Department of Agricultural Communication

Research Projects Completed

Farm broadcast improvement programme

Communication gap and constraints analysis in wheat production technology

Communication support for adult education programme

Communication profile of farmers

Utilizing cassette special communication system

Farm publications improvement programme

A study of communication institution and training needs of extension personnel

Development of alternative communication strategies for transfer of technologies among small and marginal farmers

An analytical study of Anganwadi Workers & Rural Women under ICDS with reference to communication system.

Trends in content coverage readership behaviour with respect to regional newspapers.

Documentary film utilization for rural development

Designing Training of Teachers in instructional skills

Team of excellence in agricultral information and communication under NATP.

Department of Agricultural Economics

Thrust research areas:

In the past 51 years of its existence, the department has built up expertise in almost all major fields of agricultural economics. Presently, the department has identified the following research thrust areas for agricultural economics research.

- Farming system- diversification, income, employment, capital requirements, energy needs, risk and sustainability
- Capital formation in Indian Agriculture- trends and determinants
- Economics of resource use/conservation
- Agro-input marketing and price behavior of agro-output and agro-input
- International trade and agricultural export
- Cost and availability of finance to farmers with change in credit policies and their linkage with farm production structure and marketing, viability of credit institutions and cooperatives in changing rural economic environment.

Department of Agrometeorology

Thrust research areas:

The major thrust areas of research are as follows :

- Crop acreage and production estimation (CAPE) of major crop using agrometeorological and remote sensing data.
- Agromet advisory service including weather forcasting for farmers.
- Characterization of agro-climate and crop-weather relation for productivity of major crops.
- Forecasting agricultural out put using space, agrometeorological and land based (FASAL) observations.
- Spectral response of the crops in relation to productivity.
- Climate change through Green House Gases

Department of Agronomy

The thrusts are as follows:

- Agro-eco-zonal specific problems in productivity will be tackled at the farmers' level.

- The research will be diverted towards management of stresses, use of biotechnology, use of myco and bio-herbicides, agro-techniques for site specific problems of small and marginal farmers under constraints input supply and prospects of bio-farming and integrated nutrient management for development of precise, permanent and productive technology.

- The effort will be made to solve the problems with the help of inter-disciplinary approach

- For such agro-eco-zones under the jurisdiction area of the university the agronomists will be required for different disciplines of crop management.

Department of Entomology

RESEARCH PROJECTS:

All India Coordinated Research Projects on Wheat, Pulses, Soybean, Oilseeds, Rice Subtropical Fruits, Honeybees and pollinators

1. "Network Project on Insect Biosystematics" Sponsored by ICAR, Department of Agricultural Research and Education Government of India, New Delhi.
2. Various consultancy projects / testing of insecticides

Department of Food Science &Technology

Department of Genetics & Plant Breeding

Thrust areas of teaching and research:

- Research on hybrid breeding on non conventional crops like Rice, Wheat, Pigeon pea and Rapeseed- mustard.
- Research on quality breeding and value addition in Wheat, Rice, Maize, Oilseeds, Pulses, Millets, Sugarcane and Forage Crops.
- Use of molecular genetic techniques for identification of markers for yield (QTLs) and other traits of economic importance (Marker Assisted Selection).
- Genetic improvement using tools.
- Research for AgroForestry plantation crops of importance in Uttarakhand.
- Registration of plant varieties and germplasm lines.

Department of Horticulture

The thrust areas of teaching and research are as follows:

- Plant nutrition
- Plant growth and development
- Nursery production and management
- Crop Improvement
- High density orcharding and post harvest management of major tropical fruits (mango, guava), subtropical fruits (litchi), low chill temperate fruits (almond, peach, plum, pear) and minor indigenous fruits (bael, karonda)
- Floriculture and Landscaping
- Protected cultivation of flower crops
- Horticultural Biotechnology
- Medicinal and Aromatic Plants

DEPARTMENT OF PLANT PATHOLOGY

Problem oriented basic and applied research related to soils is carried out through post-graduate thesis research and externally funded research projects. Until 2011 more than 60 research projects funded by various national agencies (ICAR, NATP, CSIR, DST, DBT, UPDASP, U.P. Govt., IFFCo, RCF and other agencies) and international agencies (IRRI, CIMMYT etc.) have been completed, currently, 21 research projects including 11 All India Coordinated Research Projects, one IFFCo Chair project and 7 ad-hoc/NAIP/competitive grant projects are in operation in the Department.

FOCUSSED RESEARCH

- Development of diagnostic tools for monitoring organic matter turnover.
- Generation of data base and assessment of soil and water resources using remote sensing and GIS techniques.

- Studies on nutrient dynamics in soil and plant for efficient utilization of plant nutrients and development of nutrient uptake models.
- Assessment and monitoring soil biological and biochemical properties under different crop management practices.
- Development of soil quality indices based on soil physical, chemical and biological properties for sustainable crop production.
- Management of degraded lands.
- Development of eco-friendly integrated plant nutrient management strategies for different cropping systems.
- Identification of efficient strains/biological nitrogen fixers, phosphate solubilizing, PGPR microorganisms and nutrient mobilizing mycorrhizae.
- Development of bio-fertilizers production technology to reduce the use of chemical fertilizer.
- Development of fertilizer recommendation for targeted and economic yields of different crops based on soil testing.
- Identification and characterization of genotypes for efficient nutrient uptake, utilization and enhanced soil nutrient availability.
- Development of efficient crop residue recycling techniques.
- Assessment and utilization of municipal, agricultural and industrial wastes in relation to crop production and development of scientific compost technology.

RESEARCH PROJECTS IN OPERATION

1.	Title of the research project	Principal Investigator	Co-Principal Investigators	Funding Agency
A. All India Coordinated Research Projects (AICRP)				
1.	AICRP on MULLaRP (Soil Microbiology component	Dr. Ramesh Chandra	Dr. Navneet Pareek	ICAR
2.	AICRP on Chickpea (Soil Microbiology component	Dr. Ramesh Chandra	Dr. Navneet Pareek	ICAR
3.	AICRP on Soybean improvement (Soil microbiology component)	Dr. K.P. Raverkar		ICAR

4.	AICRP on maize improvement (Soil Science component)	Dr. Veer Singh		ICAR
5.	AICRP on water management (Soil science component)	Dr. H.S. Kushwaha	Dr. Veer Singh	ICAR
6.	AICRP on Long Term Fertilizer Experiments	Dr. Shri Ram		ICAR
7.	AICRP on Soil test crop response correlation	Dr. Sobaran Singh	Dr. Ajaya Srivastava Dr. Poonam Gautam	ICAR
8.	AICRP on micro and secondary nutrients and pollutant elements in soils and plants	Dr. P.C. Srivastava	Dr. S.P. Pachauri	ICAR
9.	AICRP on Agroforestry (Soil Science component)	Dr. H.S. Mishra		ICAR
10.	AICRP on Farming System (Soil Science component)	Dr. A.P. Singh		ICAR
11.	Development of Agro-Advisory Services based on medium range	Dr. H.S. Kushwaha		DST

	weather forecasts			
B. Adhoc/Competitive Grant Projects				
12.	Evaluation of some multinutrient extractants for testing the availability of micronutrient in soils.	Dr. P.C. Srivastava		BRNS
13.	IFFCo Chair project on fertilizer use efficiency	Dr. Ramesh Chandra		IFFCo
14.	Understanding the mechanism of variation in status of a few nutritionally important micronutrients in some important food crops and the mechanism of micronutrient enrichment in plant parts (Multidiciplinary project)	Dr. P.C. Srivastava	Dr. S.P. Pachauri	NAIP (ICAR)
15.	Yield forecasting for Rice, wheat and sugarcane crops for Tarai and Bhabar Agro-	Dr. H.S. Kushwaha	Dr. Veer Singh	Earth Science Govt. of India

	climatic zone of Uttarakhand			
16.	GPS and GIS based model soil fertility maps for selected districts for precise fertilizer recommendation to the farmer of India	Dr. Shri Ram	Dr. Ajaya Srivastava Dr. Poonam Gautam Dr. S.P. Pachauri	Min of Agril. Govt. of India
17.	Effect of UPH 110 in wheat and UPH 1110 in Mustard on soil physico-chemical and micro-flora counds in on going bio-efficacy trials in the University and other centres	Dr. Ramesh Chandra	Dr. K.P. Raverker	M/s United Phosphorus Limited
18.	Bio-efficacy study of Jump Start in Wheat	Dr. Ramesh Chandra	Dr. Navneet Pareek	M/S Novozymes Sout Asia, Bangalore
19.	Bio-efficacy studies of bio fertility product JumpStart in chickpea	Dr. Ramesh Chandra	Dr. Navneet Pareek	M/S Novozymes Sout Asia, Bangalore
20.	Evaluation of fertilizer potential of seaweed sap in green gram	Dr. K.P. Raverker	Dr. Ramesh Chandra	Central Salt and Marine Chemicals Research Institute, Gujarat

	and black gram			
21.	Niche are of excellence in Geoinformatics for natural resource management and precision farming	Dr. A. S. Nain	Dr. Ramesh Chandra, Dr. A.P. Singh	ICAR, New Delhi

Department of Vegetable Science

The department of Vegetable Science was established on January 31, 1995 after the bifurcation of the existing department of Horticulture. The department offers M. Sc. and Ph. D. degree in Vegetable Science with emphasis on vegetable breeding and production technology. The seats for post-graduation students are six in the M. Sc. Ag. and four in Ph.D.