & Economics		1. Indian Agricultural Statistics Research Institute  2. N.R.C.—Agricultural Economics & Policy Research	
8. Agricultural Extension	A. Vocational Training with Integrated Function	1. Integrated Krishi Vigyan Kendra/Trainees Training Centres  2. NRC for Women in Agriculture	
	B. New Initiatives & EAP's Components	1. New Schemes  Establishment of 100 new KVKs Trainer's Training Centre on Vegetable Production Trainer's Training Centre on Rural System analysis Establishment of Institute Village Linkage Programme Frontline Demonstration in various aspects of crop production  2. EAP's component	
9. Agricultural Education	A. Strengthening of Agricultural Education	1. National Academy for Agricultural Research Management  2. Development & Strengthening of State Agricultural Universities  3. Development & Strengthening of Agricultural Education of Central Universities  4. Strengthening PD Education in Deemed to be Universities  5. Establishment of Central Agricultural University NEH Region	



Sector	Programmes	Plan Schemes	Remarks
		6. Establishment of Centres of Advance Studies in SAUs and DUs.	
		7. AICRP on Home Science	
	B. Recognising of Professional Excellence	Best Teacher Award	
	C. Professional Resources Utilization	1. Utilization of Internal Competence	Phased out
		2. Preparation of University level books	
		3. Emeritus Scientist Scheme	
	D. New Initiatives & EAP's Components	1. New Schemes Rural awareness work experience programme National talent scholarship Agril. Education media Res. Centre Strengthening Edn. Technology National Agril. Information & Lib. Networking Support to Agril. Colleges not affiliated to SAUs Sabbatical Leave Visiting Scientist Schemes Vocationalisation	
		2. EAP's Component	
10. World Bank Aided Projects/ Foreign Aided Projects	A. World Bank Project	1. National Agricultural Research Project II (World Bank)	Completed
		2. National Seed Project	
		3. Agricultural Human Resource Development Project	
	B. Other Foreign Aided Projects		
11. Management and Information Services	A. Bilateral and Cooperation Aided Projects	1. Bilateral Cooperation Programme with Developing & Developed Countries	
		2. Long-term Project under INDO-USSR, INDO-UK & INDO-USA Programme	

Sector	Programmes	Plan Schemes	Remarks
	B. Publication & Information		
	C. Strengthening of the Infrastructure	1. Civil Works (a) ICAR Bhawan Phase II (b) Guest House for ICAR Hqrs. (c) National Agricultural Science Centre & Museum (d) Residential Accommodation for ICAR Staff 2. ICAR Agricultural Library 3. Strengthening of ASRB 4. Modernization of Office Space & Facilities 5. ICAR Headquarters 6. Publicity & Public Relations	
	D. Support to Professional Societies/Associations/ Support to National Academy of Agricultural Science		

## CHAPTER II

### DEMANDS FOR GRANTS 1997-98 (DARE)

2.1 The Demands for Grants for Department of Agricultural Research & Education (DARE) of Ministry of Agriculture is incorporated as Demand No. 3 in the Expenditure Budget. The Demand includes besides Secretariat expenditure of the Department, contribution to international bodies, payments of grants-in-aid to the Indian Council of Agricultural Research to enable it to meet the expenditure on the various research institutes controlled by it and for its several research projects, schemes and activities. Payment of net proceeds of cess under the Agricultural Produce Cess Act, 1940, is also provided for in the Demand.

2.2 The entire demand of DARE comes under Revenue Section amounting to Rs. 599.27 crores for the year 1997-98. This Demand is divided into two major heads as follows:

Major Head "3451"	includes outlay of Plan & Non-Plan expenditure on Secretariat of DARE under Sub-Head—Salaries, Overtime Allowance, Domestic Travel Expenses, Foreign Travel Expenses and Office Expenses.
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Major Head "2415"	includes outlay of Plan & Non-Plan payments to ICAR towards Agricultural Research and Education on Crop Husbandry, Soil & Water Conservation, Animal Husbandry, Dairy Development, Fisheries, Forestry and contributions to Commonwealth Agricultural Bureau (CAB), Consultative Group on International Agricultural Research (CGIAR), Asia-Pacific Association of Agricultural Research Institution (APAARI) and Network of Agriculture Centres for Asia and the Pacific (NACA), etc.
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## Overall Review of Plan Allocation to Agricultural Research and Anticipated Expenditure along with Shortfall during the VIIIth Plan

2.3 The sector-wise summary of Plan Outlays and Anticipated Expenditure along with likely Shortfall in respect of ICAR during the VIIIth Plan is as under:

(Rs. in crores)

Name of the Programme	VIIIth Five Year Plan Approved Outlay	Total Anticipated Expenditure during VIIIth Plan	Total Expected Shortfall during VIIIth Plan	%age of Expenditure against Outlay
1. Crop Science	288.24	268.88	- 2.51	93.28
2. Horticulture	123.75	109.88	6.37	88.79
3. Soil, Agronomy & Agroforestry	156.27	144.08	- 13.32	92.20
4. Agricultural Engineering	53.23	46.82	- 3.74	87.96
5. Animal Science	146.77	114.62	- 19.26	78.09
6. Fisheries	65.00	56.42	- 15.89	86.80
7. Agricultural Economics & Statistics	9.00	4.56	- 3.23	50.67
8. Agricultural Extension	200.32	170.03	38.08	84.88
9. Agricultural Education	159.91	107.74	37.28	67.38
10. World Bank and Externally Aided Projects	177.19	225.19	13.82	127.09
11. Management and Information Services	19.48	20.71	-18.41	106.31
Grand Total	1300.00	1268.93	- 55.37	95.71
#99.16				

#Additional amount approved by PIC/EPC for which expenditure to be met from Plan savings/ additional funds, over and above Rs. 1300 crores.

## VIIIth Plan Requirement & Allocation

2.4 The Planning Commission Working Group, after careful deliberations had estimated the financial requirement of Eighth Five Year Plan (1992—97) as Rs. 1780.00 crores. Assuming a 10% rate of inflation, the requirement worked out to Rs. 2153.80 crores. However, a demand of Rs. 2008.78 crores was placed against a requirement of Rs. 2153.80 crores but the allocation provided by the Planning Commission was Rs. 1300.00 crores against its own estimated allotment of Rs. 1780.00 crores.

2.5 Against an VIIIth Plan approved outlay of Rs. 1300 crore for DARE Rs. 99.16 crore of additional amount was approved by PIC/EFC for which expenditure was to be met from Plan savings/additional funds over and above Rs. 1300 crore thereby raising the VIIIth Plan Outlay to Rs. 1399.16 crore. The total anticipated expenditure during the VIIIth Plan is Rs. 1268.93 crore against an actual allocation of Rs. 1324.30 crore in the yearly demands.

2.6 The Department was asked whether they have been able to allocate the entire amount of Rs. 1399.16 crore in different Plan Schemes and the Department replied that the Scheme-wise outlay of Rs. 1399.16 crore has been provided.

2.7 The Department was also asked to give reasons why out of Rs. 1324.30 crore only Rs. 1268.93 crore could be spent and whether shortfall of Rs. 55.43 crore have been surrendered to the Government as unutilised money by the Department.

2.8 The Department replied as under:

“The overall fund utilisation for entire VIIIth Plan period is expected to be of the order of 95.71 per cent and this status of fund utilisation happens to be the highest amongst various other Scientific Departments. During the first two years of VIIIth Plan due to late clearance and consequence delays in finalisation of EFC/PIC, funds could not be utilised to the full. Besides this, an economy cut of Rs. 20 crore in 1995-96. (Rs. 310 crore allocation in 1995-96 were brought down to Rs. 290 crore), in the last months of the year was a factor responsible for less utilisation.”

2.9 The Committee has over the years consistently maintained that the outlay for agricultural research should be targeted at 1% of the

agricultural GDP. In contrast, the allocation for VIIIth Plan works out to a mere 0.32% of the agricultural GDP. The Department was asked to state how will it be able to utilise funds if they are raised to 1% of agricultural GDP?

2.10 The Department has replied as under:

"The IXth Plan Working Group constituted by the Planning Commission identified several gaps which require to be addressed by the Department. The gaps include rainfed areas, sustainable agriculture, hill and mountainous areas, arid regions, coastal areas, post harvest management. The emphasis has been placed on research on Integrated Pest Management (IPM) and Integrated Nutrient Management System (INMS), resources conservation and programme mode approach for tackling various problems. The other areas identified are: value addition and quality improvement to make Indian agriculture globally competitive, human resource development to meet challenges of future, technology assessment and refinement before release, establishment of institutions in critical areas which have not been addressed. The Department is planning to mobilise resources through external funding. In this regard, National Agricultural Technology Project (NATP) is under negotiation with the World Bank while the project on Agricultural Human Resource Development (AHRD) is already in operation. The generation of own resources will also get impetus due to incentives and rewards provided to the scientists. Further, the perspective plan of the Institutes upto year 2020 have been finalised. The Department's projection to reach 1% of agricultural GDP is through gradual stepping up from 0.3% in the first year to 1% in the fifth year of the plan.

In view of the above, it is stated that the Department has the capability to utilise the funds upto 1% of agricultural GDP."

### **VIIIth Plan Financial Outlay/Expenditure Scenario**

2.11 The VIIIth Plan approved outlay of the DARE/ICAR was Rs. 1300 crore against which Rs. 1304.30 crore were provided as total of yearly allocations, viz. Rs. 200 crore, Rs. 250 crore, Rs. 275 crore, Rs. 290 crore (initially Rs. 310 crore were provided but brought down to Rs. 290 crore subsequently) and Rs. 289.30 crore for 1992-93, 93-94, 94-95, 95-96 and 96-97 respectively. The first four years (1992—96)

expenditure during Eighth Plan has been Rs. 957.84 crore out of four years' allocation of Rs. 1015 crore indicating an utilisation of 94.36%. The allocation during 5th year (1996-97) of VIIIth Plan is Rs. 289.30 crore and is expected to be fully utilised as per approved programmes; going by this expectation the overall utilisation during VIIIth Plan is expected to be of the order of 95.62%. In overall sense, 4.38% funds could not be utilised during VIIIth Plan. The less than full utilisation percentage can be mainly attributed to less utilisation (88%) in first year (1992-93) of the VIIIth Plan as the Ministry of Finance had issued specific procedural instructions on clearance of VIIIth Plan projects/programmes as late as September 1992, subsequently effecting clearance of plan schemes by EFCs/PICs in the second year (1993-94) of the VIIIth Plan. Thereafter the utilisation scenario gained momentum but again a severe cut was imposed towards the end of 1995-96 (Rs. 310 crore allocation was brought down to Rs. 290 crore) and this resulted in a significant slow-down utilisation psychology and 94% funds could be utilised out of the revised allocation (curtailed) of Rs. 290 crore. The percentage allocation to different sectors stood at 20 for crop science, 8.05 for horticulture, 11.54 for soil and agronomy, 3.93 for agriculture engineering, 10.77 for animal science, 5 for fisheries, 0.69 for agricultural economics and statistics, 12.58 for agricultural extension, 11.42 for agricultural education, 14.49 for World Bank and foreign aided projects and 1.53 for management and information.

### **IXth Plan Requirement**

2.12 The Parliamentary Committee noted that the Third World Countries have been increasing their National Expenditure on Agricultural Research from 0.3% in 1976 to 2.0% but in India the outlay has decreased from 0.535 to 0.163% of the total plan outlay during the IVth Plan to VIIIth Plan.

2.13 The Committee was also informed by the Department that the IXth Plan Working Group constituted by the Planning Commission gave their recommendation regarding raising the outlay for Agriculture Sector as follows:

“Reaching an ideal investment level of 2% as against the present level of 0.3% agricultural GDP in the short run may be more

demanding. But it should be raised to at least 1.0% during the IXth Five Year Plan, if agriculture has to play its due role. At current prices, based on the total GDP of 1989—94, it comes to about Rs. 7800 crore as against the outlay of Rs. 1300 crores in the VIIIth Five Year Plan."

2.14 And the Committee have also strongly recommended in their 2nd Report on Demands for Grants (1996-97) as under:

"The Committee has also gone through the report of the Working Group for the IXth Plan. Its recommendation that a minimum of 1% of the GDP be allocated during the coming plan is in tune with the Committee's own recommendations. But, it still has its doubts whether this proposed amount of Rs. 7,800 crores will finally be allocated. The Committee therefore, strongly recommend that not only should the Rs. 7,800 crores be given to DARE/ICAR for the IXth Plan to begin with but it should also be the constant effort of the Government to ensure that the amount is at least 1% of the Agricultural GDP with a tendency to increase the allocation gradually to reach 2% of Agricultural GDP. The Committee is also happy with the efforts of the Council but would stress that the Department should take up this issue with the Planning Commission and subsequently Ministry of Finance while it comes up for discussion in the coming months. The members of the Committee would vigorously support the cause as and when required."

2.15 And the Department in their Action Taken Replies to the 2nd Report (1996-97) of the Committee have stated as under:

"The Council has taken up the issue of allocation of a minimum of 1% (one per cent) of the agricultural GDP during the Annual Plan 1997-98/IXth Plan during the discussion with the Planning Commission on 15th January, 1997 with the Member Secretary Planning Commission."

#### **IXth Plan proposed Outlay**

2.16 The IXth Plan proposed outlay is Rs. 7800.01 crore and the Sector-wise summary of Break-up of Outlay proposed for IXth Plan



(1997—2002) in comparison with VIIIth Plan approved outlay is as under:—

*Department of Agricultural Research & Education Sector-wise  
Summary of Break-up of VIIIth Plan Approved Outlay  
& IXth Plan proposed Outlay*

(Rs. in crores)

Sl. No.	Name of the Sector	VIIIth Five Year Plan Approved Outlay	Outlay proposed for IXth Plan 1997—2002
1.	Crop Science	288.24	1600.00
2.	Horticulture	123.75	1087.30
3.	Soil, Agronomy & Agro-Forestry	156.27	875.00
4.	Agricultural Engineering	53.23	390.60
5.	Animal Science	146.77	1054.22
6.	Fisheries	65.00	468.00
7.	Agricultural Statistics & Economics	9.00	20.12
8.	Agricultural Extn.	200.32	815.00
9.	Agricultural Education	159.91	753.00
10.	World Bank & E.A.P.	177.19	0.00
11.	Management and Information Services	19.48	143.60
12.	Pipeline Projects	—	593.17
Total:		1300.00	7800.01
		#99.16	

#Additional amount approved by PIC/EFC for which expenditure to be met from Plan savings/additional funds, over and above Rs. 1300 crore.

### **Thrust Areas of the IXth Five Year Plan**

2.17 The Department was asked whether it has identified the thrust areas for the IXth Five Year Plan and also the details of the proposals and allocations posed to Planning Commission for these areas.

2.18 In their reply the Department has stated as under:

“The thrust areas for IXth Plan were identified by the Working Group constituted by the Planning Commission. The document has since been prepared and accepted. The proposed major thrust areas for the IXth Plan are:—

- Conservation, Planned enhancement and utilization of agro-biodiversity.
- Enhancing productivity through evolution of high-yielding hybrids and varieties.
- Research on diversification, quality improvement, post-harvest technology, value addition and export-oriented commodities.
- Sustaining enhanced productivity of irrigated agriculture and judicious development and use of energy, specially renewable sources of energy.
- Characterization and development of sustainable land-use models for rainfed agriculture in high-rainfall areas.
- Development of the Integrated Pest Management (IPM) and Integrated Nutrient Management System (INMS) approaches and systems for sustainable agriculture.
- Fostering excellence in the relevant basic and strategic research.
- Generating research and technologies geared to promote equity among regions, sectors of society and gender.
- Strengthening social science, policy planning, agri-business, research monitoring mechanisms, administration and personnel reforms, publication and information dissemination system.
- Strengthening the Agricultural Research Information System (ARIS).

- Promoting the Agricultural Human Resource Development (AHRD).
- Linking Scientists with the farmers through Institution—Village Linkage Programme (IVLP) as an innovative technology transfer model.
- Institutionalization and strengthening linkages/partnerships with the CGIAR and other national and international agencies and research and development establishments, non-governmental organisations (NGOs), farmer organizations, private sector etc.
- Optimization of resources through planning, prioritization and co-ordination.

The IX Plan proposals in respect of thrust areas will be finalised at the time of discussion of IX Plan proposals with the Planning Commission."

### **Financial Outlay Proposed for 1997-98**

2.19 The Committee wanted to know that what percentage of the Agriculture GDP is the total allocation to the Department for the year 1997-98 which comes to Rs. 599.27 crore (Plan + Non Plan) and the Department was also asked to give details about the demand accepted by the Planning Commission.

2.20 The Department in their reply stated as under:

"The allocation for 1997-98 is Rs. 599.27 crore which includes Plan (Rs. 331.17 crore) and Non-Plan (Rs. 268.10 crore). Rs. 599.27 crore is 0.28% of agricultural GDP (based on Agril. GDP at current price during 1993-94 estimate—Source Agril. Statistics at a glance, March, 1996, Directorate of Economics and Statistics); whereas for Plan allocation of Rs. 331.17 crore, this percentage is 0.15% only. The Department had submitted a proposal of Rs. 1000 crore (Plan) for the year 1997-98 to the Planning Commission and in response the Planning Commission has intimated an allocation of Rs. 331.17 crore."

**Sector-Wise Break up of Plan Projection for 1997-98**

(Rs. in Crore)

Sl. No.	Name of the Sector	Projected
1.	Crop Science	93.20
2.	Horticulture	87.20
3.	Soil, Agronomy & Agro-Forestry	106.28
4.	Agricultural Engineering	50.80
5.	Animal Science	188.72
6.	Fisheries	60.00
7.	Agricultural Economics & Statistics	10.00
8.	Agricultural Extension	125.00
9.	Agricultural Education	189.00
10.	World Bank and Externally Aided Projects	#
11.	Management and Information Services	27.50
12.	Pipeline Projects	61.70
Total:		1000.00

#The World Bank Projects/Externally Aided Projects component is included under each sector.

## Overall View of Budgetary Allocations for DARE/ICAR (1997-98)

### 2.21 Objective Classification

#### Plan

The sectoral details of ICAR and DARE programmes for B.E. & R.E. for 1996-97 and B.E. for 1997-98 is given below:

(Rupees in crores)			
Area/Sector	Budget Estimates 1996-97	Revised Estimates 1996-97	Budget Estimates 1997-98
<i>Research</i>			
Crop Science	58.0	56.14	71.00\$
Horticulture	24.00	27.00	29.50
Soil, Agronomy & Agroforestry	31.00	30.09	36.00\$
Agricultural Engineering	11.50	11.00	14.00\$
Animal Sciences	26.00	27.00	34.00\$
Fisheries	15.50	13.50	19.00
Agril. Economics & Statistics	1.30	1.00	1.50
N.A.R.P.	19.35	—	—
N.S.P. (Phase III)	45.54	—	—
Foreign Aided Projects	26.19	67.04	36.17*
Agricultural Education	27.00	29.68	34.50\$
Extension Education	35.00	38.00	40.00
ICAR Headquarters			
including ASRB	14.06	10.35	15.00 (10.03)@
DARE	0.40	**	0.50
<b>Grand Total:</b>	<b>289.30</b>	<b>310.80</b>	<b>331.17</b>

\* This is pure external aid (reimbursable). The reflectable part of the amount of EAPs is included under outlays of concerned subject matter Divisions.

\*\* This has been included in the item (MIS) in the RE 96-97.

@ Including National Agricultural Technology Project.

\$ Including EAP (Indian Component).

## Non-Plan

The objective-wise break-up in respect of ICAR Non-Plan Budget is indicated below:

(Rupees in crores)				
Sl. No.	Sub-Head	Budget Estimates 1996-97	Revised Estimates 1996-97	Budget Estimates 1997-98
1.	Estt. Charges (including O.T.A. and Wages*)	194.57*	199.34*	213.94*
2.	T.A.	2.48	2.83	2.51
3.	Other Charges	20.31	25.07	18.13
4.	Works	0.59	1.36	1.04
5.	Other Items	8.05	8.40	8.38
Total : (1 to 5)		226.00	237.00	244.00
A.P. Cess Fund		14.00	14.00	20.00
Grand Total		240.00	251.00	264.00

2.22 After going through the Budgetary Allocations for 1997-98 the Committee felt that the Budgetary allocations do not reflect any one time allocation towards a catch up grant of Rs. 500 crore for the IXth Plan as it has already been recommended by the Committee in its' Second Report on Demands for Grants (1996-97). The Department was asked to state the reaction of the Planning Commission to provide this grant as well as the direction of efforts of the Department to raise this money through internal resources.

2.23 In their reply the Department has stated that it has requested for one time catch up grant of Rs. 500 crore through the recommendation of IXth Plan Working Group and Annual Plan 1997-98 proposals submitted to the Planning Commission. The Department has explored the possibility of getting sufficient funding and the matter has been taken up with Member Secretary, Planning

Commission, Secretary, Department of Expenditure and the Ministry of Finance at the level of Director General, Indian Council of Agricultural Research/Agriculture Minister, but the Planning Commission have indicated their inability to provide more funds due to budgetary constraints. All the Institutes were given the targeted amount to generate the resources through consultancy, sale of seeds and other products, trainings etc. during 1996-97. More than Rs. 20 crore is expected to be realised and this figure is likely to grow to Rs. 29 crore during 1997-98 as the ICAR Institutes are gearing up to generate more resources through various means. The Johl's Committee report has been accepted by the G.B. and the guidelines have been circulated to all the Institutes. It will add up to the efforts of the Institutes in generating resources. Further, the ICAR expects to get the matching grant from the Ministry of Finance for the amount generated by it.

#### **Major Head 2415—Crop Husbandry**

2.24 BE (1996-97) under the Major Head 2415-2.02 for other programmes of Crop Husbandry as reflected in the Expenditure Budget 1997-98 were Rs. 240.15 crore (Plan) and Rs. 153.15 crore (Non-Plan) while the RE (1996-97) went up to Rs. 261.65 crore (Plan) and Rs. 160.62 crore (Non-Plan); finally raising the Plan expenditure by Rs. 21.50 crore and non-plan expenditure by Rs. 7.47 crore.

The Committee asked the Department to state the reasons for this increase of RE over BE.

2.25 The Department has stated in their reply that the additionality of Rs. 21.5 crore under Plan is in respect of Indo-Japanese Project on Development of Quality Seed at IARI. Since it was a turn-key project met by external aid for which no provision was made in BE 1996-97, provision has now been made through Supplementary Demands for Grants 1996-97. The increase of Rs. 7.47 crore in RE over BE of 1996-97 under Non-Plan is for meeting the committed liabilities in respect of establishment expenses through Supplementary Demands for Grants to make up for inadequacies in BE (1996-97).

## 2.26 Agricultural Production

### Production of Foodgrains and Commercial Crops

(Million Tonnes)

Crop	1991-92	1992-93	1993-94	1994-95	1995-96		1996-97	
					Target	Final	Target	Likely
Rice	74.7	72.9	80.3	81.8	80.0	79.6	81.0	79.6
Wheat	55.7	57.2	59.8	65.8	60.0	62.6	65.0	64.5
Coarse Cereals	26.0	36.6	30.8	29.9	36.5	29.6	32.5	33.1
Pulses	12.0	12.8	13.3	14.0	15.5	13.2	15.0	14.0
Foodgrains	168.4	179.5	184.3	191.5	192.0	185.0	193.5	191.2
Kharif	91.6	101.5	100.4	101.0	107.5	98.2	104.0	103.2
Rabi	76.8	78.0	83.9	90.4	84.5	86.8	89.5	88.0
Oilseeds	18.6	20.1	21.5	21.3	22.5	22.4	23.0	24.1
Sugarcane	254.0	228.0	229.7	275.5	255.0	283.0	270.0	273.6
Cotton@	9.7	11.4	10.7	11.9	13.0	13.1	13.0	14.3
Jute & mesta\$	10.3	8.6	8.4	9.1	9.3	8.9	9.0	9.2
(Percentage variation in production over the previous year)								
Rice	0.5	-2.4	10.2	1.9		-2.7		0.0
Wheat	1.1	2.7	4.5	10.0		- 4.9		3.0
Coarse Cereals	- 20.5	40.8	- 15.8	- 2.9		- 1.0		11.8
Pulses	16.1	6.7	3.9	5.3		- 5.7		6.1
Foodgrains	- 4.5	6.6	2.7	3.9		- 3.4		3.3
Kharif	- 7.8	10.8	- 1.1	0.6		- 2.8		5.1
Rabi	- 0.3	1.6	7.6	7.7		- 3.9		1.3
Oilseeds	0.0	8.1	7.0	- 0.9		5.2		7.6
Sugarcane	5.4	- 10.2	0.7	19.9		2.7		- 3.3
Cotton@	- 1.0	17.5	- 6.1	11.2		10.1		9.2
Jute & mesta\$	12.0	- 16.5	- 2.3	8.3		- 2.2		3.4

@Million Bales of 170 Kg. each.

\$ Million Bales of 100 Kg. each.



2.27 Foodgrains account for about 63% of country's agricultural output and hence even a marginal decline in foodgrains production has a 'ripple effect' on the rest of the economy. Despite a near normal monsoon in 1996 the wheat harvest was just about 62.6 million tonnes which is lower than the production in the last year by about 3 million tonnes. The reasons for decline in production of rabi; foodgrain crops, i.e., wheat and gram are mainly attributed to unfavourable weather conditions (sudden rise in temperature) at the grain filling stage in Feb./March 1996. This was a serious setback causing distortions in wheat availability and prices of wheat rose to unprecedented heights by November, 1996.

2.28 The Department claims that in cereals, in all 222 improved varieties of rice, wheat etc. have been released during the VIIIth Plan and these varieties include varieties resistant/tolerant to biotic and abiotic stresses such as drought, salinity and temperature extremes.

2.29 The Committee opine that biotic and abiotic stresses are not a new phenomenon and varieties resistant to these stresses have also been released through research.

2.30 The Committee therefore, was keen to know the reasons for a loss in production of wheat by about 3 million tonnes inspite of the Department's claim to have had released varieties resistant to biotic and abiotic stresses such as drought, salinity and temperature extremes. The Committee also asked the Department whether the decline in production is due to lack of dissemination of information to the farmers regarding availability of varieties tolerant to such pressures and the remedial measures DARE proposes to take for tackling such a situation in future.

2.31 The reply of the Department is as under:

"The Department has been assigned with the responsibility for agricultural research, education and extension. The matter of agricultural production relates to the domain of Department of Agriculture and Cooperation (DAC) and also the States (this being a State subject). However, our perception relating to decline in the foodgrain production is as follows:

- Prevalence of yellow and brown rust disease in Punjab, Haryana where more than 2 million ha. of wheat suffered appreciable yield losses.

- Increased imbalanced use of fertilizer nutrient (the consumption of phosphatic fertilizers declined from 33.2 lakh tonnes in 1991-92 to 29.3 lakh tonnes in 1994-95. The trend was similar in respect of potassic fertilizer from 13.6 to 11.3 lakh tonnes during the corresponding period. Use level of N Fertilizer however increased sharply from 80.5 lakh to 95.1 lakh tonnes).
- Unfavourable weather during March, the grain filling period (Nights and days were warmer by 3° C and 2°C respectively during March 15—30. Also the entire crop growth period *i.e.* from November to March was warmer by 1.3°C). This accelerated maturity resulting in lower yields. In U.P. also where 9 millions ha. is under wheat, average yield came down by 0.5Q. as result.
- Reduction in area planted to wheat in Haryana due to late receding of flood water. (overall reduction in area is 0.5 million ha.)

Measures proposed by ICAR to overcome such constraints in future.

In the next 2-3 years new varieties like WH 542, UP 2338, PBW 343 resistant to the prevailing virulent races of rust (Brown and yellow) pathogens in the NWPZ and varieties like K8804 (K88), Vaishali, K 9006 resistant to yellow rust and foliar blight and adoption to late sown conditions in NEPZ will be promoted for their wide adoption (special efforts are being made to produce adequate quality seed of the new varieties to cover the targetted area)."

2.32 The Committee noted that severe incidence of yellow rust was reported on wheat variety largely grown in Punjab. As this incidence causes a loss of 2 million tonnes of wheat, the Committee felt concerned about it and wanted to know from the Department that when the wheat variety HD-2329 was released and whether It was tested against yellow rust before releasing. The Committee also asked the Department to give reasons why the Directorate of Wheat Research has failed largely in its research work against biotic and abiotic stresses even after having spent more than the approved outlay from 1993-94 to 1995-96 except in 1996-97 when the outlay was Rs. 280.00 lakh and

the anticipated expenditure is Rs. 250.00 lakh and the likely shortfall is Rs. 30.00 lakh.

2.33 To these points, the Department informed the Committee as under:

- “(a) The wheat variety HD 2329 developed by IARI, New Delhi was released in 1985.
- (b) HD 2329 like all varieties was tested against yellow rust in multi-locational field trials for three years as well as under artificial epiphytotic conditions for then prevailing races of the rust pathogen. Severe incidence of yellow rust on HD 2329 is because of the appearance of new virulent race of the pathogen in 1995. Anticipating breakdown of resistance, due to the new race, efforts were made to identify varieties resistant to the same and as a result varieties WH 542 and WH 896 were found to be resistant and as high yielding as HD 2329. They have now been recommended for wide adoption in the entire N.E. India.
- (c) The original approved outlay for the Directorate of Wheat Research in the VIIIth Plan Period was Rs. 1050 lakh. But subsequently considering the fact that the Directorate was shifted to Karnal and has to be established from scratch and with a view to provide adequate laboratories and other related facilities, the outlay was revised to Rs. 1650 lakh by the Expenditure Finance Committee (EFC). In order to restrict the VIIIth Plan outlay within the ceiling of Rs. 1650 lakh the allocation for 1996-97 was finalised as Rs. 250 lakh, there has been no shortfall and in fact the Directorate has utilised fully the revised allocation of Rs. 1650 lakh.
  - (i) The Directorate has not failed in this respect as it has developed several improved varieties which are resistant to various biotic and abiotic stresses. Last year nine new varieties were identified and six were released. All the new varieties are resistant to rust diseases. Among these JWS 17 is tolerant to drought in Central India, JOB 666 is tolerant to salt affected soil while Raj. 3777 is tolerant to high temperature during grain filling period.

- (ii) There has been no shortfall but revised outlay for 1996-97 has been kept at Rs. 250 lakh to keep the allocation within the revised EFC for the VIIIth Plan."

2.34 The Committee noted that Foodgrains registered over 3% annual growth in production during eighties. The low annual growth rate of 1.2% in production of pulses since 1980-81 did cause annual growth of total foodgrains to fall to 2.86%. The latest annual growth rate of foodgrains was only 1.7% which is lower than the current population growth rate. If this trend continues it could become a matter of grave concern.

2.35 The Committee also noted that total Budget Estimates (1997-98) for Crop Husbandry amounts to Rs. 4,54,55,00,000. The total Revenue Expenditure demanded for DARE is Rs. 5,99,27,00,000. The proportion of expenditure on Crop Husbandry amounts to roughly 75% of the total estimates.

2.36 The Committee, therefore, wanted to be apprised of the allocations made to Food Crops in 1997-98 under various schemes and emphatically enquired about the reasons responsible for this grave situation of low growth of foodgrains even after having an outlay of Rs. 1324.00 lakh for Food Crops during the VIIIth Plan.

2.37 The Department has replied as under:

- “(a) The Budget head under Crop Husbandry also includes besides Crop Science allocations made for Horticulture, Soils and Water Management, Agricultural Engineering, Agricultural Extension, Agricultural Education, Agricultural Statistics, World Bank Projects and Headquarters of ICAR. That is why the proportion under this budget has gone to 75% of total BE (1997-98). If the allocations for these sectors are taken away and only the allocations for Crop Sciences is considered the proportion for this sector under the budget will be about 21 per cent. The Department is concerned with the matter and taking appropriate action to get these budget heads suitably modified. Details of Scheme-wise allocations made for Food Crops in 1997-98 are given in following Table.

Table : Scheme-wise Allocation for Food Crops in 1997-98

(Rs in lakh)

Sl. No.	Name of the Scheme	BE 1997-98	
		Plan	Non-Plan
1.	Indian Agricultural Research Institute, New Delhi	800	3200
2.	Central Rice Research Institute, Cuttack	170	440
3.	Vivekananda Parvatiya Krishi Anusandhan Shala, Almora	115	118
4.	Indian Institute of Pulses Research, Kanpur	150	167
5.	Directorate of Wheat Research, Karnal	380	110
6.	Directorate of Rice Research, Hyderabad	410	168
7.	Project Directorate on Maize, New Delhi	350	No Non-Plan component
8.	NRC Sorghum, Hyderabad	75	110
9.	AICRP on Chickpea	90	No Non-Plan Component
10.	AICRP on Pigeon Pea	85	
11.	AICRP on Pulses (Mullarp)	130	
12.	AICRP on Arid Legumes	25	
13.	AICRP on Pearl Millets	100	
14.	AICRP on Small Millets	90	
15.	AICRP on Barley	20	
16.	AICRP on Sorghum	110	
		3100	4313

- (b) Since 1990s area under foodgrains is declining (from about 127 m.ha in 1990-91 to 123 m.ha in 1995-96). The growth trend of production during this period is exclusively through steady rise in productivity (1380 kg. to 1499 kg./ha during the corresponding period). As the yields in major foodgrain crops have already reached relatively higher level over years, production growth due to productivity increase is bound to decline. Nevertheless the growth trend less than that of population is a matter of great concern. To sustain the present level of self-sufficiency in food grains, minimum growth rate required is 2.6%."

### Post-Harvest Technology (PHT) of Horticulture Crops

#### 2.38 Project on Post Harvest Technology of Fruits and Vegetables:

Relevant figures of approved outlay, actuals and shortfall during the Eighth Plan are as follows: —

Eighth Plan approved outlay was Rs. 120.00 lakh

Rs. in lakh													
1992-93			1993-94			1994-95			1995-96			1996-97	
App. Outlay	Exp. Outlay	Short-fall	App. Outlay	Exp. Outlay	Short-fall	App. Outlay	Exp. Outlay	Short-fall	App. Outlay	Exp. Outlay	Short-fall	App. Outlay	Exp. Outlay
—	20.01	20.01	40.00	5.89	34.11	0.00	7.19	7.19	15.50	13.78	-1.72	15.50	15.50
Total Anticipated Expenditure during Eighth Plan						Total Expected Shortfall during Eighth Plan						%age of Expenditure against Approved Outlay	
62.37						-8.63						51.98	

2.39 The physical targets for Post-Harvest Management (PHM) during Eighth Plan were to develop appropriate post-harvest handling, storage and processing systems for different horticultural commodities, product diversification and value addition.

2.40 The Committee enquired about the reasons for such a low allocation of funds under PHT on Fruits and Vegetables and why the expenditure is as low as 51.98% of the total outlay. The Committee also enquired about the bottlenecks and problems coming in the way of any major breakthrough in Post-Harvest Management of fruits and vegetables and how the Department proposes to remedy them so that the annual loss of Rs. 3000 crore can be avoided as well as the extent

to which the technologies developed by ICAR have been adopted by the National Horticulture Board (NHB) in its efforts to create the proper infrastructure for Post-Harvest Management of Fruits & Vegetables.

2.41 And the Department in their reply stated as under:—

“(a) 1. The ICAR is carrying out research on Post-Harvest Management of Horticultural Crops under the two schemes namely, (i) AICRP on PHT of Horticultural Crops, and (ii) Project on PHT of Fruits & Vegetables. While the AICRP Project is operational at 11 Centres, mainly at different State Agricultural Universities, the programme of research project is being implemented at four ICAR Institutes. In both the projects research on Post-Harvest Management of Fruits and Vegetables receive major focus. The project under reference is essentially a sub-project of erstwhile Indo-USAID Project, which was allowed to continue as a Plan programme after the withdrawal of US grant in March, 1991. It is proposed to merge both the two projects into one comprehensive project during Ninth Plan period.

2. In fact, there are two major projects on post-harvest technology which are in operation, their allocation and expenditure during the Eighth Plan are as follows:—

(Rs. in lakh)

	Allocation	Exp. during 4 years	RE 1996-97	Total	Shortfall
1. PHT on Hort. Crops	130.00	215.93	29.00	244.93	(-)114.93
2. PHT on Fruits & Vegetables	120.00	46.87	15.50	62.37	(+)57.63
Total	250.00	262.80	44.50	307.3	(-)57.30

The combined expenditure on both the above projects has been to the tune of Rs. 307.30 lakh under the outlay of Rs. 250 lakh. Hence, the total allocation and the expenditure has been satisfactory. The PHT on Fruits & Vegetables is being proposed to be merged with main PHT on Horticultural Crops during the Ninth Plan.

Besides the above 2 AICRPs, the work on PHT is being carried out at the major crop institutes like IIHR, Bangalore, IARI, New Delhi, CISH, Lucknow, NRC Citrus and at CIPHET Ludhiana/Abohar.

- (b) The major bottleneck has been the absence of infrastructural facilities like pre-cooling chambers, proper storage, proper packing material, refrigerated vans etc. due to which many technologies could not be tested at pilot scale level.

The Department proposes to remedy this by strengthening the research work at commodity institutes *viz.* IIHR, Bangalore, CISH, Lucknow, NRC-Citrus, Nagpur, IARI, New Delhi, CIPHET, Ludhiana. The two AICRPs on PHT in the Division of Horticulture will be merged into one. It is also proposed to establish an Advance Centre on PHT at IIHR, Bangalore under the World Bank funded NATP.

- (c) The Department is aware that National Horticulture Board (NHB) is supporting/funding several projects in creating infrastructure support on PHT of fruits and vegetables. Many of the entrepreneurs have adopted the "zero energy cool chambers" developed by ICAR for on-farm storage of fruits and vegetables. Similarly, the 'Package Line' developed by NRC-Citrus, Nagpur, 'Mango Peeler' developed by IIHR, Bangalore, 'Mango Harvester' developed by CISH, Lucknow and 'Ventilated Fibre Board Box' (CFB) out of cotton stalk waste developed by CIRCOT, Mumbai for packaging can become popular, if supported suitably by NHB."

### Animal Husbandry (Science)

2.42 Under the Animal Science Sector the Eighth Five Year Plan approved outlay was Rs. 146.77 crore and the year-wise approved outlay, actual expenditure and shortfall (1992-97) is as under:—

(Rs. in Crore)													
1992-93		1993-94		1994-95		1995-96		1996-97					
App. Outlay	Exp.	Short-fall	App. Outlay	Exp.	Short-fall	App. Outlay	Exp.	Short-fall	App. Outlay	Exp.	Short-fall	App. Outlay	Exp.
22.70	14.61	-8.09	27.32	17.93	-9.39	29.56	27.21	-2.35	28.30	27.81	-0.43	26.00	27.00
Total Anticipated Expenditure during Eighth Plan				Total Expected Shortfall during Eighth Plan				%age of Expenditure against Approved Outlay				Budget Estimate 1997-98	
114.62				-19.26				78.09				29.00	



Against the approved outlay of Rs. 146.77 crore for this Sector in the Eighth Plan, the Department has got an allocation of Rs. 133.88 crore only for utilisation during 1992-97. Out of Rs. 133.88 crore also only Rs. 114.62 crore have been utilised in five years leaving Rs. 19.26 crore shortfall.

2.43 The Department was asked the reasons for not utilising Rs. 19.26 crore in this sector and the remedial measures the Department has taken while envisaging budget proposals for 1997-98, so that funds do not remain under-utilised in future.

2.44 The Department in their reply stated:—

- (a) The reasons for shortfall in utilisation of the amount against the original projected expenditure relate mostly to the first two years of the Plan totalling to Rs. 17.48 crore. During these years, the plan activity could not take off particularly with respect to the newer institutes and the All India Coordinated Research Projects. The National Institution of Animal Nutrition and Physiology had late start in the Fourth year of the Plan due to the delay in allocation of land for the institute. Similarly for Coordinated Programmes slight initial delay in signing MoUs with all the centres resulted in lower spending.
- (b) The spending during the last three years has been fully in conformity with the allocation and in the same manner no funds are expected to remain unutilised against the allocation during 1997-98. The site for National Institute of Animal Nutrition and Physiology has been decided and infrastructure for this Institute is being processed and developed and the allocation against the Institute is now being spent.

#### **Animal Science: Animal Breeding and Production**

2.45 Project Directorate on Cattle, Meerut in collaboration with Military Farms is engaged in evolving a national milch breed of Frieswal cow which has milk yield of 2950 kg. in the first lactation with peak yield of 16.3 kg. A total of 176 Frieswal bull-calves were reared for selection and use in progeny testing. A total of 251758 semen doses from 47 Frieswal bulls have been frozen and 111350 distributed to 28 Military Farms during 1992 to 1996.

2.46 The Department was asked to give the budgetary allocations to the Directorate on Cattle, Meerut for the last 3 years the actual amount spent, the number of cows produced, the cost of producing one Frieswal cow and a progeny tested bull. The Department was further required to give the cost of rearing a total 196 Frieswal bull-calves and how many were finally selected for use in progeny testing.

2.47 The Department in their reply stated as under:

“(a) The total budget allocation in respect of Project Directorate on Cattle and bull rearing unit of the Frieswal Project which is financed by ICAR is as follows:—

Year	Plan	Non-Plan		
	Allocation (Rs. in lakh)	Expenditure (Rs. in lakh)	Allocation (Rs. in lakh)	Expenditure (Rs. in lakh)
1993-94	150.60	83.99	45.00	44.02
1994-95	159.50	156.77	32.00	27.46
1995-96	140.00	124.49	34.00	35.71
Frieswal Project (a component of PDC programme)				
1993-94	18.67	18.67	—	—
1994-95	27.48	22.44	—	—
1995-96	26.87	26.87	—	—

So far 5786 Frieswal female animals are available in the project. The cost for production of Frieswal cows is being met by Military Farms and that the Project Directorate on Cattle is meeting the cost of bull rearing unit at Meerut and data recording unit at various farms.

- (b) As stated in part (a) the expenditure on bull breeding unit is being met by the Council and is shown above. Calves born from the nominated matings are brought to Military Farm, Meerut and raised for semen collection and freezing. Only those Frieswal bull calves which qualify the criteria laid are finally selected and use in the progeny testing programme.”

2.48 In another query on the outcome of 111350 semen doses distributed to 28 military farms and the fate of the remaining 140408 frozen doses, the Department clarified that:—

- “(a) A total of 2,51,758 semen does from Frieswal bulls were frozen and out of this 1,11,350 were distributed for production of progenies from elite females and also improvement of other females as per the technical programme. The remaining doses of semen are to be kept stored from the bulls which are under test. This semen will remain stored till information on the daughters’ performance of these bulls becomes available. As this normally takes anywhere between 6 to 7 years among the crossbreeds, this semen will remain stored till that time. The stored semen of the bulls under tests and also from other bulls would be put to use for improvement only after the progeny test index becomes available. This semen can be stored under frozen conditions for several years (even 15 to 20 and more).
- (b) The Project Directorate on Cattle is regularly monitoring the distribution of semen in the Frieswal Project and required doses are frozen both for use in breeding and storage for later use.”

## Fisheries

## Submajor Head—05

2.49 Under Fisheries Sector the Eighth Plan approved outlay was Rs. 65.00 crore and the yearly approved outlay, actual expenditure and shortfall are as under:—

(Rs. in Crore)											
1992-93			1993-94			1994-95			1995-96		
App. Outlay	Exp.	Short-fall	App. Outlay	Exp.	Short-fall	App. Outlay	Exp.	Short-fall	App. Outlay	Exp.	Short-fall
10.80	6.44	-4.36	13.17	12.59	-0.58	16.00	9.52	-6.48	16.84	14.37	-2.47
Total Anticipated Expenditure during Eighth Plan			Total Expected Shortfall during Eighth Plan			%age of Expenditure against Approved Outlay					
56.42			-15.89			86.80					

The actuals (1995-96), BE and RE 1996-97 and BE (1997-98) as given in Demands for Grants (1997-98) under Fisheries (sub major head) are as under:—

(Rs. in thousands)			
Actuals	BE	RE	BE
1995-96 (Plan)	1996-97 (Plan)	1996-97 (Plan)	1997-98 (Plan)
15,84,00	15,50,00	15,50,00	19,00,00

2.50 The Committee found that there is a continuous trend of under utilisation of funds during Eighth Plan under Fisheries Sector and on the other hand the Department is demanding Rs. 19 crore for 1997-98. In other words, the Department is asking for Rs. 5.50 crore moreover the 1996-97 anticipated expenditure of Rs. 13.50 crore. The Department was asked to justify their demand for Rs. 19 crore and was also asked to explain the reasons for under-utilisation of funds and how have the Department utilised the unutilised portion of funds.

2.51 The Department has replied as under:—

“(a) The Budget Estimate for the year 1997-98 for the Fisheries Division is Rs. 19 crore. The additional demand of Rs. 5.50 crore over and above the allocation of 1996-97 is for the following ongoing activities:—

- (i) Instalments to be paid to the construction Agency for ongoing construction activities at Mumbai for the permanent University Complex of CIFE.
- (ii) Final payments to be made towards completion of the first phase of NBFGR at Lucknow.
- (iii) Further instalments to be paid for construction of office-cum-laboratory complex and farm facilities at Chennai for CIBA.
- (iv) Construction activities for Bhimtal complex of NRCCWF to be initiated.
- (v) New research vessels to be acquired by CMFRI and CIFT for taking up vessel based programmes for off-shore waters.

- (vi) Strengthening of the Research Institutes in terms of equipment, manpower in specialised disciplines, exposure of newly recruited scientists in laboratories abroad through training and attachment.

The shortfall in the utilisation of funds is due to the following reasons:—

- (i) Administrative delay in handing over land at Chennai by the State Government for Central Institute of Brackishwater Aquaculture (CIBA) for construction of permanent office-cum-laboratory complex, residential quarters, farm facilities etc. The land has since been taken over and the estimates from CPWD are ready for taking up construction activities.
- (ii) Delay in initiating the construction activities at Lucknow for National Bureau of Fish Genetic Resources (NBFGR) due to shifting of the location of the Bureau from Allahabad to Lucknow in 1994. First phase of construction is almost at final stage.
- (iii) Administrative delay in initiating the construction activities at Mumbai for the permanent University Complex for Central Institute of Fisheries Education (CIFE). The construction has since been started.
- (iv) Delay in taking over land for construction of Bhimtal complex of National Research Centre for Coldwater Fisheries (NRCCWF). The land has since been taken over.
- (v) Due to reduced allocations during the current financial year on account of above reasons, payments of further instalments towards a number of ongoing construction activities had to be deferred for the next financial year.

(b) Allocations to Fisheries Division are adjustable with the overall activities of the ICAR and accordingly the unspent amount from the Fisheries Division was utilised by other sectors of the Council where the need of funds was urgently felt."

2.52 The Committee noted that the marine fish production in India has fallen down by 3.9% and also noted that the annual catch from Andaman and Nicobar Islands and Lakshadweep group of Islands has been very low, contributing only about 1.5% to the all India total

marine landings. The Committee showing concern for the development of fishermen and the fish production of India and particularly of these Islands asked the Department why the research work is falling short of its expectation in the efforts to increase the marine fish production in India and whether the Department has identified the factors responsible for only 1.5% contribution of these Islands and what are the budgetary allocation for 1997-98 for marine fisheries research and funds earmarked for marine fisheries development of these Islands.

2.53 In their reply the Department stated that:—

- (a) The Department does not deal with the development programmes on fish production. The mandate of the Fisheries Institutes of the department pertains only to research, education and extension education. The research is focussed on the assessment of the behaviour of pelagic and demersal fish stocks in relation to the fishery hydrography and to evaluate their annual and seasonal fluctuations through vessel based programmes. The Geographical Information System (GIS) linked interpretations of satellite imageries in relation to ground truth data are being used by the Institute for estimating optimum harvesting potential. The reported decline in the pelagic fishery during 1995 and a general disease in marine fish landings in Kerala and Gujarat have been assessed to be the major reasons for a marginal reduction in the total annual catch from marine sector by about 3.9% as observed.
- (b) The annual catch from Andaman & Nicobar Islands and Lakshadweep group of Islands has been consistently low, contributing only about 1.5% to the all India total marine landings, because of extremely low production infrastructure, although the fisheries resources of these Islands are rich. The administration of these Islands have made significant investments in fish landing facilities, mechanised fishing fleets and post harvest sectors. However, the number of active fishermen in these Islands has remained consistently low. The ICAR has initiated a number of programmes through its research institutes for the identification of potential fishing grounds, to promote various seafarming

technologies and harvest & post-harvest technologies as well as manpower development in capture and culture sectors.

- (c) The budgetary allocation for 1997-98 under Plan to the CMFRI, CIFT and CIBA dealing with the research on marine species is Rs. 200 lakh, Rs. 170 lakh and Rs. 400 lakh respectively, wherein research on Island waters is also included.

### Management and Information Services

2.54 Under the programme of Management and Information Services approved outlay, actual expenditure and shortfall during VIIIth Plan are as under:

The total VIIIth Five Year Plan approved outlay was Rs. 19.48 crore.

(Rs. in crore)			
Year	Approved Outlay	Actual Expenditure	Shortfall
1992-93	3.55	0.85	-2.70
1993-94	4.56	1.07	-3.49
1994-95	4.00	1.69	-2.31
1995-96	12.55	6.75	-5.80
1996-97	14.46	10.35	-4.11

2.55 The Committee noted that there is a continuous trend of shortfall in Management & Information Services Sector. Therefore, the Committee asked the Department to specify the reasons for under-utilisation of funds and how the Department proposes to strengthen this vital sector.

2.56 The Department replied as under:

"The budget head under Management Services consists of:

— Bilateral Cooperation Project

- Publication and Information
- Strengthening of Infrastructure
- Support to Scientific Societies/Associations

The under-utilisation of funds under civil works during the first three years was due to delay in execution of Krishi Anusandhan Bhawan-II, National Agricultural Science Centre, Guest House and Residential Quarters because of delay in sanction of plan from Municipal Corporation of Delhi (MCD) and Department of Urban Arts Commission (DUAC). However, consequent upon completion of all formalities and fixing up of agencies for these major work, there has been better utilisation of funds in 1995-96 and 1996-97.

Publication and Information Division has been restructured which has also improved fund utilisation.

The amount unutilised in one segment gets utilised in the other sectors after a careful review of the utilisation as well as the need of those sectors."



## CHAPTER III

### RECOMMENDATIONS/OBSERVATIONS

#### Overall View of Budgetary Demands

3.1 The Committee has been informed that approved Eighth Plan outlay of the DARE/ICAR was Rs. 1300 crores against which a total amount of Rs. 1304.30 crores were provided by way of yearly allocations *viz.* Rs. 200 crores (1992-93), Rs. 250 crores (1993-94), Rs. 275 crores (1994-95), Rs. 290 crores (initially Rs. 310 crores were provided but brought down to Rs. 290 crores subsequently) (1995-96), and Rs. 289.30 crores (1996-97). In the year 1995-96, the approved outlay of Rs. 310 crores was reduced to Rs. 290.00 crores at the Revised Estimates stage which has affected the implementation of the programmes drastically and the actual shortfall later increased to Rs. 37.21 crores. Considering the total shortfall of Rs. 55.37 crores during the VIII Plan the shortfall of Rs. 37.21 crores during 1995-96 amount to 67% of the total shortfall. The Department holds Planning Commission solely responsible for this undesirable cut of Rs. 20 crores in the later months of the financial year 1995-96.

3.2 The Committee take a serious view of this tendency of Planning Commission to cut down the original allocation at later stages which affects the implementation of the vital research programmes. Further, the Committee do not approve of the steps taken by the Planning Commission to restrict expenditure from the first year of the VIII Plan period. The implementation process of five years in the field of Research cannot be carried out with so many restrictions on expenditure and intervention by the Planning Commission.

3.3 On a request by the Department for higher allocation in favour of Agricultural Research, the Planning Commission and the Department of Expenditure asked the Department to generate its own resources. The Finance Minister assured that for each rupee generated by the Department one rupee will be given as a matching grant. The Department generated more than Rs. 22 crores this year and has requested for the matching grant as assured earlier.

3.4 The Committee appreciate the efforts made by the Department for getting higher allocations and for generating resources. But, the Committee are appalled at the manner in which the Planning Commission and the Finance Ministry have treated the request of the Department of Agricultural Research and Education for more plan funds.

3.5 The Committee a representative body of the people of the nation has been requesting year after year for an increase in the allocation equivalent to 1% of agricultural GDP for the conduct of research in this most important sector. But the request has fallen on deaf ears.

3.6 The Committee, therefore, make a ferment appeal to the Planning Commission for higher allocations to Agricultural Research and Education as recommended by it in their earlier Reports and not to apply the brakes on the smooth conduct of research by the Department by imposing restrictions in incurring expenditure and slashing allocations at the R.E. stage. It also appeals to the Ministry of Finance to abide by its assurance to pay one rupee for every rupee generated by the Department lest the zeal of the Department should be lost in generating their own resources.

### Crops

3.7 The Committee noted that the total Budget Estimates (1997-98) for Crop Husbandry amounts to Rs. 4,54,55,00,000 whereas the total Revenue Expenditure demanded for DARE is Rs. 5,99,27,00,000. The proportion of expenditure on Crop Husbandry amounts to roughly 75% of the total estimates.

3.8 In this connection, the Committee was informed by the Department that the Budget Head under Crop Husbandry also includes besides Crop Science allocations made for horticulture, soil and water management, Agricultural Engineering, Agricultural Extension, Agricultural Education, Agricultural Statistics, World Bank projects and Headquarters of ICAR and that is why the proportion under this Head has gone to 75% of total Budget Estimates (1997-98). If the allocations for these sectors are taken away and only the allocations for Crop Science is considered the proportion for this sector will be about 21%.

3.9 Foodgrains registered over 3% annual growth in production during the 1980's. The latest annual growth rate of foodgrains is only 1.7% which is lower than the current population growth rate.

3.10 The Committee are alarmed at the lowering trend in the production of foodgrains, even though 21% of the total budget of the Department is spent on the research on Crop Husbandry. The reasons given by the Department for this decline in the productivity of foodgrains are (i) prevalence of yellow rust & brown rust diseases, (ii) imbalanced use of fertilizer, (iii) unfavourable weather during March, and (iv) reduction in area under wheat in Haryana.

3.11 The Committee feel that the incidence of yellow and brown rust diseases and imbalanced use of fertilizers being directly related to the functions of ICAR could have been avoided by taking timely precautions and by properly educating the farmers.

3.12 This would have saved at least 2 million tonnes of foodgrains. However, the target growth rate to be achieved in the production of foodgrains should be more than the growth rate of population every year and this can be achieved only through cultivation of high yielding varieties.

3.13 The Committee recommend the Budget Head of Crop Husbandry should be suitably modified so that the allocations to other sectors are properly reflected in the demands.

3.14 The Committee further recommend that greater thrust should be given by the ICAR for developing high yielding varieties since the area under cultivation is almost stagnant and they should not only concentrate on developing various disease-resistant varieties but also advise on the proper precautionary measures to be adopted by the farmers to avoid losses in production.

## **Pulses**

3.15 The Committee has been informed that Pulses are grown in marginal lands, and rainfed areas and sprinkler system is the best method to obtain 30-40 million tonnes of grams. The Committee find that the farmers do not take up production of Pulses in view of its susceptibility to diseases and low output.

3.16 The Committee are concerned at the low productivity of Pulses which automatically affects the total production and availability of foodgrains. Pulses are being imported year after year in huge quantities. The Committee wish to point out that Pulses can be grown in minimum moisture conditions and they feel that low productivity and the lack of interest in the farmers to take up cultivation of Pulses are due to the lack of knowledge of the merits of sprinkler system and of the high yielding disease-resistant varieties and the farmers do not always get remunerative prices for their crop.

3.17 The Committee strongly recommend that there is need to popularise the cultivation of pulses through demonstrations of sprinkler systems, the low costs of its installation, and its vital use for cultivation of pulses must be given utmost priority by the Department through a pilot project so that the country could totally avoid the import of pulses. Simultaneously Research should address itself to the task of evolving high yielding, disease-resistant varieties.

#### Post Harvest Technology of Horticulture Crops

3.18 The total anticipated expenditure during VIII Plan in this sector is Rs. 62.37 lakhs out of a total approved outlay of Rs. 120.00 lakhs and this works out to 51.98% of the total allocation. The Committee has been informed that Rs. 3000 crores worth of horticulture produce is lost annually due to lack of infrastructure for handling, storage, processing of the produce like pre-cooling chambers, proper packaging material, refrigerated vans etc. Research on these items of technology at the pilot scale level has been hampered for want of many of these facilities in the AICRP-Projects for Horticulture.

3.19 The Committee recommend that the Department should strengthen the commodity institutes *viz.* ICAR Bangalore, CISA Lucknow, NRC-Citrus, IARI, CIPHET, Ludhiana to do effective research studies in this field. They further recommend that these institutes may be directed to fully utilise the entire budgetary allocations so that export earnings could be generated and the burden on the consumption of foodgrains could also be lessened.

3.20 The Committee feel that the Department is always keen to demand more funds but does not bother to utilise the funds already

available to them properly and efficiently for creating infrastructural facilities for developing and testing technologies which could help in saving country's loss of Rs. 3000 crores annually which happens to be 6 times of the total plan allocations (Rs. 331.17 crores) made for Agricultural Research for 1997-98.

3.21 The Committee, therefore, strongly recommend that project on PHT of Fruits & Vegetables should continue as a separate project with all the infrastructural facilities provided and all the bottlenecks coming in the way of developing technologies suited for Post Harvest Management (PHM) of Fruits & Vegetables should be removed as this is the need of the hour with a clear goal to save Rs. 3000 crores annual loss due to wastage of fruits and vegetables for it is not only a greater loss but all the efforts of the Research Department, farmers and everybody involved in the task of increasing production and productivity yield of fruits & vegetables also finally going down the drain. Therefore, the Department should reconsider the merger of PHT fruits and vegetables with another project as in the opinion of the Committee it can function better with a separate identity and single-minded dedicated efforts to achieve it's goal with better planning, efficient management and execution of research work.

#### Soil and Water Management

3.22 The Committee has been informed that the soil is gradually losing its potential to produce good crops. This is more so specially in those areas where the drainage system of irrigation is adopted. In those areas, the problem of soil salinity has arisen and as a result of this the land has lost its potential to produce. It has been brought to the notice of the Committee that competitive digging for ground water for sinking tube-wells has adversely affected the level of the water table which has gone down at an alarming pace year after year. At certain places in West Bengal this table of water has gone down so low that further extraction gives rise to arsenic poisoning and contamination.

3.23 The main problem as cited by the Government is the lack of coordination between the research conducted by the Department of Water Resources and ICAR. In a particular instance wherein ICAR recommended 25/30 mm of water for the sugarcane crop, the water supplied to the farmers is 10" which is not required.

3.24 The Committee's attention was also drawn to the prevalence of unreliable results obtained by some methods of soil testing and the lack of knowledge on proper use of fertilizers on the part of the farmers. The Committee was informed that the farmers have been using these inputs without getting their soil tested and the inputs used by them were not actually required and thereby they destroyed the producing capacity of the land.

3.25 The Committee recommend that there shall be proper coordination among the research scientists of ICAR and the engineers of the Water Resources Departments of the State Governments with a view to ensure optimum use of the scarcely available water for better production. The farmers should be made to realise the importance of soil-testing to properly plan the use of various kinds of fertilizers in their land. The Krishi Vigyan Kendras of ICAR could do a lot of useful work in the matter of soil-testing and in the matter of use of appropriate fertilizers by the farmers.

#### Animal Husbandry

3.26 The approved outlay in the Animal Husbandry sector for the VIII Plan was Rs. 146.77 crores and the Department was given a total budgetary allocation of Rs. 133.38 crores. The Department was able to utilize Rs. 114.62 crores thereby leaving Rs. 19.26 crores unspent. The Government has stated that the shortfall in expenditure by Rs. 17.48 crores related to the first two years of the Plan. The Plan activity could not take off particularly with respect to the newer-institutes and the All India Coordinated Projects.

3.27 The Committee observe that under many of the Plan schemes, expenditure could not take place in the first two years because the schemes were not finalised and the buildings were not available.

3.28 In a Five Year Plan if two of the initial years are lost due to delays, much time is already lost. Automatically, there is much of work and expenditure in the last three years. This results in non-completion of the Plan Schemes & shortfall in utilization of allocated money. Research cannot be rushed up for quick results by greater influx of money. Therefore, there is a tendency to spent money in non-productive uses and as a result actual research suffers. The

Committee recommend that Plan Schemes be taken up in greater earnest from the very 1st year of the Plan at least from the initial year of the Ninth Five Year Plan.

### **Agricultural Education**

3.29 The Committee observe that the research institutions of the Government are generally of a big size and they feel that the Institutes should be decentralised to make them more effective. The Committee desire that in the process of education of the Professors, Scientists and the Staff, more refresher courses should be periodically conducted, for a better exposure, scientists are being sent on mutual exchange programmes to other countries and their knowledge is utilised for the development of the nation. However, the Committee desire that instead of sending older scientists in the age group of 50-55 years for foreign assignments in view of the financial constraints, preference should be given to younger scientists who had a future in the Department. The Committee further recommend that keeping in view the busy engagement schedule of the Hon'ble Minister of the Department the selection process for foreign assignments may be finalized at the Secretary level so that decisions are taken quickly and sufficient notice is made available to the persons selected for these assignments.

### **Agricultural Extension**

3.30 The Committee observe that a considerable portion of the allocation in this sector is being utilised for construction of buildings and this leaves very little money for the procurement of essential research equipments. The Committee feel that more stress is being given to building activities than on equipping the laboratories with the latest and sophisticated research equipments etc.

3.31 The Committee further observe that the farmers are kept away from the latest technological developments as such they are not in a position to adopt such technologies. The Committee desire that the scientist-farmer linkage should be strengthened and whether it be coastal or hilly or even arid or semi-arid region of India each farmer at each place should get the latest technology suitable to his region.

3.32 The Committee has been informed that a programme of Institute-village linkage has been initiated and 60 institutes have

been selected for the implementation of the programme. Each institute has to select one village for development and advancement of technologies. Each Scientist has been advised to give 20% of his time to villagers.

3.33 The Committee are happy to learn the interest taken by the Department for the dissemination of technologies to farmers. The Committee are particularly happy that the scientists are now facing the ground realities by working shoulder to shoulder with the farmers. The Committee would like to have the programme monitored and the results of its success be reported to the Committee within a year.

### **Fisheries**

3.34 The Committee have been informed that the reasons for under- utilisation of funds in the Fisheries Division are (i) Administrative delays (ii) delays in initiating the construction activities at Lucknow, Mumbai, Bhimtal etc. and (iii) reduced allocations during the current financial year. Due to reduced allocations, payments of further instalments towards a number of ongoing construction activities had to be deferred for the next financial year.

3.35 The Committee desire that the Government should analyse the causes due to which delays occur in their administrative set up and suitable steps should be taken to streamline and rationalise the procedures so that the research activities are not hampered by bureaucratic delays and by red-tapism.

### **Linking Research Expenditure to Productivity**

3.36 The Committee is of the view that efforts have not been made by DARE to link expenditure on research to productivity. Projects and sub-projects often lack objectivity. Technologies generated largely remain confined to published literature either because they are commercially not viable or lack necessary competitive edge. The Committee, therefore, recommend that programme be developed in a stipulated time-frame so that measures could be initiated to enhance revenue generation and increase recovery of expenditure on research so that agricultural research in the time to come is made more sustainable.



3.37 It has been brought to the notice of the Committee that only a meagre percentage of the plan outlay is spent on consumable meant for research and the funds are almost entirely diverted towards construction/civil works and purchase of equipments. In the absence of adequate funds for recurring expenditure to meet research expenses of Scientists, the equipments purchased remain non-functional and certainly hamper research output. The Committee recommend that allocations made for purchase of equipments and consumable should be the first charge on the Budget, the civil works should receive the lowest priority.

#### Use of Embryo-Transfer Technique in Cattle Breeding

3.38 The Committee observed that the Embryo-Transfer in cattle and buffalo was standardized during the Seventh Plan. Surprisingly, this objective of standardization of embryo-transfer technique continued in the Eighth Plan also. Unfortunately, technique though standardized has not been put to use for production of bulls by the Government even in its own livestock farms. The Committee recommend that a progeny testing programme at IVRI, NDRI and CIRB be developed using ET as the model.

3.39 The Committee understand that the work in the area of invitro-fertilization has been standardized in buffaloes and the World's first invitro-fertilized buffalo calf was born at NDRI and technology is now being given to the other institutes. Thereafter, no progress in this area has been reported. The Committee would like the ICAR Animal Science Division to use this technique at all its institutional farms.

#### Agricultural Engineering

3.40 Scrutiny of the performance budget reveals that Engineering Division of the ICAR has been working on problems critical to Indian Agriculture. Committee is happy to note that due consideration has been given by the division in developing the post harvest and drainage technologies. The Committee is however, not satisfied with the efforts of the division in solving the problems of small and marginal farmers. Greater emphasis should be given to develop the bullock drawn implements which are mostly used by small and marginal farmers. Similarly, the decisions of establishing a Division of Irrigation and Drainage Engineering at the Central Institute of Agricultural Engineering, Bhopal and to propose a new AICRP on "Engineering Measures for Efficient Land and Water

Management” are welcome steps towards involving the Agricultural Engineers and particularly those who have specialization in Soil and Water Engineering, for supporting the agricultural production process through an efficient and sustainable use of the two most important capital resources.

3.41 The Committee strongly support the above two steps and hope that the Soil and Water Engineering activities, which are integral to the Agricultural Engineering discipline, will get a boost at the Council under the Agricultural Engineering Division through the effective implementation of the above two steps.

3.42 The Committee is convinced that for agricultural development and people’s involvement in the development process, on a sustainable basis, water is the focal point around which all the activities are gradually build up. It is also known that vast number of small agricultural watersheds in the country are ungaged and hence, their water yield behaviour are unknown. Hence appropriate research is to be initiated to reliably estimate the water resource potential that can be harnessed at the small watershed level for its storage and use in agriculture. Therefore, harnessing of the rain water at the micro level in small watersheds for creating a locally usable water resource, through appropriate storage structures and land manipulation by using suitably designed implements should be given primary importance in the proposed new AICRP on “Engineering Measures for Efficient Land and Water Management.”

3.43 The Committee recommend that in view of the competing demand of the scarce water resource, there has to be an all out effort in adopting efficient irrigation application methods such as drip, sprinkler etc. For this, the proposed Engineering Division at the Central Institute of Agricultural Engineering, Bhopal should emphasise on the development of a strong research data-base on the adoptability and economics of use of these advanced irrigation application methods for different crops and under different agro-ecological situations.

NEW DELHI;  
10 April, 1997  
20 Chaitra, 1919 (Saka)

SANTOSH KUMAR GANGWAR,  
Chairman,  
Standing Committee on Agriculture.

## APPENDIX

### MINUTES OF THE TWENTY SEVENTH SITTING OF THE STANDING COMMITTEE ON AGRICULTURE HELD ON THURSDAY, THE 10TH APRIL, 1997 AT 1500 HRS. IN COMMITTEE ROOM 'D', PARLIAMENT HOUSE ANNEXE, NEW DELHI

The Committee sat from 1500 hrs. to 1700 hrs.

#### PRESENT

Shri Santosh Kumar Gangwar — *Chairman*

#### MEMBERS

*Lok Sabha*

2. Shri Pandurang Fundkar
3. Shri Ramesh Bais
4. Shri Thawar Chand Gehlot
5. Shri Padamsen Chaudhary
6. Shri Bhimrao Badade
7. Shri G. Mallikarjunappa
8. Shri Manibhai Chaudhuri
9. Shri Sohanveer Singh
10. Smt. Ratna Singh
11. Shri Gangadhar Kunturkar
12. Shri Gulam Mohd. Mir Magami
13. Shri Meti Hullappa Yamanappa
14. Shri Mahaboob Zahedi
15. Shri Suresh Jadhav
16. Shri Sode Ramaiah
17. Dr. Mohan Singh
18. Shri Bhim Prasad Dahal

*Rajya Sabha*

19. Shri Anantha Sethi
20. Maulana Habibur Rahman Nomani
21. Shri Jagir Singh Dard
22. Shri Shiv Charan Singh
23. Dr. Ranbir Singh
24. Shri Ramnarayan Goswami
25. Shri Devi Prasad Singh
26. Shri Sharief-ud-din Shariq

## SECRETARIAT

1. Shri S. Bal Shekar — *Deputy Secretary*
2. Shri Mange Ram — *Under Secretary*
3. Shri K.L. Arora — *Assistant Director*

2. At the outset, Chairman (AC) welcomed the Members to the sitting of the Committee and requested them to take up for consideration one by one the Draft Reports on Demands for Grants 1997-98 in respect of the Ministry of Agriculture, Department of Agriculture and Cooperation, Department of Agricultural Research and Education and Department of Animal Husbandry and Dairying, and the Ministry of Water Resources and Ministry of Food Processing Industries.

3. The Draft Reports were considered one by one and adopted with slight amendments/modifications.

4. The Members of the Committee, thereafter, authorized the Chairman to present the Reports on Demands for Grants 1997-98 in respect of the Ministry of Agriculture, Department of Agriculture and Cooperation, Department of Agricultural Research and Education, and Department of Animal Husbandry and Dairying, the Ministry of Water Resources and Ministry of Food Processing Industries to the House on a date and time convenient to him.

5. Hon'ble Chairman thanked the Members for their dedicated involvement during the sittings of the Committee and the officers and staff of the Agriculture Committee Branch for their efficient work in formulating and conceptualizing the ideas of the Committee into fruitful recommendations and preparing the reports in such a short time.

*The Committee then adjourned.*

# ANNEXURE

## A Consolidated Statement showing Financial Outlays, Expenditure and Shortfall in respect of the Programmes/Plan Schemes during VIII Five Year Plan (1992-97)

(Note : Due to more numbers of Column, the Statements are spread into two pages.)

### DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION

#### Sector-wise Summary of Plan Outlays and Expenditure during Eighth Plan (Rs. in Crore)

Name of the Programme/ Plan Scheme	VIII Five year Plan			1992-93			1993-94			1994-95		
	Approved Outlay	Approved Outlay	Approved Outlay	Approved Outlay	Actual Expd.	Shortfall	Approved Outlay	Actual Expd.	Shortfall	Approved Outlay	Actual Expd.	Shortfall
1	2	3	4	5	6	8	9	10	11			
1. Crop Science	288.24	39.96	38.37	- 1.59	48.79	2.80	60.00	51.59	2.80	62.24	62.24	2.24
2. Horticulture	123.75	12.84	12.31	- 0.53	15.52	5.74	25.00	21.26	5.74	24.97	24.97	- 0.03
3. Soil, Agronomy & Agroforestry	156.27	26.00	21.57	- 4.43	31.23	2.33	35.00	28.90	2.33	33.54	33.54	- 1.46
4. Agricultural Engineering	53.23	8.20	5.55	- 2.65	9.76	2.13	10.00	7.63	2.13	11.33	11.33	1.33
5. Animal Science	146.77	22.70	14.61	- 8.09	27.32	9.39	29.56	17.93	9.39	27.21	27.21	- 2.35

(Rs. in crore)

Name of the Programme/ Plan Scheme	1995-96			1996-97			Total Anticipated Expd. during Eighth Plan	Total Expec. Shortfall During Eighth Plan	% age of Expec. against Outlay
	Approved Outlay	Actual\$ Expd.	Shortfall	Outlay	Anticipated Expd.	Shortfall			
1	12	13	14	15	16	17	18	19	20
1. Crop Science	64.64	60.54	- 4.10	58.00	56.14	- 1.86	268.88	- 2.51	93.28
2. Horticulture	26.15	24.34	- 1.81	24.00	27.00	3.00	109.88	6.37	88.79
3. Soil, Agronomy & Agroforestry	34.17	29.98	- 4.19	31.00	30.09	- 0.91	144.08	- 13.32	92.20
4. Agricultural Engineering	11.10	11.31	0.21	11.50	11.00	- 0.50	46.82	- 3.74	87.96
5. Animal Science	28.30	27.87	- 0.43	26.00	27.00	1.00	114.62	- 19.26	78.09

\$ The outlay of Rs. 310 crore was reduced to Rs. 290 crore at RE which has affected the utilisation.

(Rs. in crores)

1	2	3	4	5	6	7	8	9	10	11
6. Fisheries	65.00	10.80	6.44	- 4.36	13.17	12.59	- 0.58	16.00	9.52	- 6.48
7. Agricultural Economics & Statistics	9.00	1.60	0.29	- 1.31	1.95	0.57	- 1.38	1.44	1.10	-0.34
8. Agricultural Extension	200.32	13.00	19.25	6.25	17.95	36.25	18.30	26.00	37.51	11.51
9. Agricultural Education	159.91	28.15	13.71	-14.44	30.87	12.26	- 18.61	30.00	25.78	- 4.22
10. World Bank and Externally aided Projects	177.19	33.20	43.09	9.89	48.88	43.01	- 5.87	38.00	41.35	3.35
11. Management and Information Services	19.48	3.55	0.85	- 2.70	4.56	1.07	- 3.49	4.00	1.69	- 2.31
<b>Grand Total</b>	<b>1300.00</b>	<b>200.00</b>	<b>176.04</b>	<b>- 23.96</b>	<b>250.00</b>	<b>233.06</b>	<b>- 16.94</b>	<b>275.00</b>	<b>276.24</b>	<b>1.24</b>
#99.16										

# Additional amount approved by PIC/EFC for which expenditure to be met from Plan savings/additional funds, over and above Rs. 1300 crore.

(Rs. in crores)

1	12	13	14	15	16	17	18	19	20
6. Fisheries	16.84	14.37	- 2.47	15.50	13.50	- 2.00	56.42	- 15.89	86.80
7. Agricultural Economics & Statistics	1.50	1.60	0.10	1.30	1.00	- 0.30	4.56	- 3.23	50.67
8. Agricultural Extension	40.00	39.02	- 0.98	35.00	38.00	3.00	170.03	38.08	84.88
9. Agricultural Education	29.00	26.31	- 2.69	27.00	29.68	2.68	107.74	- 37.28	67.38
10. World Bank and Externally aided Projects	45.75	30.70	- 15.05	45.54	67.04	21.50	225.19	13.82	127.09
11. Management and Information Services	12.55	6.75	- 5.80	14.46	10.35	- 4.11	20.71	- 18.41	106.31
Grand Total	310.00	272.79	- 37.21	289.30	310.80	21.50	1268.93	- 55.37	95.71
	(290.00)	(272.79)	(- 17.21)	(\$)					

(\$)

The outlay of Rs. 310 crore was reduced to Rs. 290 crore at RE which has affected the utilisation.



# DEPARTMENT OF AGRICULTURAL RESEARCH AND EDUCATION

## Plan Outlays and Expenditure during Eighth Plan (from 1992-93 to 1996-97 for the Ministry/DARE) (Rs. in lakhs)

Name of the Programme/ Plan Scheme	VIII Five Year Plan		1992-93		1993-94		1994-95	
	Approved Outlay	Approved Outlay	Actual Expd.	Shortfall	Approved Outlay	Actual Expd.	Approved Outlay	Actual Expd.
1	2	3	4	5	6	7	8	9
10	11							
<b>1. CROP SCIENCE</b>								
<i>A. Plant Genetic Resources</i>								
1. National Bureau of Plant Genetic Resources	729.15	109.00	109.52	0.52	120.00	132.00	12.00	144.99
2. AICRP—Under-utilised & Under-exploited Plant	114.00	14.00	13.96	- 0.04	20.00	16.20	- 3.80	21.81
3. AICRP—Arid Legumes	145.90	14.00	14.00	0.00	25.00	12.18	- 12.82	2.87
Total (A)	989.05	137.00	137.48	0.48	165.00	160.38	- 4.62	169.67
<i>B. Food Crops</i>								
1. Indian Agricultural Research Institute	3995.00	409.00	534.20	125.20	500.00	892.71	392.71	996.40

(Rs. in Lakh)

Name of the Programme/ Plan Scheme	1995-96		1996-97		Total		% Age of Expd. against Outlay		
	Approved Outlay (5)	Actual# Expd.	Outlay	Anticipated Expd.	Anticipated Expd. During VIII Plan	Total Expe. Shortfall During VIII Plan			
1	12	13	14	15	16	17	18	19	20
1. CROP SCIENCE									
A. Plant Genetic Resources									
1. National Bureau of Plant Genetic Resources	150.00	144.59	- 5.41	150.00	140.00	- 10.00	671.10	- 6.08	92.04
2. AICRP-Under-utilised & Under-exploited Plant	28.00	34.52	6.52	25.00	25.00	0.00	111.49	- 24.45	97.80
3. AICRP-Arid Legumes	30.00	22.36	- 7.64	20.00	20.00	0.00	71.41	- 20.46	48.94
Total (A)	208.00	201.47	- 6.53	195.00	185.00	- 10.00	854.00	- 50.99	
B. Food Crops									
1. Indian Agricultural Research Institute	719.00	808.01	89.01	650.00	760.00	110.00	3991.32	1103.32	99.91

1	2	3	4	5	6	7	8	9	10	11
2. Central Rice Research Institute	690.00	91.00	85.00	- 6.00	105.00	120.81	15.81	130.00	137.60	7.60
3. Vivekanand Parvatiya Krishi Anusandhan Shala	440.00	59.00	30.70	- 28.30	90.00	57.70	- 32.30	105.00	67.00	- 38.00
4. Institute of Pulses Research	603.10	91.00	322.58	231.58	100.00	349.27	249.27	125.00	424.49	299.49
5. AICRP—Chick Pea	442.00	0.00	0.00	0.00	90.00	0.00	- 90.00	100.00	0.00	- 100.00
6. AICRP—Pegion Pea	388.00	0.00	0.00	0.00	77.00	0.00	- 77.00	90.00	2.12	- 87.88
7. AICRP—Pulses (MULLARP)	591.00	273.00	8.10	-264.90	115.00	3.46	- 111.54	135.00	0.00	- 135.00
8. Directorate of Wheat Research	1650.00	236.00	232.70	- 3.30	250.00	409.84	159.84	315.00	439.99	124.99
9. N.R.C.—Sorghum	320.00	32.00	106.11	74.11	40.00	120.08	80.08	50.00	221.71	171.71
10. AICRP—Sorghum	450.00	77.00	0.00	- 77.00	85.00	2.93	- 82.07	100.00	1.18	- 98.82

	1	12	13	14	15	16	17	18	19	20
2	Central Rice Research Institute	160.00	159.98	-0.02	150.00	135.00	-15.00	638.39	2.39	92.52
3.	Vivekanand Parvatiya Krishi Anusandhan Shala	90.00	91.75	1.75	90.00	90.00	0.00	337.15	- 96.85	76.63
4.	Institute of Pulses Research	140.00	159.40	19.40	140.00	125.00	-15.00	1380.74	784.74	228.94@
5.	AICRP—Chick Pea	100.00	98.05	-1.95	90.00	85.00	- 5.00	183.05	-196.95	41.41@
6.	AICRP—Pegion Pea	90.00	78.40	-11.60	85.00	85.00	0.00	165.52	-176.48	42.66@
7.	AICRP—Pulses (MULLARP)	130.00	110.28	- 19.72	130.00	115.00	-15.00	236.84	-546.16	40.07@
8.	Directorate of Wheat Research	400.00	413.48	13.48	280.00	250.00	-30.00	1746.01	265.01	105.82
9.	N.R.C. Sorghum	65.00	72.26	7.26	60.00	55.00	-5.00	575.16	328.16	179.74**
10.	AICRP-Sorghum	110.00	97.98	-12.02	100.00	90.00	-10.00	192.09	-279.91	42.69**

1	2	3	4	5	6	7	8	9	10	11
11. Project Directorate—Rice	1750.00	203.00	210.41	7.41	270.00	311.28	41.58	350.00	378.50	28.50
12. PD.—Maize	998.00	127.00	138.41	11.41	140.00	191.28	51.28	165.00	152.42	- 12.58
13. AICRP—Pearl Millets	424.95	55.00	47.28	- 7.72	80.00	60.94	- 19.06	95.00	68.82	- 26.18
14. AICRP—Small Millets	349.95	55.00	54.59	- 0.41	72.00	58.26	- 13.74	80.00	72.67	- 7.33
15. AICRP—Barley	148.00	23.00	0.10	- 22.90	25.00	26.98	1.98	35.00	54.93	19.93
Total (B)	13240.00	1731.00	1770.18	39.18	2039.00	2605.84	566.84	2485.00	3017.83	532.83
<i>C. Forage Crops</i>										
1. Indian Grassland & Fodder Research Institute	617.61	73.00	70.00	- 3.00	110.00	159.83	49.83	135.00	160.00	25.00
2. AICRP—Forage Crops	480.00	63.00	60.01	- 2.99	80.00	80.00	0.00	95.00	113.00	18.00
Total (C)	1097.61	136.00	130.01	- 5.99	190.00	239.83	49.83	230.00	273.00	43.00

1	12	13	14	15	16	17	18	19	20
11. Project Directorate—Rice	440.00	447.04	7.04	350.00	415.00	65.00	1762.53	149.53	100.72
12. PD—Maize	375.00	230.32	-144.68	300.00	290.00	-10.00	1002.43	-104.57	100.44
13. AICRP—Pearl Millets	90.00	70.25	-19.75	90.00	85.00	-5.00	332.29	-77.71	78.20
14. AICRP—Small Millets	85.00	67.89	-17.11	85.00	80.00	-5.00	333.41	-43.59	95.27
15. AICRP—Barley	30.00	32.24	2.24	20.00	20.00	0.00	134.25	1.25	90.71
Total (B)	3024.00	2937.33	-86.67	2620.00	2680.00	60.00	13011.18	1112.18	
<i>C. Forage Crops</i>									
1. Indian Grassland & Fodder Research Institute	125.00	134.00	9.00	95.00	75.00	-20.00	598.83	60.83	96.96
2. AICRP—Forage Crops	105.00	96.10	-8.90	90.00	92.00	2.00	441.11	8.11	91.90
Total (C)	230.00	230.10	0.10	185.00	167.00	-18.00	1039.94	68.94	

1	2	3	4	5	6	7	8	9	10	11
<i>D. Commercial Crop</i>										
1. Central Tobacco Research Institute	465.00	73.00	69.99	-3.01	85.00	107.00	22.00	110.00	112.45	2.45
2. Indian Institute of Sugarcane Research	475.00	54.00	78.55	24.55	80.00	84.59	4.59	100.00	135.39	35.39
3. Central Institute of Cotton Research	590.00	82.00	88.24	6.24	100.00	136.18	36.18	125.00	185.33	60.33
4. Central Research Institute for Jute & Allied Fibres	310.00	27.00	26.87	-0.13	40.00	40.00	0.00	45.00	93.99	48.99
5. Sugarcane Breeding Instt.	458.00	55.00	65.00	10.00	80.00	78.00	-2.00	100.00	115.00	15.00
6. AICRP—Cotton	717.95	105.00	104.13	-0.87	140.00	150.21	10.21	175.00	116.66	-58.34
7. AICRP—Jute	200.00	36.00	36.32	0.32	40.00	42.72	2.72	50.00	43.03	-6.97
8. AICRP—Tobacco	240.15	32.00	31.00	-1.00	48.00	31.69	-16.31	65.00	43.71	-21.29
9. AICRP—Sugarcane	340.00	45.00	43.58	-1.42	60.00	70.48	10.48	70.00	53.03	-16.97
10. Network scheme—Sugarbeet	57.00	9.00	4.93	-4.07	11.00	5.25	-5.75	15.00	5.06	-9.94
Total (D)	3853.10	518.00	548.61	30.61	684.00	746.12	62.12	855.00	903.65	48.65

1	12	13	14	15	16	17	18	19	20
<i>D. Commercial Crops</i>									
1. Central Tobacco Research Institute	120.00	112.07	-7.93	85.00	65.00	-20.00	466.51	-6.49	100.32
2. Indian Institute of Sugarcane Research	115.00	116.63	1.63	90.00	60.00	-30.00	475.16	36.16	100.03
3. Central Institute of Cotton Research	140.00	132.21	-7.79	130.00	100.00	-30.00	641.96	64.96	108.81
4. Central Research Institute for Jute & Allied Fibres	65.00	55.24	-9.76	80.00	80.00	0.00	296.10	39.10	95.52
5. Sugarcane Breeding Instt.	140.00	130.41	-9.59	95.00	70.00	-25.00	458.41	-11.59	100.09
6. AICRP—Cotton	200.00	160.31	-39.69	160.00	160.00	0.00	691.31	-88.69	96.29
7. AICRP—Jute	55.00	53.32	-1.68	45.00	40.00	-5.00	215.39	-10.61	107.70
8. AICRP—Tobacco	65.00	49.62	-15.38	50.00	53.00	3.00	209.02	-50.98	87.04
9. AICRP—Sugarcane	70.00	70.35	0.35	65.00	60.00	-5.00	297.44	-12.56	87.48
10. Network scheme-Sugarbeet	15.00	4.38	-10.62	10.00	8.00	-2.00	27.62	-32.38	48.46
Total (D)	985.00	884.54	-100.46	810.00	696.00	-114.00	3778.92	-73.08	



1	2	3	4	5	6	7	8	9	10	11
<i>E. Oilseeds</i>										
1.	N.R.C.—Groundnut	600.00	55.00	50.04	— 4.96	110.00	110.56	0.56	135.00	109.85 — 25.15
2.	N.R.C.—Soyabean	400.00	118.00	57.00	— 61.00	80.00	56.34	— 23.66	80.00	91.81 11.81
3.	N.R.C.—Rapseed & Mustard	350.00	45.00	0.00	— 45.00	70.00	31.72	— 38.28	120.00	94.85 — 25.15
4.	Project Directorate —Oilseed	1491.00	386.00	375.00	— 11.00	300.00	345.94	45.94	340.00	359.99 19.99
5.	AICRP—Groundnut	258.00	0.00	0.00	0.00	60.00	7.46	— 52.54	75.00	13.19 — 61.81
6.	AICRP—Rapseed & Mustard	325.00	0.00	0.00	0.00	70.00	0.00	— 70.00	85.00	0.00 — 85.00
7.	AICRP—Soyabean	256.49	33.00	36.83	3.83	40.00	34.90	— 5.10	55.00	64.76 9.76
Total (E)		3680.49	637.00	518.87	—118.13	730.00	586.92	—143.08	890.00	734.45 — 155.55
<i>F. Plant Protection</i>										
1.	N.R.C.—Integrated Pest Management	450.00	54.00	44.45	— 9.55	90.00	23.02	— 66.98	100.00	33.92 — 66.08

1	12	13	14	15	16	17	18	19	20
<i>E. Oilseeds</i>									
1. N.R.C.-Groundnut	140.00	79.99	- 60.01	120.00	110.00	- 10.00	460.44	- 99.56	76.74
2. N.R.C.-Soyabean	100.00	91.79	- 8.21	90.00	100.00	10.00	396.94	- 71.06	99.24
3. N.R.C. Rapseed & Mustard	156.00	60.83	- 95.17	120.00	80.00	- 40.00	267.40	- 243.60	76.40
4. Project Directorate —Oilseed	325.00	284.07	- 40.93	300.00	300.00	0.00	1665.00	14.00	111.67+
5. AICRP—Groundnut	80.00	20.84	- 59.16	60.00	52.00	- 8.00	93.49	- 181.51	36.24+
6. AICRP—Rapseed & Mustard	90.00	55.65	- 34.35	50.00	50.00	0.00	105.65	- 189.35	32.51+
7. AICRP—Soyabean	70.00	52.19	- 17.81	55.00	48.00	- 7.00	236.68	- 16.32	92.28
Total (E)	961.00	645.36	- 315.64	795.00	740.00	- 55.00	3225.60	- 787.40	
<i>F. Plant Protection</i>									
1. N.R.C.—Integrated Pest Management	210.00	74.07	-135.93	75.00	65.00	-10.00	240.46	-288.54	53.44

1	2	3	4	5	6	7	8	9	10	11
2. P.D-Biological Control	400.00	45.00	24.00	-21.00	80.00	70.88	-9.12	120.00	87.01	-32.99
3. AICRP-Honey Bees	150.00	24.00	22.71	-1.29	30.00	26.69	-3.31	40.00	21.13	-18.87
4. AICRP-White Grub	150.00	18.00	16.10	-1.90	30.00	44.68	14.68	38.00	23.86	-14.14
5. AICRP-Agriculture Acarology	125.00	14.00	14.87	0.87	25.00	13.72	-11.28	38.00	32.59	-5.41
6. AICRP-Rodent Control	143.85	18.00	18.62	0.62	30.00	23.99	-6.01	38.00	28.18	-9.82
7. AICRP-Pesticide Residue	350.00	50.00	48.39	-1.61	75.00	65.02	-9.98	100.00	89.61	-10.39
8. AICRP-Nematode	245.00	27.00	30.18	3.18	43.00	58.62	15.62	57.50	50.42	-7.08
9. Network-Economic Ornithology	100.00	14.00	13.43	-0.57	23.00	20.01	-2.99	28.50	18.43	-10.07
Total (F)	2113.85	264.00	232.75	-31.25	426.00	346.63	-79.37	560.00	385.15	-174.85
<i>G. Hybrid Seed</i>										
1. Project on Promotion of Research & Development on Hybrid Seed in Selected Crops	1300.00	227.00	214.02	-12.98	235.00	171.36	-63.64	270.00	118.49	-151.51

1	12	13	14	15	16	17	18	19	20
2. P.D.—Biological Control	130.00	115.31	-14.69	110.00	120.00	10.00	417.20	-67.80	104.30
3. AICRP—Honey Bees	40.00	31.86	-8.14	35.00	30.00	-5.00	132.39	-36.61	88.26
4. AICRP—White Grub	30.00	28.46	-1.54	30.00	26.00	-4.00	139.10	-6.90	92.73
5. AICRP—Agriculture Acarology	25.00	21.92	-3.08	25.00	20.00	-5.00	103.10	-23.90	82.48
6. AICRP—Rodent Control	35.00	32.41	-2.59	35.00	35.00	0.00	138.20	-17.80	96.07
7. AICRP—Pesticide Residue	80.00	82.05	2.05	75.00	70.00	-5.00	355.07	-24.93	101.45
8. AICRP—Nematode	57.00	55.54	-1.46	55.00	50.00	-5.00	244.76	5.26	99.90
9. Network—Economic Ornithology	25.00	20.71	-4.29	25.00	22.00	-3.00	94.58	-20.92	94.58
Total (F)	632.00	462.33	-169.67	465.00	438.00	-27.00	1864.86	-482.14	
<i>G. Hybrid Seed</i>									
1. Project on Promotion of Re- search & Development on Hy- brid Seed in Selected Crops	260.00	178.32	-81.68	200.00	200.00	0.00	882.19	-309.81	67.86

1	2	3	4	5	6	7	8	9	10	11
<i>H. Genetic Engineering &amp; Biotechnology for Crop Improvement</i>										
1. N.R.C.—Biotechnology Centre for Crop Science	400.00	73.00	54.32	-18.68	80.00	43.33	-36.67	110.00	60.06	- 49.94
2. Genetic Engg. & Biotechnology		91.00	0.00	-91.00	Not approved					
3. NRC—DNA Fingerprinting	450.00	Started during Annual Plan		(1995-96)						
<i>I. Seed Technology Research &amp; Breeder Seed Production</i>										
1. National Seed Project including existing AICRP on Seed Borne Diseases	1700.00	182.00	230.27	48.27	330.00	258.44	-71.56	400.00	561.33	161.33
Total (C.S.)	28824.10	3996.00	3836.51	-159.49	4879.00	5158.85	279.85	6000.00	6223.63	223.64

1	12	13	14	15	16	17	18	19	20
<i>H. Genetic Engineering &amp; Biotechnology for Crop Improvement</i>									
1. N.R.C.—Biotechnology Centre for Crop Science	100.00	106.31	6.31	100.00	110.00	10.00	374.02	-88.98	93.51
2. Genetic Engg. & Biotechnology	Not approved								
3. NRC—DNA Fingerprinting		75.00	75.00	180.00	130.00	-50.00	205.00	25.00	45.56
<i>I. Seed Technology Research &amp; Breeder Seed Production</i>									
1. National Seed Project including existing AICRP on Seed Borne Diseases	300.00	332.70	32.70	250.00	268.00	18.00	1650.74	188.74	97.10
Total (C.S.)	6464.00	6053.46	-646.54	5800.00	5614.00	-186.00	26886.45	-397.54	



1	12	13	14	15	16	17	18	19	20
<b>II. HORTICULTURE</b>									
<i>A. Fruits</i>									
1. Indian Institute of Horticultural Research (50%)	330.00	314.96	- 15.04	205.00	330.00	125.00	1487.60	373.61	99 17
2. Central Institute of Horticultural for Northern Plain (90%)	180.00	195.00	15.00	140.00	140.00	0.00	827.38	137.38	100.29
3. ICAR Research Complex for Goa (10%)	Integrated with Fruits								
4. N.R.C.—Citrus (90%)	90.00	79.65	- 10.35	65.00	70.00	5.00	367.37	- 31.63	83.49
5. N.R.C.—Grapes	45.00	0.17	- 44.83	50.00	20.00	- 30.00	20.31	- 115.69	14.88
6. AICRP—Tropical Fruits	88.50	65.49	- 23.01	80.00	80.00	0.00	421.94	33.94	111.04
7. AICRP—Sub-tropical Fruits	95.40	57.08	- 38.32	52.00	52.00	0.00	221.03	- 109.37	86.68
8. AICRP—Arid Fruits	46.05	48.10	2.05	49.00	49.00	0.00	253.13	21.58	112.50
9. Central Institute of Temperate Horticulture	50.00	12.64	- 37.36	40.00	50.00	10.00	80.62	- 51.38	40.31



1	2	3	4	5	6	7	8	9	10	11
10. N.R.C.—Arid Horticulture	350.00	27.00	9.78	-17.22	40.00	17.48	-22.52	134.00	44.74	-89.26
11. N.R.C.—Banana	230.00	9.00	0.00	-9.00	10.00	0.00	-10.00	45.00	38.98	-6.02
12. AICRP—Apple Scab	70.00	12.00	10.30	-1.70	15.00	12.59	-2.41	22.00	9.61	-12.39
Total (A)	4611.50	508.00	448.98	-59.02	587.00	824.21	237.21	1034.00	985.59	-48.41
<i>B. Vegetables</i>										
Integrated with Fruits										
1. Indian Institute of Horticulture Research (30%)										
2. N.R.C.—Mushroom	335.00	18.00	14.96	-3.04	20.00	24.97	4.97	79.00	67.94	-11.06
3. P.D.—Vegetable	1150.00	81.00	94.65	13.65	120.00	157.59	37.59	170.00	132.75	-37.25
4. Vegetable Seed Project	300.00	0.00	0.00	0.00	0.00	0.00	0.00	67.50	10.07	-57.43
5. AICRP—Mushroom	100.00	14.00	11.96	-2.04	18.00	27.45	9.45	25.00	13.61	-11.39
6. N.R.C.—Onion and Garlic	160.00	9.00	0.00	-9.00	10.00	0.00	-10.00	23.00	5.50	-17.50
Total (B)	2045.00	122.00	121.57	-0.43	168.00	210.01	47.01	364.50	229.87	-134.63

1	12	13	14	15	16	17	18	19	20
10. N.R.C.—Arid Horticulture	80.00	95.19	15.19	70.00	100.00	30.00	267.19	- 83.81	76.34
11. N.R.C.—Banana	60.00	61.91	1.91	70.00	80.00	10.00	180.89	- 13.11	78.65
12. AICRP—Apple Scab	15.00	14.32	-0.68	15.50	15.50	0.00	62.32	- 17.18	89.03
Total (A)	1079.95	944.51	-135.44	836.50	986.50	150.00	4189.78	144.34	
<i>B. Vegetables</i>									
Integrated with Fruits									
1. Indian Institute of Horticulture Research (30%)									
2. N.R.C.—Mushroom	65.00	47.13	- 17.87	55.00	50.00	- 5.00	205.00	- 32.00	61.19
3. P.D.—Vegetable	165.00	167.82	2.82	200.00	400.00	200.00	952.81	216.81	82.85
4. Vegetable Seed Project	52.72	19.93	- 32.79	65.00	65.00	0.00	95.00	- 90.22	31.67
5. AICRP—Mushroom	27.53	14.27	- 13.26	20.00	20.00	0.00	87.29	- 17.24	87.29
6. N.R.C.—Onion and Garlic	35.00	13.00	- 22.00	50.00	15.00	- 35.00	33.50	- 93.50	20.94
Total (B)	345.25	262.15	- 83.10	390.00	550.00	160.00	1373.60	- 16.15	

1	2	3	4	5	6	7	8	9	10	11
<i>C. Potato &amp; Tuber Crops</i>										
1.	Central Potato Research Institute	860.00	133.01	51.01	85.00	150.20	65.20	145.00	326.52	181.52
2.	Central Tuber Crops Research Institute	470.00	29.35	-6.65	40.00	60.00	20.00	66.00	80.00	14.00
3.	AICRP—Potato	245.00	37.32	0.32	43.00	52.48	9.48	45.30	47.58	2.28
4.	AICRP—Tuber Crops	130.00	18.76	0.76	20.00	15.59	-4.41	20.00	34.01	14.01
Total (C)		1705.00	218.44	45.44	188.00	278.27	90.27	276.30	488.11	211.81
<i>D. Plantation Crops</i>										
1.	Central Plantation Crops Research Institute	700.00	68.02	-31.98	100.00	164.13	64.13	169.00	180.41	11.41
2.	ICAR Research Complex for Goa (90%)	350.00	46.00	-0.01	55.00	52.57	-2.43	85.00	55.37	-29.63
3.	N.R.C.—Cashew	380.00	73.00	-0.02	75.00	99.94	24.94	88.00	84.84	-3.16
4.	N.R.C.—Oilseed Palm	275.00	9.00	-9.00	10.00	0.00	-10.00	22.00	6.28	-15.72

1	12	13	14	15	16	17	18	19	20
<i>C. Potato &amp; Tuber Crops</i>									
1. Central Potato Research Institute	220.00	209.00	- 11.00	150.00	167.00	17.00	985.73	303.73	114.62
2. Central Tuber Crops Research Institute	90.00	100.30	10.30	100.00	100.00	0.00	369.65	37.65	78.65
3. AICRP—Potato	45.00	55.49	10.49	53.00	53.00	0.00	245.87	22.57	100.36
4. AICRP—Tuber Crops	27.00	23.62	- 3.38	32.00	32.00	0.00	123.98	6.98	95.37
Total (C)	382.00	388.41	6.41	335.00	352.00	17.00	1725.23	370.93	
<i>D. Plantation Crops</i>									
1. Central Plantation Crops Research Institute	200.00	168.98	- 31.02	140.00	120.00	- 20.00	701.54	- 7.46	100.22
2. ICAR Research Complex for Goa (90%)	65.00	49.77	- 15.23	45.00	60.00	15.00	263.70	- 32.30	75.34
3. N.R.C.—Cashew	65.00	64.95	- 0.05	55.00	63.00	8.00	385.71	29.71	101.50
4. N.R.C.—Oilseed Palm	35.00	83.81	48.81	80.00	95.00	15.00	185.09	29.09	67.31

1	2	3	4	5	6	7	8	9	10	11
5. AICRP—Palms	230.00	23.00	19.53	-3.47	20.00	57.82	37.82	38.50	55.27	16.77
6. AICRP—Cashew	115.00	18.00	14.57	-3.43	35.00	16.28	-18.72	37.00	32.08	-4.92
Total (D)	2050.00	269.00	221.09	-47.91	295.00	390.74	95.74	439.50	414.25	-25.25
<i>E. Spices</i>										
1. Indian Instt. of Spices Res.	537.00	63.00	62.99	-0.01	75.00	115.89	40.89	121.00	160.00	39.00
2. AICRP—Spices	225.00	32.00	33.12	1.12	44.00	61.17	17.17	44.00	41.65	-2.35
Total (E)	762.00	95.00	96.11	1.11	119.00	117.06	58.06	165.00	201.65	36.65
<i>F. Floriculture, Medicinal &amp; Aromatic Plants</i>										
Integrated with Fruits										
1. Indian Institute of Horticulture Research (10%)										
2. N.R.C.—Orchids	120.00	9.00	0.00	-9.00	10.00	0.00	-10.00	11.00	0.18	-10.82
3. N.R.C.—Medicinal & Aromatic Plants	200.00	9.00	0.00	-9.00	10.00	5.00	-5.00	44.00	0.00	-44.00
4. AICRP—Floriculture	180.00	23.00	21.49	-1.51	25.00	33.09	8.09	29.50	28.16	-1.34

1	12	13	14	15	16	17	18	19	20
5. AICRP—Palms	54.64	51.66	- 2.98	52.00	52.00	0.00	236.28	48.14	102.73
6. AICRP—Cashew	26.46	22.17	- 4.29	25.00	25.00	0.00	110.10	- 31.36	95.74
Total (D)	446.10	441.34	- 4.76	397.00	415.00	18.00	1882.42	35.82	
<i>E. Spices</i>									
1. Indian Instt. of Spices Res.	100.00	108.79	8.79	90.00	90.00	0.00	537.67	88.67	100.12
2. AICRP—Spices	91.00	57.05	- 33.95	51.00	51.00	0.00	243.99	- 18.01	108.44
Total (E)	191.00	165.84	- 25.16	141.00	141.00	0.00	781.66	70.66	208.56
<i>F. Floriculture, Medicinal &amp; Aromatic Plants</i>									
1. Indian Institute of Horticulture Research (10%)	Integrated with Fruits								
2. N.R.C.—Orchids	25.00	13.97	- 11.03	70.00	20.00	- 50.00	34.15	- 90.85	28.46
3. N.R.C.—Medicinal & Aromatic Plants	45.00	8.66	- 36.34	50.00	30.00	- 20.00	43.66	- 114.34	21.83
4. AICRP—Floriculture	40.20	44.50	4.30	40.00	40.00	0.00	167.24	9.54	92.91

1	2	3	4	5	6	7	8	9	10	11
5. AICRP-Medicinal and Aromatic Plants	295.00	36.00	38.10	2.10	65.00	56.71	-8.29	73.50	77.38	3.88
6. AICRP-Betelvine	156.00	22.00	18.04	-3.96	25.00	36.07	11.07	29.70	29.58	-0.12
Total (F)	951.00	99.00	77.63	-21.37	135.00	130.87	-4.13	187.70	135.30	-52.40
<i>G. Post Harvest Technology of Horticultural Crops</i>										
1. Indian Institute of Horticulture Research (10%)	Integrated with Fruits									
2. Central Institute of Horticulture for Northern Plains (10%)	Integrated with Fruits									
3. NRC on Citrus (10%)	Integrated with Fruits									
4. AICRP—Post Harvest Technology of Horticultural Crops	130.00	18.00	26.97	8.97	20.00	109.03	89.03	33.00	35.30	2.30
5. Project on PHT of Fruits and Vegetables	120.00	0.00	20.01	20.01	40.00	5.89	-34.11	0.00	7.19	7.19
Total (G)	250.00	18.00	46.98	28.98	60.00	114.92	54.92	33.00	42.49	9.49
Total (Hort)	12374.50	1284.00	1230.80	-53.20	1552.00	2126.08	574.08	2500.00	2497.26	-2.74

1	12	13	14	15	16	17	18	19	20
5. AICRP-Medicinal and Aromatic Plants	64.00	68.52	4.52	60.00	60.00	0.00	300.71	2.21	101.94
6. AICRP-Betelvine	26.00	37.70	11.70	36.00	36.00	0.00	157.39	18.69	100.89
Total (F)	200.20	173.35	- 26.85	256.00	186.00	- 70.00	703.15	- 174.75	
<i>G. Post Harvest Technology of Horticultural Crops</i>									
1. Indian Institute of Horticulture Research (10%)	Integrated with Fruits								
2. Central Institute of Horticulture for Northern Plains (10%)	Integrated with Fruits								
3. NRC on Citrus (10%)	Integrated with Fruits								
4. AICRP-Post Harvest Technology of Horticultural Crops	35.00	44.63	9.63	29.00	29.00	0.00	244.93	109.93	188.41
5. Project on PHT of Fruits and Vegetables	15.50	13.78	- 1.72	15.50	15.50	0.00	62.37	- 8.63	51.98
<i>H. For Consolidated Arrears to AICRP</i>									
Total (G)	50.50	58.41	7.91	44.50	69.50	25.00	332.30	126.30	
Total (Hort)	2615.00	2434.01	- 260.99	2400.00	2700.00	300.00	10988.14	557.15	88.80



1	2	3	4	5	6	7	8	9	10	11	
III SOIL, AGRONOMY & AGROFORESTRY											
A. Resource Inventory											
1.	National Bureau of Soil Survey & Land Use Planning	1016.81	175.00	158.98	-16.02	250.00	195.04	-54.96	275.00	230.00	-45.00
B. Cropping System Research											
1.	Central Agriculture Research Institute	975.00	118.00	159.90	41.90	140.00	235.00	95.00	165.00	244.50	79.50
2.	ICAR Research Complex for NEH Region	1300.00	164.00	165.47	1.47	240.00	235.92	-4.08	265.00	353.79	88.79
3.	N.R.C.—Agro-forestry	400.55	52.00	35.00	-17.00	70.00	73.97	3.97	80.00	48.67	-31.33
4.	N.R.C.—Weed Science	520.00	82.00	66.69	-15.31	80.00	76.89	-3.11	90.00	119.90	29.90
5.	P.D.—Cropping System Research	2051.75	324.00	340.52	16.52	400.00	338.81	-61.19	440.00	511.38	71.38
6.	AICRP—Agro-meteorology	255.00	29.00	40.16	11.16	30.00	55.70	25.70	35.00	32.89	-2.11

1	12	13	14	15	16	17	18	19	20
<b>III SOIL, AGRONOMY &amp; AGROFORESTRY</b>									
<i>A. Resource Inventory</i>									
1.	National Bureau of Soil Survey & Land Use Planning	200.00	304.21	104.21	130.00	130.00	0.00	1018.23	- 11.77 100.14
<i>B. Cropping System Research</i>									
1.	Central Agriculture Research Institute	200.00	239.78	39.78	85.00	85.00	0.00	964.18	256.18 98.89
2.	ICAR Research Complex for NEH Region	205.00	208.31	3.31	220.00	210.00	- 10.00	1173.49	79.49 90.27
3.	N.R.C.—Agro-forestry	80.00	66.10	- 13.90	120.00	67.00	- 53.00	290.74	-111.26 72.59
4.	N.R.C.—Weed Science	170.00	108.06	- 61.94	100.00	90.00	- 10.00	461.54	- 60.46 88.76
5.	P.D.—Cropping System Research	450.00	78.58	- 371.42	381.00	435.00	54.00	1704.29	- 290.71 83.07
6.	AICRP—Agro-meteorology	80.00	47.64	- 32.36	85.00	80.00	- 5.00	256.39	- 2.61 100.55

1	2	3	4	5	6	7	8	9	10	11
7. AICRP-Diarland Improvement	106.70	57.00	19.30	-37.70	25.00	25.02	0.02	30.00	9.27	-20.73
8. AICRP-Agro-Forestry	480.00	78.00	74.58	-3.42	80.00	80.18	0.18	90.00	87.11	-2.89
9. AICRP-Weed Control	284.00	52.00	51.40	-0.60	65.00	87.63	22.63	75.00	66.71	-8.29
Total (B)	6373.00	956.00	953.02	-2.98	1130.00	1209.12	79.12	1270.00	1474.22	204.22
<i>C. Soil Management</i>										
1. Central Arid Zone Research institute	550.00	73.00	60.16	-12.84	80.00	102.02	22.02	90.00	126.98	36.98
2. Central Soil & Water Conservation Research & Training Institute	900.00	133.00	119.74	-13.26	190.00	240.93	50.93	220.00	219.82	-0.18
3. AICRP-Tillage Management of Indian Soils	180.00	33.00	33.01	0.01	35.00	30.30	-4.70	40.00	32.38	-7.62
4. AICRP-Management of Acid Soil	90.00	27.00	0.00	-27.00	15.00	0.00	-15.00	20.00	0.00	-20.00
Total (C)	1720.00	266.00	212.91	-53.09	320.00	373.25	53.25	370.00	379.18	9.18

1	12	13	14	15	16	17	18	19	20
7. AICRP—Diarland Improvement	10.00	312.22	302.22	25.00	20.00	- 5.00	385.81	238.81	361.58
8. AICRP—Agro-forestry	100.00	107.13	7.13	105.00	105.00	0.00	454.00	1.00	94.58
9. AICRP—Weed Control	100.00	0.00	- 100.00	70.00	60.00	- 10.00	265.74	- 96.26	93.57
Total (B)	1395.00	1167.82	- 227.18	1191.00	1152.00	- 39.00	5956.18	14.18	
<i>C. Soil Management</i>									
1. Central Arid Zone Research Institute	100.00	149.90	49.90	120.00	120.00	0.00	559.06	96.06	101.65
2. Central Soil & Water Conservation Research & Training Institute	200.00	229.98	29.98	120.00	120.00	0.00	930.47	67.47	103.39
3. AICRP—Tillage Management of Indian Soils	40.00	193.89	153.89	40.00	42.00	2.00	331.58	143.58	184.21
4. AICRP—Management of Acid Soil				Schemes not approved					
Total (C)	340.00	573.77	233.77	280.00	282.00	2.00	1821.11	307.11	

1	2	3	4	5	6	7	8	9	10	11
<i>D. Water Management</i>										
1. Central Soil Salinity Research Institute	475.00	104.00	62.97	-41.03	85.00	87.74	2.74	95.00	114.16	19.16
2. Water Technology Centre for Eastern Region	550.00	100.00	56.69	-43.31	95.00	78.95	-16.05	110.00	132.99	22.99
3. P.D. Water Management	1400.00	354.00	173.18	-180.82	500.00	233.39	-266.61	550.00	212.77	-337.23
4. AICRP—Management of Salt Affected Soils	320.00	54.00	53.05	-0.95	60.00	45.63	-14.37	67.00	51.60	-15.40
5. AICRP—Optimisation of Groundwater Utilization althrough Wells Pumps	200.00	23.00	13.74	-9.26	40.00	28.53	-11.47	46.00	27.10	-18.90
Total (D)	2945.00	635.00	359.63	-275.37	780.00	474.24	-305.76	868.00	538.62	-329.38
<i>E. Nutrient Management</i>										
1. Indian Institute of Soil Science	900.00	133.00	105.01	-27.99	140.00	159.25	19.25	155.00	245.98	90.98
2. Central Research Institute for Dryland Agriculture	510.00	69.00	78.04	9.04	85.00	71.75	-13.25	97.00	87.95	-9.05

1	12	13	14	15	16	17	18	19	20
<i>D. Water Management</i>									
1. Central Soil Salinity Research Institute	105.00	83.97	- 21.03	80.00	80.00	0.00	428.84	- 40.16	90.28
2. Water Technology Centre for Eastern Region	120.00	118.80	- 1.20	187.00	167.00	- 20.00	554.43	- 57.57	100.81
3. P.D. Water Management	430.00	25.09	-404.91	292.00	295.00	3.00	939.43	-1186.57	67.10
4. AICRP—Management of Salt Affected Soils	50.00	58.98	8.98	60.00	56.00	- 4.00	265.26	- 25.74	82.89
5. AICRP—Optimisation of Groundwater Utilization althrough Wells Pumps	40.00	30.90	- 9.10	40.00	42.00	2.00	142.27	-46.73	71.14
Total (D)	745.00	317.74	- 427.26	659.00	640.00	- 19.00	2330.23	-1356.77	
<i>E. Nutrient Management</i>									
1. Indian Institute of Soil Science	160.00	133.89	- 26.11	280	250	- 30.00	894.13	26.13	99.35
2. Central Research Institute for Dryland Agriculture	180.00	149.83	- 30.17	120.00	120.00	0.00	507.57	- 43.43	99.52

1	2	3	4	5	6	7	8	9	10	11
3. AICRP—Dryland Agriculture	960.00	164.00	150.37	-13.63	185.00	232.85	47.85	205.00	182.92	-22.08
4. AICRP—Micro Nutrients	260.00	44.00	30.48	-13.52	63.00	28.83	-34.17	70.00	38.23	-31.77
5. AICRP—Biological Nitrogen Fixation	150.00	52.00	19.94	-32.06	30.00	34.02	4.02	35.00	37.13	2.13
6. AICRP—Micro Biological Decomposition	150.00	19.00	19.50	0.50	31.00	30.91	-0.09	35.00	52.27	17.27
7. AICRP—Soil Test Crop Response	380.00	73.00	55.87	-17.13	90.00	66.80	-23.20	100.00	65.22	-34.78
8. AICRP—Long-term Fertilizer Experiments	200.00	14.00	13.48	-0.52	19.00	14.41	-4.59	20.00	22.50	2.50
9. Network Land Use Planning	62.00	Scheme not approved								
Total (E)	3572.00	568.00	472.69	-95.31	643.00	638.82	-4.18	717.00	732.20	15.20
Total (SA & AF)	15626.51	2600.00	2157.23	-442.77	3123.00	2890.47	-232.53	3500.00	3354.22	-145.78

1	12	13	14	15	16	17	18	19	20
3. AICRP—Dryland Agriculture	250.00	200.00	– 50.00	250.00	245.00	– 5.00	1011.14	– 42.86	105.33
4. AICRP—Micro Nutrients	62.00	23.86	– 38.14	50.00	50.00	0.00	171.40	– 117.60	65.92
5. AICRP—Biological Nitrogen Fixation	30.00	28.05	– 1.95	30.00	30.00	0.00	149.14	– 27.86	99.43
6. AICRP—Micro Biological Decomposition	28.00	24.22	– 3.78	25.00	25.00	0.00	151.90	13.90	101.27
7. AICRP—Soil Test Crop Response	60.00	56.47	– 3.53	65.00	63.00	– 2.00	307.36	– 80.64	80.88
8. AICRP—Long-term Fertilizer Experiments	50.00	17.91	– 32.09	20.00	22.00	2.00	90.30	– 32.70	45.15
9. Network Land Use Planning	Scheme not approved								
Total (E)	820.00	634.23	– 185.77	840.00	805.00	– 35.00	3282.94	– 305.06	
Total (SA&AF)	3417.00	2997.77	– 502.23	3100.00	3009.00	– 91.00	14408.69	–1352.31	92.20



1	2	3	4	5	6	7	8	9	10	11
IV. AGRICULTURAL ENGINEERING										
<i>A. Farm Implements &amp; Machinery</i>										
1. Central Institute of Agricultural Engineering	700.00	126.00	18.70	-107.30	117.00	103.68	-13.32	128.00	170.00	42.00
2. AICRP—Power Tiller	140.00	23.00	22.26	-0.74	30.00	25.36	-4.64	35.00	27.48	-7.52
3. AICRP—Farm Implements Machinery	450.00	68.00	62.67	-5.33	85.00	72.48	-12.52	81.00	68.73	-12.27
4. AICRP—Human Engineering and safety studies	80.00	14.00	0.00	-14.00	25.00	0.00	-25.00	30.00	0.00	-30.00
Total (A)	1370.00	231.00	103.63	-127.37	257.00	201.52	-55.48	274.00	266.21	-7.79
<i>B. Post Harvest Technology</i>										
1. Central Institute for Post Harvest Engg. & Technology	1100.00	147.00	116.97	-30.03	156.00	160.51	4.51	179.00	264.95	85.95
2. Central Institute for Research on Cotton Technology	400.00	60.00	55.00	-5.00	82.00	83.40	1.40	65.00	97.00	32.00

1	12	13	14	15	16	17	18	19	20
<b>IV. AGRICULTURAL ENGINEERING</b>									
<i>A. Farm Implements &amp; Machinery</i>									
1. Central Institute of Agricultural Engineering	150.00	160.10	10.10	180.00	180.00	0.00	632.48	-68.52	90.35
2. AICRP—Power Tiller	31.00	23.88	-7.12	35.00	38.50	3.50	137.48	-16.52	98.20
3. AICRP—Farm Implements Machinery	90.00	61.55	-28.45	90.00	100.00	10.00	365.43	-48.57	81.21
4. AICRP—Human Engineering and safety studies	30.00	7.24	-22.76	40.00	29.00	-11.00	36.24	-102.76	45.30
Total (A)	301.00	252.77	-48.23	345.00	347.50	2.50	1171.63	-236.37	
<i>B. Post Harvest Technology</i>									
1. Central Institute for Post Harvest Engg. & Technology	200.00	355.72	155.72	200.00	150.00	-50.00	1048.15	166.15	95.29
2. Central Institute for Research on Cotton Technology	100.00	89.24	-10.76	110.00	110.00	0.00	434.64	17.64	108.66

1	2	3	4	5	6	7	8	9	10	11
3. Indian Lac Research Instt.	300.00	46.00	26.62	-19.38	44.00	30.12	-13.88	53.00	59.50	6.50
4. Jute Technological Research Laboratory	400.00	60.00	19.98	-40.02	62.00	87.51	25.51	65.00	165.60	100.60
5. AICRP—Application of Plastics in Agriculture	80.00	18.00	10.70	-7.30	25.00	8.01	-16.99	18.00	12.50	-5.50
6. AICRP—Jaggery & Khandasari	70.00	13.00	5.81	-7.19	20.00	12.32	-7.68	15.00	17.58	2.58
7. AICRP—Harvest & Post Harvest Technology	475.00	73.00	73.54	0.54	94.00	22.85	-71.15	110.00	99.79	-10.21
Total (B)	2825.00	417.00	308.62	-108.38	483.00	404.72	-78.28	505.00	716.92	211.92
<i>C. Energy Management in Agriculture</i>										
1. AICRP—Renewable Energy Sources	340.00	56.00	58.65	2.65	65.00	60.79	-4.21	83.00	62.20	-20.80
2. AICRP—Energy Requirement in Agricultural Sector	250.00	45.00	39.18	-5.82	55.00	45.96	-9.04	53.00	33.37	-19.63
3. AICRP—Animal Energy	160.00	26.00	24.39	-1.61	35.00	24.35	-10.65	32.00	21.55	-10.45

1	12	13	14	15	16	17	18	19	20
3. Indian Lac Research Instt.	60.00	40.13	-19.87	60.00	50.00	-10.00	206.37	-56.63	68.79
4. Jute Technological Research Laboratory	75.00	66.30	-8.70	85.00	70.00	-15.00	409.39	62.39	102.35
5. AICRP—Application of Plastics in Agriculture	18.00	25.68	7.68	20.00	20.50	0.50	77.39	-21.61	96.74
6. AICRP—Jaggery & Khandasari	16.00	15.07	-0.93	20.00	20.00	0.00	70.78	-13.22	101.11
7. AICRP—Harvest & Post Harvest Technology	100.00	108.24	8.24	110.00	125.00	15.00	429.42	-57.58	90.40
Total (B)	569.00	700.38	131.38	605.00	545.50	-59.50	2676.14	97.14	
<i>C. Energy Management in Agriculture</i>									
1. AICRP—Renewable Energy Sources	100.00	64.55	-35.45	70.00	70.00	0.00	316.19	-57.81	93.00
2. AICRP—Energy Requirement in Agricultural Sector	65.00	46.21	-18.79	55.00	55.00	0.00	219.72	-53.28	87.89
3. AICRP—Animal Energy	35.00	31.73	-3.27	40.00	40.00	0.00	142.02	-25.98	88.76

1	2	3	4	5	6	7	8	9	10	11
4. NRC—Removal of Drudgery for farm women	125.00	15.00		-15.00	20.00		-20.00	Integrated with NRC—Women		
5. Network Oilseed Processing	80.00	5.00		-5.00	25.00	Not approved	-25.00	19.00	0.00	-19.00
6. Award of Innovation & Creativity	22.50	merged with information 1.00 & Management								
Total (C)	977.50	147.00	122.22	-24.78	201.00	131.10	-68.90	187.00	117.12	-69.88
<i>D. Drainage Engineering</i>										
1. AICRP—Agricultural Drainage	150.00	25.00	20.00	-5.00	35.00	25.21	-9.79	34.00	32.55	-1.45
Total (Ag. Engg.)	5322.50	820.00	554.47	-265.53	976.00	762.55	-212.45	1000.00	1132.80	132.80
<b>V. ANIMAL SCIENCE</b>										
<i>A. Animal Genetic Resources</i>										
1. National Institute of Animal Genetics	600.00	113.00	30.38	-82.62	60.00	55.12	-4.88	75.00	91.50	16.50
2. National Bureau of Animal Genetic Resources	200.00	68.00	6.06	-61.94	60.00	32.16	-27.84	60.00	44.96	-15.04

1	12	13	14	15	16	17	18	19	20
4. NRC—Removal of Drudgery for farm women	Integrated with NRC—Women								
5. Network Oilseed Processing	Not approved								
6. Award of Innovation & Creativity	merged with information & Management								
Total (C)	200.00	142.49	-57.51	165.00		165.00	0.00	677.93	-137.07
<i>D. Drainage Engineering</i>									
1. AICRP—Agricultural Drainage	40.00	35.71	-4.29	35.00	42.00	7.00	155.47	-13.53	103.65
Total (Ag. Engg)	1110.00	1131.35	21.35	1150.00	1100.00	-50.00	4681.17	-289.83	87.95
<b>V. ANIMAL SCIENCE</b>									
<i>A. Animal Genetic Resources</i>									
1. National Institute of Animal Genetics	Merged with NBAGR		0.00			0.00	177.00	-71.00	29.50
2. National Bureau of Animal Genetic Resources	110.00	212.39	102.39	115.00	175.00	60.00	470.57	57.57	235.29++

1	2	3	4	5	6	7	8	9	10	11
3. Network—Animal Genetic Resources	400.00	40.00	0.00	-40.00	80.00	0.00	-80.00	30.00	2.75	-27.25
Total (A)	1200.00	221.00	36.44	-184.56	200.00	87.28	-112.72	165.00	139.21	-25.79
<i>B. Livestock Improvement</i>										
1. National Dairy Research Institute	1600.00	250.00	193.56	-56.44	200.00	225.27	25.27	390.00	466.61	76.61
2. Central Sheep and Wool Research Institute	763.50	91.00	85.49	-5.51	90.00	138.00	48.00	190.00	200.00	10.00
3. Central Avian Research Institute	310.00	46.00	59.33	13.33	50.00	50.77	0.77	70.00	83.33	13.33
4. Central Institute for Research for Goats	553.60	45.00	115.22	70.22	50.00	39.83	-10.17	120.00	149.80	29.80
5. Central Institute for Research on Buffaloes	598.00	45.00	89.53	44.53	50.00	138.16	88.16	130.00	148.00	18.00
6. National Institute of Animal Nutrition & Physiology	875.00	92.00	0.00	-92.00	180.00	0.00	-180.00	95.00	0.00	-95.00

	1	12	13	14	15	16	17	18	19	20
3. Network—Animal Genetic Resources		50.00	59.72	9.72	80.00	33.00	-47.00	95.47	-184.53	23.87
Total (A)		160.00	272.11	112.11	195.00	208.00	13.00	566.04	-126.96	
<i>B. Livestock Improvement</i>										
1. National Dairy Research Institute		400.00	373.11	-26.89	345.00	345.00	0.00	1603.55	18.55	100.22
2. Central Sheep and Wool Research Institute		180.00	175.00	-5.00	165.00	165.00	0.00	763.49	47.49	100.00
3. Central Avian Research Institute		80.00	105.19	25.19	95.00	100.00	5.00	398.62	57.62	128.59
4. Central Institute for Research for Goats		130.00	155.57	25.57	140.00	104.00	-36.00	564.42	79.42	101.95
5. Central Institute for Research on Buffaloes		160.00	165.83	5.83	132.00	132.00	0.00	673.52	156.52	112.63
6. National Institute of Animal Nutrition & Physiology		170.00	29.50	-140.50	60.00	75.00	15.00	104.50	-492.50	11.94



1	2	3	4	5	6	7	8	9	10	11
7. N.R.C. on Biotechnology (Part of NDRI)	Functioning under NDRI									
8. N.R.C.—Camel	350.58	68.00	40.00	-28.00	60.00	80.60	20.60	90.00	89.98	-0.02
9. N.R.C.—Yak	160.66	23.00	19.29	-3.71	30.00	31.04	1.04	35.00	40.33	5.33
10. N.R.C.—Mithun	100.00	23.00	15.58	-7.42	30.00	11.45	-18.55	40.00	29.70	-10.30
11. N.R.C.—Equine	350.00	68.00	69.27	1.27	77.00	64.76	-12.24	85.00	100.04	-15.04
12. P.D.—Poultry	830.00	91.00	136.10	45.10	160.00	148.68	-11.32	175.00	153.97	-21.03
13. P.D.—Cattle	650.00	68.00	72.54	4.54	130.00	83.99	-46.01	190.00	156.78	-33.22
14. AICRP—Sheep	140.00	45.00	31.97	-13.03	40.00	21.54	-18.46	40.00	29.30	-10.70
15. AICRP—Goat	200.00	45.00	22.03	-22.97	30.00	6.05	-23.95	40.00	22.32	-17.68
16. AICRP—Buffalo	276.00	91.00	88.85	-2.15	70.00	46.88	-23.12	75.00	59.18	-15.82
17. AICRP—Pig	300.00	45.00	25.57	-19.43	30.00	39.13	9.13	35.00	39.07	4.07
18. AICRP—Agricultural By-product	240.00	45.00	52.10	7.10	50.00	62.74	12.74	65.00	27.37	-37.63

1	12	13	14	15	16	17	18	19	20
7. N.R.C. on Biotechnology (Part of NDRI)						Functioning		under NDRI	
8. N.R.C.—Camel	80.00	70.00	-10.00	70.00	75.00	5.00	355.58	-12.42	101.43
9. N.R.C.—Yak	50.00	41.44	-8.56	30.00	30.00	0.00	162.10	-5.90	100.90
10. N.R.C.—Mithun	13.00	14.93	1.93	25.00	25.00	0.00	96.66	-34.34	96.66
11. N.R.C.—Equine	60.00	44.00	-16.00	45.00	75.00	30.00	353.07	-12.01	100.88
12. P.D.—Poultry	173.00	189.01	16.01	173.00	213.00	40.00	840.76	68.76	101.30
13. P.D.—Cattle	150.00	124.49	-25.51	135.00	145.00	10.00	582.80	-90.20	89.66
14. AICRP—Sheep	25.00	29.59	4.59	30.00	36.00	6.00	148.40	-31.60	106.00
15. AICRP—Goat	30.00	21.87	-8.13	30.00	26.00	-4.00	98.27	-76.73	49.14
16. AICRP—Buffalo	60.00	55.58	-4.42	60.00	104.00	44.00	354.49	-1.51	128.44
17. AICRP—Pig	42.00	42.98	0.98	50.00	52.00	2.00	198.75	-3.25	66.25
18. AICRP—Agricultural By-product	45.00	76.47	31.47	35.00	40.00	5.00	258.68	18.68	107.78

1	2	3	4	5	6	7	8	9	10	11
19. Network—Micronutrients	200.00	53.00	0.00	-53.00	50.00	0.00	-50.00	20.00	8.48	-11.52
20. Network—Embryo Transfer	240.00	53.00	0.00	-53.00	80.00	0.00	-80.00	30.00	27.25	-2.75
21. Network—Crop Based Animal Production System	91.44	0.00	0.00	0.00	0.00	0.00	0.00	8.00	0.24	-7.76
Total (B)	8828.78	1287.00	1116.43	-170.57	1457.00	1188.89	-268.11	1923.00	1831.75	-121.33
<i>C. Livestock Product Technology</i>										
1. N.R.C.—Meat & Meat Product Technology	300.00	45.00	16.55	-28.45	45.00	4.51	-40.49	25.00	14.08	-10.92
2. R&D Support for Process Upgradation of indigenous milk products for Industrial Application	265.00	46.00	0.00	-46.00	60.00	0.00	-60.00	20.00	0.00	-20.00
Total (C)	565.00	91.00	16.55	-74.45	105.00	4.51	-100.49	45.00	14.08	-30.92
<i>D. Animal Health</i>										
1. Indian Veterinary Research Institute	3050.00	455.00	237.34	-217.66	510.00	357.23	-152.77	650.00	665.65	15.65

1	12	13	14	15	16	17	18	19	20
19. Network-Micronutrients	46.00	37.82	-8.18	50.00	50.00	0.00	96.30	-122.70	48.15
20. Network-Embryo Transfer	56.00	45.54	-10.46	60.00	60.00	0.00	132.79	-146.21	55.33
21. Network-Crop Based Animal Production System	30.00	7.29	-22.71	35.00	35.00	0.00	42.53	-30.47	46.51
Total (B)	1980.00	1805.21	-174.79	1765.00	1887.00	122.00	7829.28	- 612.80	
<i>C. Livestock Product Technology</i>									
1. N.R.C. Meat & Meat Product Technology	7.00	9.71	2.71	7.00	7.00	0.00	51.85	-77.15	17.28
2. R&D Support for Process Upgradation of indigenous milk Products for Industrial Application	34.00	10.00	- 24.00	30.00	30.00	0.00	40.00	-150.00	15.09
Total (C)	41.00	19.71	- 21.29	37.00	37.00	0.00	91.85	-227.15	
<i>D. Animal health</i>									
1. Indian Veterinary Research Institute	685.00	599.64	- 85.36	513.00	440.00	- 73.00	2299.86	-513.14	75.41

1	2	3	4	5	6	7	8	9	10	11
2. AICRP—Disease Monitoring & Surveillance	275.00	136.00	17.73	-118.27	130.00	79.36	-50.64	70.00	12.52	-57.48
3. AICRP—Blood Protesta	150.00		19.03	19.03	40.00	20.99	-19.01	35.00	9.45	-25.55
4. AICRP on Foot & Mouth Disease	200.00		17.73	17.73	40.00	54.93	14.93	58.00	48.71	-9.29
5. Strengthening of Monitoring Mechanism and Training of Scientists & Technicians	400.00	Scheme not started			50.00		-50.00	10.00		-10.00
6. N.R.C.—Biotechnology (Part of IVRI)		Included in IVRI								
7. Vaccine and Diagnostic Tech./ Livestock Farming System	8.56	80.00	0.00	-80.00	200.00	Scheme not started				
Total (D)	4083.56	671.00	291.83	-379.17	970.00	512.51	-257.49	823.00	736.33	-86.67
Total (A.S.)	14677.34	2270.00	1461.25	-808.75	2732.00	1793.19	-938.81	2956.00	2721.37	-234.63

1	12	13	14	15	16	17	18	19	20
2. AICRP—Disease Monitoring & Surveillance	40.00	38.03	-197	30.00	41.00	11.00	188.64	-217.36	68.60
3. AICRP—Blood Protesta	21.00	0.68	-20.32	10.00	17.00	7.00	67.15	-38.85	44.77
4. AICRP on Foot & Mouth Disease	58.00	52.04	-5.96	50.00	70.00	20.00	243.41	37.41	121.71
5. Strengthening of Monitoring Mechanism and Training of Scientists & Technicians	5.00		-5.00		Scheme not started				-65.00
6. N.R.C.—Biotechnology (Part of IVRI)					Included in IVRI				
7. Vaccine and Diagnostic Tech./ Livestock Farming System									
Total (D)	809.00	690.39	-118.61	603.00	568.00	-35.00	2799.06	-796.94	
Total (A.S.)	2830.00	2787.42	-151.86	2600.00	2700.00	100.00	11286.23	-1763.85	76.90

1	2	3	4	5	6	7	8	9	10	11	
VI. FISHERIES											
A. Capture Fisheries											
1.	Central Marine Fisheries Research Institute	900.00	110.00	99.97	-10.03	175.00	215.00	40.00	250.00	264.98	14.98
2.	Central Inland Capture Fisheries Research Institute	600.00	55.00	66.43	11.43	100.00	92.00	-8.00	170.00	83.28	-86.72
Total (A)		1500.00	165.00	166.40	1.40	275.00	307.00	32.00	420.00	348.26	-71.74
B. Culture Fisheries											
1.	Central Institute for Freshwater Aquaculture	900.00	164.00	145.81	-18.19	192.00	195.00	3.00	205.00	204.98	-0.02
2.	Central Institute of Brackish Water Aquaculture	900.00	136.00	98.50	-37.50	175.00	80.34	-94.66	187.00	94.72	-92.28
3.	N.R.C.-Cold Water Fisheries	400.00	54.00	32.24	-21.76	75.00	27.67	-47.33	78.00	21.99	-56.01
4.	ORP on Processing and Utilisation of Organic Waste for Aquaculture	150.00	0.00	0.00	0.00	0.00	0.00	0.00	30.00	4.01	-25.99
Total (B)		2350.00	354.00	276.55	-77.45	442.00	303.01	-138.99	500.00	325.70	-174.30

1	12	13	14	15	16	17	18	19	20
<b>VI. FISHERIES</b>									
<i>A. Capture Fisheries</i>									
1. Central Marine Fisheries Research Institute	240.00	255.00	15.00	175.00	175.00	0.00	1009.95	59.95	112.22
2. Central Inland Capture Fisheries Research Institute	150.00	120.00	-30.00	150.00	140.00	-10.00	501.71	-123.29	83.62
Total (A)	390.00	375.00	-15.00	325.00	315.00	-10.00	1511.66	-63.34	
<i>B. Culture Fisheries</i>									
1. Central Institute for Freshwater Aquaculture	160.00	159.95	-0.05	140.00	150.00	10.00	855.74	-5.26	95.08
2. Central Institute of Brackish Water Aquaculture	200.00	146.97	-53.03	190.00	175.00	-15.00	595.53	-292.47	66.17
3. N.R.C.-Cold Water Fisheries	60.00	50.98	-9.02	45.00	35.00	-10.00	167.88	-144.12	41.97
4. ORP on Processing and Utilisation of Organic Waste for Aquaculture	45.00	8.75	-36.25	25.00	25.00	0.00	37.76	-62.24	25.17
Total (B)	465.00	366.65	-98.35	400.00	385.00	-15.00	1656.91	-504.09	



1	2	3	4	5	6	7	8	9	10	11
C. <i>Fish &amp; Fish Processing Technology</i>										
Central Institute of Fisheries Technology	650.00	91.00	71.01	-19.99	125.00	172.00	47.00	195.00	150.01	-44.99
D. <i>Fish Genetic Resources</i>										
National Bureau of Fish Genetic Resources	900.00	118.00	50.44	-67.56	150.00	22.52	-127.48	195.00	69.80	-125.20
E. <i>Fisheries Education</i>										
Central Institute of Fisheries Education	1100.00	352.00	79.98	-272.02	325.00	454.10	129.10	290.00	58.18	-231.82
Total (Fy.)	6500.00	1080.00	644.38	-435.62	1317.00	1258.63	-58.37	1600.00	951.95	-648.05
VII. AGRIL. STATISTICS & ECONOMICS										
A. Indian Agricultural Statistics Research Institute	700.00	130.00	18.89	-111.11	155.00	36.06	-118.94	100.00	80.63	-19.37
B. N.R.C.-Agricultural Economics & Policy Research	200.00	30.00	9.82	-20.18	40.00	20.98	-19.02	44.00	28.97	-15.03
Total (A.S. & E.)	900.00	160.00	28.71	-131.29	195.00	57.04	-137.96	144.00	109.60	-34.40

1	12	13	14	15	16	17	18	19	20
<i>C. Fish &amp; Fish Processing Technology</i>									
Central Institute of Fisheries Technology	155.00	154.62	-0.38	150.00	140.00	-10.00	687.64	-28.36	105.79
<i>D. Fish Genetic Resources</i>									
National Bureau of Fish Genetic Resources	290.00	401.38	111.38	325.00	260.00	-65.00	804.14	-273.86	89.35
<i>E. Fisheries Education</i>									
Central Institute of Fisheries Education	400.00	138.92	-261.08	350.00	250.00	-100.00	981.18	-735.82	89.20
Total (FY.)	1684.31	1436.57	-263.43	1550.00	1350.00	-200.00	5641.53	-1605.47	86.79
<b>VII. AGRIL. STATISTICS &amp; ECONOMICS</b>									
A. Indian Agricultural Statistics Research Institute	110.00	110.22	0.22	90.00	70.00	-20.00	315.80	-269.20	45.11
B. N.R.C.-Agricultural Economics & Policy Research	40.00	49.86	9.86	40.00	30.00	-10.00	139.63	-54.37	69.82
Total (A.S. & E.)	150.00	160.08	10.08	130.00	100.00	-30.00	455.43	-323.57	

1	2	3	4	5	6	7	8	9	10	11
VIII. AGRICULTURAL EXTENSION										
A.	<i>Vocational Training with Integrated Function</i>									
1.	Integrated Krishi Vigyan Kendras	16132.00 3682.00	1300.00 @	1925.00	625.00	1794.60	3624.86	1830.26	2570.00	3751.00 1181.00
2.	N.R.C. for Women in Agriculture	218.00	Scheme started	w.e.f 1.4.96			30.00	0.00	-30.00	
Total (Ag. Ext.)		20032.00	1300.00	1925.00	625.00	1794.60	3624.86	1830.26	2600.00	3751.00 1151.00
IX. AGRICULTURAL EDUCATION										
<i>A Strengthening of Agricultural Education</i>										
1.	National Academy for Agricultural Research Management	730.00	82.00	87.94	5.94	80.00	141.89	61.89	136.00	122.97 -13.03
2.	Development & Strengthening of State Agri. Universities	7500.00	1636.00	1095.94	-540.06	1400.00	668.56	-731.44	1350.00	1457.07 107.07

1	12	13	14	15	16	17	18	19	20
<b>VIII. AGRICULTURAL EXTENSION</b>									
<b>A. Vocational Training with Integrated Function</b>									
1. Integrated Krishi Vigyan Kendras	3950.00	3901.89	-48.11	3320.00	3700.00	380.00	16902.75	3968.15	104.78
2. NRC for Women in Agri.	50.00	0.00	-50.00	180.00	100.00	-80.00	100.00	-160.00	45.87
<b>Total (Ag. Ext.)</b>	<b>4000.00</b>	<b>3901.89</b>	<b>-98.11</b>	<b>3500.00</b>	<b>3800.00</b>	<b>300.00</b>	<b>17002.75</b>	<b>3808.15</b>	<b>84.88</b>
<b>IX. AGRICULTURAL EDUCATION</b>									
<b>A. Strengthening of Agricultural Education</b>									
1. National Academy for Agricultural Research Management	275.00	162.82	-112.18	225.00	200.00	-25.00	715.62	-82.38	98.03
2. Development & Strengthening of State Agril. Universities	1500.00	1624.39	124.39	1500.00	1700.00	200.00	6545.96	-840.04	87.28

1	2	3	4	5	6	7	8	9	10	11
3. Development & Strengthening of Agricultural Education of Central Universities	390.00	136.00	60.00	-76.00	90.00	0.00	-90.00	105.00	27.00	-78.00
4. Strengthening PG Education in Deemed to be Universities	1015.90	100.00	80.00	-20.00	100.00	53.59	-46.41	110.00	652.31	542.31
5. Establishment of Central Agricultural University NEH Region	4100.00	382.00	0.00	-382.00	1000.00	300.00	-700.00	787.00	40.00	-747.00
6. Establishment of Centres of Advance Studies in SAUs and DUs	1474.00	364.00	0.00	-364.00	300.00	16.11	-283.89	368.00	209.03	-158.97
7. AICRP on Home Science	415.55	56.00	32.71	-23.29	48.00	39.90	-8.10	65.00	65.73	0.73
Total(A)	15625.45	2756.00	1356.59	-1399.41	3018.00	1220.05	-1797.95	2921.00	2574.11	-346.89
<b>B. Recognising Professional Excellence</b>										
1. Best Teacher Award	32.00	9.00	0.36	-8.64	6.00	0.39	-5.61	8.50	0.00	-8.50

1	12	13	14	15	16	17	18	19	20
3. Development & Strengthening of Agricultural Education of Central Universities	100.00	29.80	-70.20	50.00	50.00	0.00	166.80	-314.20	42.77
4. Strengthening PG Education in Deemed to be Universities	100.00	99.24	-0.76	100.00	100.00	0.00	985.14	475.14	96.97
5. Establishment of Central Agricultural University NEH Region	300.00	300.00	0.00	360.00	350.00	-10.00	990.00	-1839.00	24.15
6. Establishment of Centres of Advance Studies in SAUs and DUs.	400.00	312.11	-87.89	300.00	342.50	42.50	879.75	-852.25	59.68
7. AICRP on Home Science	80.00	60.82	-19.18	80.00	180.00	100.00	379.16	50.16	91.24
Total (A)	2755.00	2589.18	-165.82	2615.00	2922.50	307.50	10662.43	-3402.57	
<b>B. Recognising Professional Excellence</b>									
1. Best Teacher Award	20.00	3.31	-16.69	15.00	1.50	-13.50	5.56	-52.94	17.38

1	2	3	4	5	6	7	8	9	10	11	
C. Professional Resources Utilization											
1.	Utilization of Internal Competence	25.00	5.00	0.00	-5.00	6.00	0.00	-6.00	8.50	0.00	-8.50
2.	Preparation of University Level books	32.00	5.00	0.00	-5.00	6.00	0.54	-5.46	7.00	0.00	-7.00
3.	Emeritus Scientist Scheme	225.00	28.00	14.08	-13.92	40.00	5.32	-34.68	55.00	4.26	-50.74
4.	Establishment of Monitoring & Exam. Cell	30.00	Included in reorganisation of Education Division under AHRD								
5.	Establishment of Examination Cell	22.00	12.00	0.00	-12.00	11.00	0.00	-11.00	Scheme not started		
6.	Rural Awareness Work Experience Programme	Scheme not approved									
7.	Strengthening of PG Edn. in Food & Child Dev.										
8.	Advance Centre on PG Edn. & Research										
Total (B & C)		366.00	59.00	14.44	-44.56	69.00	6.25	-62.75	79.00	4.26	-74.74
Total (Ag. Edn.)		15991.45	2815.00	1371.03	-1443.97	3087.00	1226.30	-1860.70	3000.00	2578.37	-421.63

1	12	13	14	15	16	17	18	19	20
C. Professional Resources Utilization									
1. Utilization of Internal Competence	20.00	0.00	-20.00	10.00	1.00	-9.00	1.00	-48.50	4.00
2. Preparation of University Level books	30.00	0.66	-29.34	10.00	2.00	-8.00	3.20	-54.80	10.00
3. Emeritus Scientist Scheme	75.00	38.30	-36.70	25.00	30.00	5.00	91.96	-131.04	40.87
4. Establishment of Monitoring & Exam. Cell		Included in reorganisation of Education Division under AHRD							
5. Establishment of Examination Cell		Scheme not started							
6. Rural Awareness Work Experience Programme		Scheme not approved							
7. Strengthening of PG Edn. in Food & Child Dev.		1.00							
8. Advance Centre on PG Edn. & Res.		10.00							
Total (B & C)	145.00	42.27	-102.73	85.00	45.50	-25.50	101.72	-287.28	
Total (Ag. Edn.)	2900.00	2631.45	-268.55	2700.00	2968.00	282.00	10764.15	-3689.85	



1	2	3	4	5	6	7	8	9	10	11	
X. WORLD BANK/FOREIGN AIDED PROJECTS											
A. World Bank Projects											
1.	National Agricultural Research Project II	13500.00	1818.00	3139.85	1321.85	3472.00	3293.97	-178.03	3297.00	3625.21	328.21
2.	National Seed Project		114.00	809.54	695.54	681.00	263.88	-417.12 Scheme transferred to DAC			
3.	Agril. Human Resource Development	1450.64	Scheme started during 1995-96								
4.	Foreign Aided Project	2768.16	1388.00	360.00	-1028.00	735.00	742.73	7.73	503.00	509.53	6.53
Total		17718.80	3320.00	4309.39	989.39	4888.00	4300.58	-567.42	3800.00	4134.74	334.74
XI. MANAGEMENT AND INFORMATION SERVICES											
A. Bilateral Cooperation Projects											
1.	Bilateral Cooperation Programme with Developing and Developed Countries (DARE) and Long-term Project under INDO-USSR, INDO-UK and INDO-USA Programme	100.00	17.00	0.00	-17.00	25.00	15.00	-10.00	30.00	—	-30.00
Total(A)		100.00	17.00	0.00	-17.00	25.00	15.00	-10.00	30.00	0.00	-30.00

1	12	13	14	15	16	17	18	19	20
<b>X. WORLD BANK/FOREIGN AIDED PROJECTS</b>									
<i>A. World Bank Projects</i>									
1. National Agricultural	3000.00	2381.99	-618.01	1935.00	1935.00	0.00	14376.02	854.02	106.49
2. National Seed Project		Scheme transferred to DAC					1073.42		
3. Agril. Human Resource Development	586.69	73.05	-513.64	1110.00	1101.00	-9.00	1174.05	-522.64	80.93
4. Foreign Aided Project	988.00	614.95	-373.05	1509.00	3668.00	2159.00	5895.21	772.21	
Total	4574.69	3069.99	-1504.70	4554.00	6704.00	2150.00	22518.70	1103.59	
<b>XI. MANAGEMENT SERVICES</b>									
<i>A. Bilateral Cooperation Projects</i>									
1. Bilateral Cooperation Programme with Developing and Developed Countries (DARE) and Long-term Project under INDO-USSR, INDO-UK and INDO-USA Programme	50.00	36.04	-13.96	40.00	40.00	0.00	91.04	-70.96	91.04
Total (A)	50.00	36.04	-13.96	40.00	40.00	0.00	91.04	-70.96	

1	2	3	4	5	6	7	8	9	10	11
B. Publication and Information	359.00	42.00	26.87	-15.13	30.00	26.15	-3.85	55.00	2.09	-52.91
C. Strengthening of the Infrastructure										
1. Civil Works	850.00	110.00	17.56	-92.44	350.00	0.00	-350.00	143.00	30.21	-112.79
a. ICAR Bhawan Phase II										
b. Guest House for ICAR Hqrs.										
c. National Agricultural Science Centre and Museum										
d. Residential Accommodation for ICAR Staff										
2. ICAR Agricultural Library	50.00	0.00	0.00	0.00	1.00	5.00	4.00	7.00	0.30	-6.70
3. Strengthening of ASRB	60.00	1.00	0.00	-1.00	1.00	1.00	0.00	2.00	4.41	2.41
4. Modernization of Office Space and Facilities	216.00	1.00	0.00	-1.00	2.00	2.22	0.22	22.00	18.86	-3.14
5. ICAR Headquarters	100.00	52.00	20.82	-31.18	3.00	35.24	32.24	85.50	56.48	-29.02
6. Publicity & Public Relations		20.00	19.52	-0.48	3.00	4.71	1.71	5.50	0.00	-5.50
Total (B+C)	1635.00	226.00	84.77	-141.23	390.00	74.32	-315.68	320.00	112.35	-207.65

1	12	13	14	15	16	17	18	19	20
<b>B. Publication and Information</b>	69.00	74.82	5.82	150.00	145.00	-5.00	274.93	-71.07	76.58
<b>C. Strengthening of the Infrastructure</b>									
1. Civil Works	865.00	415.00	-450.00	957.00	610.00	-347.00	1072.77	-1352.23	126.21
a. ICAR Bhawan Phase II									
b. Guest House for ICAR Hqrs.									
c. National Agricultural Science Centre and Museum									
d. Residential Accommodation for ICAR Staff									
2. ICAR Agricultural Library	15.00	1.35	-13.65	29.00	15.00	-14.00	21.65	-30.35	43.30
3. Strengthening of ASRB	17.00	7.29	-9.71	21.00	21.00	0.00	33.70	-8.30	56.17
4. Modernization of Office Space and Facilities	40.00	72.40	32.40	100.00	78.00	-22.00	171.48	6.48	79.39
5. ICAR Headquarters	89.00	23.16	-65.84	45.00	17.00	-28.00	152.70	-121.80	152.70
6. Publicity and Public Relations	40.00	0.00	-40.00	30.00	35.00	5.00	59.23	-39.27	
<b>Total (B+C)</b>	<b>1135.00</b>	<b>594.02</b>	<b>-540.98</b>	<b>1332.00</b>	<b>921.00</b>	<b>-411.00</b>	<b>1786.46</b>	<b>-1616.54</b>	

1	2	3	4	5	6	7	8	9	10	11
D. Support to professional societies/associations support to National Academy	213.00	112.00	0.00	-112.00	41.00	18.00	-23.00	50.00	56.50	6.50
E. IX Plan Working Group										
Total (MIS)	1948.00	355.00	84.77	-270.23	456.00	107.32	-348.68	400.00	168.85	-231.15
Grand Total	1,30,000.00	20,000.00	17,603.54	-2396.46	24999.60	23305.87	-1692.73	27500.00	27623.79	123.80
	# +9915.50									

# Additional amount approved by PIC/EFC for which expenditure to be met from Plan savings/additional funds, over and above Rs. 1300 crores.

1	12	13	14	15	16	17	18	19	20
D. Support to professional societies/associations support to National Academy	70.00	45.00	-25.00	70.00	70.00	0.00	189.50	-153.50	88.97
E. IX Plan Working Group									
Total (MIS)	1255.00	675.06	-579.94	1446.00	1035.00	-411.00	2071.00	-1841.00	
Grand Total	31000.00	27279.05	-3720.95	28930.00	31080.00	2150.00	126892.25	-5536.34	

\$The approved outlay of 1995-96 was Rs. 310 crore which was subsequently brought down to Rs. 290 crore at RE 1995-96 stage, so there is significant under utilisation during 1995-96.

@Expenditure for first three years projected under Institute.

\*\*Expenditure for first three years projected under National Research Centre.

+Expenditure for first three years projected under Project Directorate.

++Due to merger of expenditure for NIAG with NBAGR.