

Identified Priorities

A. Crop Improvement

1. Suitability and adoptability of low saponin/no saponin quinoa lines using molecular markers and examining the prospect of quinoa production in eastern Uttar Pradesh.
2. Selection of local germplasm and suitability of barley varieties for higher yield and animal feed.
3. Screening for biotic and abiotic stress and adoptability of advance varieties of groundnut in U.P. especially for Bundelkhand region.
4. Suitability of improved varieties for mustard for higher yield in late sown and salient abiotic conditions.
5. Identification of land races for various nutritional qualities along with biotic resistant in maize.
6. Identification of maize genotype for abiotic and water logged conditions.
7. Identification of heat stress tolerant genotypes in spring maize.
8. Identification of wheat germplasm for heavy soil moisture condition at germination and vegetative stage.
9. Development of seed standards and quality seed production technology of sub-tropical grasses.
10. Impacts of climate change on growth and seed quality traits in various forages crops.
11. Identification of suitable varieties and development of production protocols for DSR.
12. Collection, evaluation and identification of superior genotypes of *Cannabis sativa* L. with low THC (Tetra hydro cannaluinol) content through conventional and modern approaches for industrial and medicinal purposes.
13. Screening of chickpea genotypes for Phosphorous Acquisition Efficiency or Phosphorous Use Efficiency and subsequent development of chickpea and pigeonpea genotypes

B. Crop Protection

1. Management of stored grain pests through environment modification.
2. Development of weed management and plant protection technologies for natural farming.
3. Application of AI technique in pest and disease forecasting for economically important crops.

C. Natural Resource Management and Engineering

1. Nature positive IFS for sustaining ecosystems and livelihood security in Uttar Pradesh.
2. Promoting the application of Artificial intelligence (drone technology and robotics) in Precision farming.
3. Development of yield prediction model in changing climatic scenario for various crops.
4. Development of standard operating procedures for application of drones in spraying of different agro-chemicals and fertilizers.
5. Standardization of package of practices for unfavourable growing conditions.
6. Nature positive agro-techniques in forage production and livestock based farming systems.
7. Soil health management through carbon sequestration and preparation of framework for carbon trading in various agro-ecosystem of U.P.

D. Horticulture

1. Standardization of containers, multiplication time and techniques in major GI fruit crops.
2. Collection and multiplication of minor potential fruit and vegetable crops.
3. Canopy management in existing mango orchards.
4. Validation and refinement of jelly seed management technology in mango.
5. On farm selection, evaluation, adaptation, multiplication and value addition of bamboo genotypes.
6. Collection, evaluation and identification of castor genotypes/varieties for industrial and medicinal purposes.

E. Post-Harvest Management and Value Addition

1. Standardization and up scaling of commercial pulp processing technologies of North Indian mangoes.
2. Commercially viable minimal processing, powder development and extraction of biomolecules technologies from fruits and development of nano products.

F. Animal Husbandry, Dairy and Fisheries

1. Development of AI models for forecasting of diseases in animals.
2. Promoting the culture of indigenous fish species and developing breeding programmes to enhance the productivity and sustainability of aquaculture practices in Uttar Pradesh.
3. Use of Artificial Intelligence to augment animal production systems.
4. Development of goat milk based value added products.
5. Development of protocols for dairy waste management.

G. Agriculture Economics

1. Awarance and adaptation of GI agriculture produce/products/programmes launched for farmers welfare by State and Central Government.
2. Awarance and adaptation of natural farming system in Bundelkhand region and Eastern U.P.
3. Awarance and adaptation of millet crops in Bundelkhand region.
4. Awarance and adaptation on DSR system in eastern U.P.

H. Agriculture Extension

1. Innovative extension models for technology transfer to the farmers, entrepreneur development and industrial linkages.
2. Studies on assessment of communication behaviour and information use pattern of farmers, rural youth and women.

I. Home Science

1. Development of Nutri-Smart Villages for the management of malnutrition in rural households in Uttar Pradesh.
2. Toxicology study of pesticides and metals and it's amelioration potential by herbal neutralceuticals, socioeconomic impact of pesticides, use of herbal preparations in life style diseases model.
3. Devlopment of biomarkers for assessing the efficicacy of functional foods

J. Apiculture

1. Artificial insemination of honey bee production.
2. Pollination efficiency of honeybee and pollinators in major crops under changing climatic condition and agriculture practices.
3. Quality assessment of beehive products.

Format for preparation of Project Synopsis

Information on proposed project Proposal

Priority Area:
Project Title:
Name and Address of the Institute:
Information about proposed Principal Investigator* and Co-P.I.** (Name, Designation, Field of specialization, e-mail, mobile no.
.....
Justification and Objectives:
Relevance in context of U.P.:
Project duration (in years):.....
Technical programme proposed to fulfill the objectives:
Estimated Project Cost:

S. No.	Heads	I st Year	II nd Year	III rd Year	Total
1.	Project Staff (as per ICAR norms)				
2.	Recurring Contingency				
3.	Non Recurring Congingency				
4.	Institutional Charges @5% of Institute/University (1+2+3)				
5.	Total for Institute/University				
6.	Institutional Charges for UPCAR @5% of 1+2+3				
7.	Grand Total				

Expected output (in points) relevant to context of farming community of State:

1.
2.
3.
4.

Indicators of Achievements (in points)

1.
2.
3.
4.

Facilities available/required at the Institute avoid redundancy relevant to the project proposed (farm, lab., equipments etc.)

CV including specilization, Employment record, Salient Research Achievements, List of Publications and Justification to be PI*/Co-PI**.

Date:

Place:

Signature of P.I.

Signature of Co-P.I.

Signature of Co-P.I.

Signature of Co-P.I.