



आचार्य नरेन्द्र देव कृषि एवं प्रौद्योगिक विश्वविद्यालय  
कुमरगंज, अयोध्या-224 229 (उ.प्र.), भारत

**Acharya Narendra Deva University of Agriculture & Technology**

Kumarganj, Ayodhya-224 229 (U.P.), India

---

## **RESEARCH POLICY**

# Research Policy

## Scope/ Applicability of the Research Policy

This document on Research Policy Guidelines will be applicable to all faculty members, scientists and students involved in research activity.

## Policy Statement

The university is committed to be a Research and Innovation Driven institution. The aim of university is to see India in general and Eastern Uttar Pradesh in particular becomes a global knowledge superpower through education, extension, research and innovation. To attain this goal, it is absolutely important to pursue cutting-edge basic, targeted, and applied research in all domains/ faculty of studies in a transparent, responsible and ethical manner for advancement of knowledge and development of novel processes, technologies and products in field of agriculture and allied activities. It is equally important to ensure that the products and outcomes of such research are appropriately disseminated to reach the widest possible audience at both national and global levels. This policy provides a set of guidelines for conduct of research at all levels and is applicable to all full-time, part- time as well as contractual employees of the University and all students, whether full-time or part- time, of the University who may be involved in any form of research activity.

## Rationale

- In the best traditions of ANDUAT, Ayodhya considers transmission of knowledge and conduct of scholarly inquiry as the central functions of the University that is dedicated to research and innovation in the field of agriculture and allied activities. These functions require that the faculty, scholars and students are guaranteed certain degree of freedoms and that they too accept certain obligations and responsibilities, correspondingly.
- The university run presently eighteen All India Coordinated Research Projects for crop improvement of abiotic and biotic resistance and yield in various agricultural and horticultural crops for increasing the income of farmers and food and nutritional security of the country.
- The external funded projects from International Rice Research Institute, Philippines, ICAR, DBT, DST, UPCAR etc are running in the university in various thematic areas for increasing the yield of crops.

- The Rabi and Kharif season technical programme were organized by Directorate of Research regularly in every year after prior permission of Hon'ble Vice-Chancellor. The Principal Investigator and Associated scientist present their achievements of previous year and finalized technical programme of coming season/year before Research Advisory Committee (RAC) external and internal member.
- The findings and conclusions are open to both internal (through a Research Sub-Committee mechanism) and external RAC member scrutiny. All research reports are also open to criticism as required by the University's Policy on Openness in Research.
- The findings of three years are discussed thoroughly for release as technologies for various crops as minimum input and maximum out increasing the income of farmers.
- It is important to emphasize that all research reports and publications arising out of research Programme carry the name of university in the credit/address tag lines in the published versions as books, research papers, book chapters, articles, and on-line or off-line reports.
- At the same time, University Research Policy is not to allow use of a research or survey methodology or technique that is in violation of professional ethics pertaining to the health, safety, privacy, and other personal rights of human subjects or to the infliction of injury or pain on animals and living organisms.
- As an academic institution of distinction, the university offers an environment that is conducive to research in all fields of knowledge cultivation. However, because of limitations on both infrastructure, funding and manpower requirements, the University cannot support all research demands. The ANDUAT allocates lab, library, design table and drawing and sculpting board spaces and facilities, and other resources such as its own funds to match with that of the funding agencies for research Programmes depending on the merits of the research proposals.
- The University does not encourage any speculations or discussions on any kind of platform (including social media) concerning the political or moral impropriety or the uses which might be made of its results of research.
- It is also mandatory to ensure that ANDUAT research platforms are not used to argue against the widely acclaimed research positions or against the national policies of India, or against the universally accepted international laws and provisions.

- Recombinant DNA (rDNA) Safety Guidelines,1990 and other guidelines issued by DBT from time to time. Such research will be undertaken with the approval and oversight of the statutory. There are similar guidelines issued by the DST (Department of Science & Technology) and/or Ministry of Electronics and Information Technology, Government of India.

### **Research Objectives**

The major objectives are to encourages its faculty to serve its research goals through their primary commitment to engaging in thematic areas of research for fulfil the requirements of the farmers and increasing their income. In addition, research and collaboration often desirable for faculty members to participate in both government-funded and private activities beyond this campus by engaging in academic and professional activities including public service and consulting that may ultimately benefit the university. In fact, all faculty members are expected to undertake research activities in addition to their teaching and administrative responsibilities. All research activities should be undertaken in compliance of the University Research policies. The research objectives are:

- ❖ To create an enabling environment in order to foster a research culture as well as provide required support through research framework and guidelines;
- ❖ Maintain and enhance the quality of research undertaken;
- ❖ To maximize funding support for research through external and internal sources;
- ❖ To create transparent, effective and efficient systems for maximizing research outputs;
- ❖ To ensure high level of efficient and effective support system to facilitate faculty and researchers in their research activities.
- ❖ Ensure publications in quality journals, indexed in Scopus/Web of Science and/or with impact factor.
- ❖ To nurture an environment of undertaking socially useful research with potential for commercialization.
- ❖ To establish Research Centers with potential for Excellence.
- ❖ Forge interdisciplinary collaborations and partnerships nationally and globally through MoU.
- ❖ To provide low-cost technologies for increasing the income of farmers;
- ❖ To integrate research activities undertaken by the undergraduate, post-graduate and

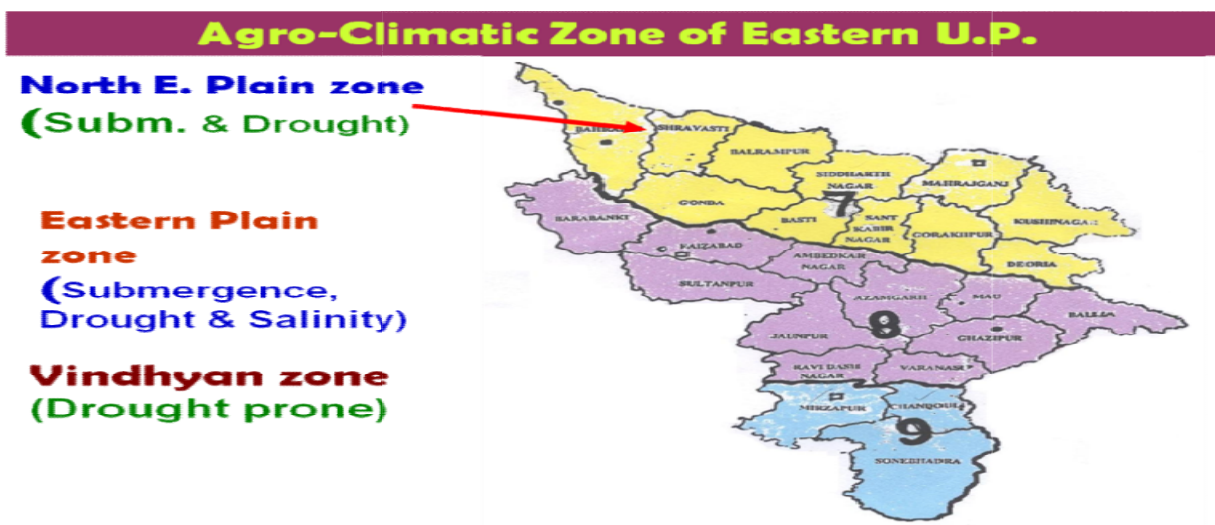
doctoral students with the research focus of the University in alignment with the national thrust areas; Create, maintain and enhance infrastructure to enable conduct of state-of-the-art research;

- ❖ Protect Intellectual Property (IP) generated as a result of research conducted at in the University.

## Research Management

Overall management of research activities are coordinated by Directorate of Research under direct supervision of Vice-Chancellor. Research advisory body and administrative committee shall be responsible for overall functioning of research activities within the University. Each Institution research activities will be coordinated by head of departments/Dean from each Institute.

The Directorate of Research with its headquarter at Kumarganj (Ayodhya) governs the research activities in 26 districts belonging to seven revenue divisions viz; Ayodhya, Basti, Devipatan, Gorakhpur, Varanasi, Azamgarh and Vindhychal Dham of eastern U.P. under three agro-climatic zones i.e., North Eastern Plain Zone (NEPZ), Eastern Plain Zone (EPZ) and Vindhyan Zone (VZ). The University has seven crop research stations in different agro-climatic zones as given below :-



### Eastern Plain Zone :

- Zonal Agricultural Research Station(ZARS),Main Campus,Kumarganj (Ayodhya)
- Zonal Agricultural Research Sub-Station (ZARSS) Baribagh , (Ghazipur)
- Crop Research Station (CRS), Masodha (Ayodhya)

### North Eastern Plain Zone :

- Zonal Agricultural Research Station (ZARS) Basuli (Mahrajganj)

- Crop Research Station (CRS) Bahraich
- Crop Research Station (CRS) Ghaghraghat (Bahraich)

**Vindhyan Zone :**

- Zonal Agricultural Research Station (ZARS) Tisuihi, (Mirzapur)

**The composition of the RAC**

The **Research Advisory Committee (RAC)** is headed by the Director Research and include Deans of colleges, leading faculty researchers and administrators from different faculty of the University and Five (5) eminent experts from outside the University. The RAC meets at least twice in a year to review research progress, offer critical comments and suggest corrective measures to enhance the research activities of the University. The 'Term' of the RAC, once constituted, will be for a period of Three(3) years after which the same members may be continued for another term. The members may be replaced in case of non-availability of existing member(s) for any reason. The five external members will be chosen by the Vice-Chancellor, from a Panel of names as may be suggested by the Director Research & Dean, Academic.

**Research Advisory Committees of the University**

- **College Level Research Advisory Committee-** A research advisory committee of all the colleges of the university has been constituted by the Dean of the concerned colleges for providing qualitative guidance to the research scholars, publication of research papers and other research related activities.
- **University level Research Advisory Committee -** A research advisory committee has been constituted by Director of Administration and Monitoring of the University with the approval of the competent authority for Research, planning physical and financial needs of the projects, registration and renewal of the research projects for the next five years.
- **An External Research Advisory Committee –** The committee has been constituted by the Director of administration and Monitoring of the university with the approval of the competent authority for advising research work of the university. The committee has various external renowned scientists for advising the thrust areas for research which is updated from time to time by the competent authority.
- **Board of Management (BoM) –** Board of Management which is an apex body endowed with the responsibility of taking any policy decisions. Any research projects of

the government/non- government agencies sanctioned for the university are approved before implementation.

**The role and function of the RAC:-**

- ❖ To make recommendations to the academic council on matters related to research promotion and infrastructure.
- ❖ The RAC recommend to the University's administration to supports the research activities. The extent of support is decided on basis of the potential of research outcome. It is expected from the researcher to ensure potential benefits to the University.
- ❖ Research Advisory Committee also facilitates designing of custom-made faculty development Programmes in advanced areas to improve upon the skills of faculty and researchers and help the mover come their weaknesses in order to maximize their contribution to the University.
- ❖ RAC also decide on the Long and Short-term Research Strategies in specific areas as well as monitor and review research work.

**Rights & Responsibilities**

- Faculty members have the right to disseminate the results and findings of their individual or collaborative research without suppression or modification from external sponsors beyond the specific undertakings or provisions that may be written down and agreed upon by the sponsoring agencies, Universities and researchers.
- The Faculty and Researchers could also engage in external consulting activities, subject to the University's rules, regulations and limitations. A separate section on Consultancy Policy is included in this document to facilitate this activity. But it is important that faculty adhere to both the spirit and the letter of the policy. Along with these freedoms come corresponding responsibilities.
- Individual colleges/departments supplement this policy with policies applicable to their faculty and/or Investigators, because there could be differences in the minute details as per the areas of research. To ensure consistency with the policies, such Institute/School policies must be approved by the academic council and bord of management.
- Ideally, there should be no conflict between commitment of faculty and research staff of the University and other activities in which faculty and research staff members may engage themselves.

- It is expected that faculty and Project Investigators (PIs) should be follow the University administration rules and regulation during implementation of research projects.

### **Guidelines for implementation of sponsored research projects and consultancy projects**

#### **A. Sponsored research projects:**

- Sponsored research projects are proposed to funding agencies through the University. The Principal Investigator prepares the proposal and submits it to the funding agency through the Directorate of Research with required number of copies and two additional copies. The university level constituted Research Advisory Committee screened the project on the basis of thematic areas and problem to be addressed. Once the Project is approved and the sanction letter is received from the funding agency, the Principal Investigator (PI) shall send a copy of the sanction letter and a copy of the approved project proposal to the Head of the concerned department and Directorate of Research for information and record.
- Each Sponsored Project will have a Principal Investigator who will be responsible for formulating the project proposal, implementation and execution of the sanctioned project. The PI will handle all communications with the sponsoring agency after the project has been accepted. She/He will write and submit intermediate and final reports and submit a statement of account and/or utilization certificate through the Finance Section according to the guidelines of the funding agency.
- The Principal Investigator shall submit the hard and soft copies of the final technical/project report submitted to the funding agency to the Directorate of Research for record. The file will be closed but retained in the Office of the Directorate of Research after completion.

#### **Operation of Project Funds**

All funds received for projects will be deposited in finance comptroller account of the university. A separate section of the Finance Office with an Officer will assist the R&D in administering project funds. This section will ensure computerization of the project account facility for the PIs.



## **Overhead charges and University Development Fund**

The cost of a project will consist of Overheads, Actual Expenses and payment to employees, external consultants and students. Usually, fifteen percent (15%) of the recurring cost of the project will be charged as overhead payable to the University.

### **The Actual Expenses will cover the following costs related to a project:**

- A. **Non-recurring head:** Major permanent equipment to be procured as per usual sanction procedure laid down by the University.
- B. **Recurring head:** Consumable Materials to be used.
- C. Computational charges (at commercial rates).
- D. Charges to be paid for the use of specific equipment in the departments or central facilities.
- E. **Contingency Expenses.** These will normally cover—
  - Cost of supplies, stationery, reproduction.
  - Cost of books, journals, membership fees of professional societies, registration fee for conferences etc.
  - Payment for typing and other office work to outside agencies.
  - Postage and telephone (including phone deposit charges rentals and call charges of phones at the office or residences).
  - Costs charged by a department for facilities provided to the project (such as large amounts of photo copying, use of computational and printing facilities, etc.
  - Hiring charges that are appropriate for the project.
- F. **Travelling expenses**
  - ❖ Travel may be undertaken for site visits, field work, experimental works in other institutes, meetings outside the University, participation in Conferences/Workshops/Seminars in India. Travel abroad may be allowed if the guidelines of the funding agency have the provisions for this.
  - ❖ TA/DA will be provided to the PI as per University rules.
  - ❖ Regular TA/DA rules of the University may be relaxed based on the

merit of the case, if need arises, which may be decided upon by the Dean, R&D with approval from the Vice-chancellor if deemed necessary.

**G. Salaries of project employees shall be paid as per project rules.**

**Selection**

- Open selection will be held for all project posts of duration for six month initial and further extended as per university rules.
- All project appointments will be contractual and on the basis of consolidated monthly compensation.
- Automatic transfer from one project to another either on completion or midway shall not be permitted.
- Selection of JRF/SRF/RA shall normally be made as per the guidelines provided by the sponsoring agency, and as per University rules.
- Appointment letters shall be issued under signature of Dean Administration and Monitoring (DAM) of the university.

**General guidelines for recurring project expenditure**

- If a project has clear sanction for a specified period of time, the fellowship/honorarium may be paid as per information mentioned advertisement.
- Prior sanction/approval is necessary for the purchase of equipments, chemical/consumables/books as university rate contract from the university authorities.
- The permission of labour should be taken and use as per university rules.
- The PI should follow GeM purchase mode, if any equipment/implements are not available on GeM portal then online tender mode should be followed for purchase.

## **Guidelines for selection of JRFs/SRFs and other research personnel in Research Projects**

*Note: These rules shall be applicable in the cases where the Funding agencies do not lay down any guidelines about selecting JRFs/SRFs, Research Associates, Project Fellows, etc.*

### **JUNIOR RESEARCH FELLOWSHIP (JRF) PROJECT FELLOW ELIGIBILITY**

#### **Educational Qualifications:**

- A candidate seeking selection as JRF/Project Fellow must possess an M.Sc./Ph.D. or any other postgraduate degree in the concerned discipline from a recognized University with a minimum of 55% marks in aggregate, provided the minimum cut-off mark is not specified by the funding agency. In case an applicant has some research experience the due concession may be given. Project employees may be allowed to register for the Ph.D. programme of the University if they fulfill all the requirements prescribed by the University.
- **Desirable Qualifications:** The desirable qualifications will be specifically determined by the PI as per the needs of the project.
- **Age:** The candidate shall not be more than 35 years of age for the award of Fellowship on the stipulated last date of receiving applications in response to advertisement. The upper age limit may be relaxed up to 5 years in the case of candidates belonging to SC/ST/OBC/Women and physically challenged applicants.

#### **1.1 Selection Procedure**

- ❖ Positions will be advertised in any of the national / regional newspapers and through other channels (such as by means of circulation of notices to various Universities and displaying in the ANDUAT University Website Homepage) at least three weeks prior to the dates on which the candidates are to appear for the personal interview.
- ❖ Applicants who have already cleared the National Eligibility Test (NET) for JRFs conducted by UGC/CSIR/ICAR/DBT/ICMR or GATE and/or have experience in research appropriate for the project will be given due weightage.

- ❖ The screening of applications for calling candidates for interview will be done by a 'Screening Committee' consisting of the Principal Investigator (PI) and /or the Co-investigator of the project and one member of the faculty of the concerned department to be nominated by the Head of the Department.

**The administrative officer will suggest a selection committee to the Director Research, comprising of:**

- |       |  |   |                            |
|-------|--|---|----------------------------|
| (i)   | Director Research /or<br>his/her nominee | : | Chairperson                |
| (ii)  | Head of the Department*                  | : | Member                     |
| (iii) | Subject Expert                           | : | External Member#           |
| (iv)  | Principal Investigator                   | : | Member Secretary/ Convenor |

\*(If the HoD is the PI, one senior faculty member of the concerned or related department to be nominated by Dean, R&D).

# (External Member can be also from other Department within the University unless specified by the funding agency).

- a) The Selection Committee has to be approved by DAM after prior permission of Hon'ble Vice-Chancellor. Subsequently the PI will inform and Selection Committee Members about the date and time of the interview.
- b) During the interview the committee shall test the candidates' knowledge of the subject, aptitude for research, creative thinking and sincerity.
- c) Following the interview, a report on the selected and wait listed candidates will be submitted for the consideration and approval of the DAM office.
- d) After the approval of Vice-Chancellor, the office of the DAM will issue appointment letter(s) to the selected candidate(s).
- e) In general, the travel and accommodation expenses to the candidates called for interview shall not be paid and this information would be provided in the advertisement.

- f) The candidate is expected to join within 30 days from the date of issue of the letter of fellowship award, failing which the award shall be cancelled. However, in exceptional circumstances, the DAM may grant extension provided the letter requesting extension is routed through the PI.

### **Fellowship and Tenure**

The tenure and fellowship amount for the project staff per month shall be determined as per the rules and regulations of the funding agency. If nothing is mentioned, the fellowship amount shall be decided by the PI and approval for this shall be taken from the Selection Committee, with necessary intimation to the funding agency.

### **Conditions of Award:**

- ❖ If nothing is mentioned in the rule book, the Associate shall devote himself/herself to whole time research work and shall not accept any other part time employment during the tenure of the Associateship. The Research Associateship will be tenable initially for the period as mentioned in the project.
- ❖ If an research personnel wishes to leave the project before the end of tenure, it should be done with the prior notice to the director Research through the PI.
- ❖ If the PI/ concerned faculty is not satisfied either with the progress of the research work or the conduct of the Fellow, the Institute may terminate the associateship at any time without any notice and assigning any reason.

### **House Rent Allowance**

University will try to provide single/double seated hostel accommodation to all Project Staff. In case, the accommodation cannot be provided by the University, they shall be entitled to House Rent Allowance (HRA) as per the guidelines of the University.

### **Leave rules**

Leave for a maximum period of fourteen days in a year in addition to general holidays may be taken by a Project Staff with necessary approval from the PI.

**APPLICATION FORM FOR THE RESEARCH POSITION (JRF/SRF/RA)**

1. Name of the applicant: \_\_\_\_\_

Present Postal Address(*Pin Code, Phone, Fax & e-mail*)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

2. Father's/Husband's Name:

3. Mother's Name:

4. Permanent Residential Address(*Pin Code, Phone, Fax & e-mail*)

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

5. Nearest Railway Station for undertaking the Journey \_\_\_\_\_

6.(i) Date of birth \_\_\_\_\_

(ii) Age in years (On the date of application) \_\_\_\_\_

(ii) Sex: Male/ Female (strike off whichever is not applicable)

(iv) Nationality:

7. If belonging to Scheduled Castes/Scheduled Tribes / OBC, state name of the Caste/Tribe \_\_\_\_\_.

If OBC, state Creamy layer/ Non-creamy layer

(A photocopy of the original caste certificate issued by competent authorities should be attached.)

8. (a)Academic Qualifications:

Examination Passed	Board/ University	Year	Subject	% of Marks/ Grade/ Division	Rank (if any)

(b) Whether qualified NET/GATE(details should be provided):

(c) Awards/Honors Received

(d) Participation in Seminar/Conferences/Workshop

(e) Research Publications(important reprints should be enclosed)

9. Have you had any scholarship/fellowship before applying for this award?(If so, please give details of the scholarship/fellowship)

10. Title of Ph.D. thesis for RA position) name of the guide and an abstract of Ph.D. thesis in about 500 words (in a separate sheet as annexure) may be submitted.

11. Extra-curricular activities.

12. Name and address of three referees not related to the candidate but is aware of the candidate's work

1.

2.

3.

**Place:**

**Date:**

**(Signature of the Applicant)**

---

**For Office Use Only**

Application for SERIAL No.:

Category:

Date of Receipt of application:

Signature

## **B. CONSULTANCY PROJECTS:**

University encourages the faculty members to undertake consultancy projects as a part of their academic duties. Such projects, in addition to providing financial incentives to the individuals enrich his/her professional knowledge. Moreover, consultancy projects augment the university resources, promote university academy alliance and contribute to the social development.

1. Each Consultancy Project will have a Principal Consultant who will be responsible for
  - i. Formulating the project proposal which may include (a) planning of the work to be done, (b) estimating costs according to guidelines provided in a later section, and (c) identifying other consultants, if necessary.
  - ii. Execution of work.
  - iii. Handling all communications with the clients after the project has been accepted.
  - iv. Writing of intermediate and final reports according to the project proposal.
  - v. Making recommendations to the Director Research regarding expenditure from the project funds and disbursement of funds to participants in the consultancy project.
- 2 Appointment of Principal Consultant: Industrial organizations usually approach the Institute for consultancy work through a faculty member or a functionary of the Institute. When a faculty member is approached for the work, he will be the Principal Consultant. If he does not wish to be the Principal Consultant or if the project is referred to a functionary, Principal Consultant would be identified through appropriate discussions and appointment will be made by Director Research.
- 3 The project proposal prepared by the Principal Consultant will be forwarded to the client by the Director Research.



4. The Institute normally requires the cost of the project to be deposited by the client, in full, before the work commences. However, based on needs of the client and circumstances, the Institute may permit commencement of work with payment to be made as per agreed upon milestones.
5. All payments from clients will be received by the Institute and expenditure and disbursements made through normal Institute procedures.
6. The Project file will be closed with the submission of the final project report and disbursement of fees to consultants and others.
7. The approved grant will be utilized by as per rules and regulation of the university and concern agencies

**Research Priority of the University**  
**Crop Improvement**

1. Breeding for high yielding varieties: Tolerant/resistant to wide range of biotic/a biotic stresses through pyramiding of genes using conventional and molecular tools.
2. Increasing crop productivity through genetic improvement and making available ample quantity of quality seed of newly developed varieties to farmers for important crops like rice, wheat, chickpea, pigeon pea, sesame, vegetables, seed spices etc.
3. Identification and mapping of the QTL associated with yield tolerance/resistance and quality in different crops and their introgression
4. Identification of resistant/tolerant donors with high yield potential against major insect-pests and pathogens and their utilization. Allele mining and discovery of new genes for productivity and resistance/tolerance to biotic/a biotic stresses to exploit in breeding programmes.
5. Production of good quality planting materials of fruit crops, flowers and medicinal crops for distribution to farmers.
6. Exploring the untapped potential of kitchen gardening in the form of rooftops and backyards.
7. Research on high density planting, efficient canopy management, eco-friendly and integrated nutrient/pest management, production, processing, storage and varietal improvement in Aonla, bael, ber crops.

8. Protected cultivation using net and poly house for cash crops, vegetables, medicinal plants and floriculture.
9. Widening of gene-pools through intra/inter-specific hybridization and genetic enhancement (Pre-breeding)
  - a) Spot blotch disease of wheat
  - b) Sclerotinia Rot and alter aria blight of rapeseed and mustard
  - c) Sterility mosaic virus of any field crops
  - d) Heat, drought tolerance of wheat, maize, vegetables, etc
5. Identification of genotypes with better nutrient uptake ability and efficient utilization (input use efficiency)
6. Clonal selection of fruit crops for improving plant type

#### **Natural Resource Management**

7. Precision farming
8. Bio-remediation of soil contamination following the synthesis of bio-sensor
9. Sustainable intensification and diversification cropping systems with better management practices for both favorable and unfavorable environments.
10. Development of Integrated Farming System model
11. Promotion of Soil Health Card and Integrated Nutrient Management
12. Studies on in-situ moisture conservation in different ecosystem
13. Technology refinement for rainwater harvesting through watershed, management and conservation of rain water for efficient and effective use
14. System analysis and simulation modeling for effective forecasting yield under biotic and a biotic stresses.
15. Resource Conservation Technology (RCT) and Conservation agriculture
26. Nanotechnology for enhancement of input use efficiency

#### **Plant Protection**

17. Integrated Pests Management
18. Survey, Characterization and Genetic improvement of Entomopathogens

19. Molecular characterization of biotypes of insect pests and plant pathogens
20. Molecular marker based monitoring of evolutionary and short term insect pest/pathogen dynamics to effectively devise the control strategies
21. Identification of active ingredient of botanicals and pheromones
22. Development of resistant/tolerant bio-agents to pesticides and mass multiplication

### **Social Science**

23. Policy research on farmers issues and institutional impact assessment
24. Value chain analysis of major commodities

### **Product development and market**

25. Development of the technology for processing, packaging, storage, extension of shelf life and value added products (including minimally processed) and prevention of the post harvest losses
26. Development of Low Cost Multiuse Farmers Friendly Machines for the marginal and small farmers.

### **Dairy Science**

27. Clean milk production
28. Newer product development/ functionally ready foods
29. Biotechnology of dairy food products
30. Microbiology-application of enzymes
31. Development of non conventional milk and milk products

### **Animal Science**

32. Conservation of local breeds and improvement of non desirable breeds
33. Diagnostic kits for different diseases for improvement in animal health
34. Nutrition management
35. Value addition in livestock products
36. Management strategy for Tal area for fish production

38. Seed production of fish

38. Goat development programme

#### **WAY FORWARD:**

- The exiting linkages would be further strengthened for better cooperation with State Agricultural University, Line department of Agriculture and Allied Science at district as well as State level.
- Different Institutions of ICAR, CSIR and International Institutes like IRRI (Manila), ICRISAT (Hyderabad), CIMMYT (Mexico), ICARDA, etc.
- Government organization like UP Seed Certification Agency, National Seed Certification Agency, etc. Private Seed Companies/Manufacturers, NGOs, Farmers organizations, Marketing Institutions for target based research and dissemination of new technologies.
- Private sector for testing of agro chemicals, varieties and for production and marketing of newly developed variety of crops, fruits and vegetables.

#### **Food security and food nutrition security:**

- University is committed to evolve need based, location specific and production oriented technology and varieties to meet out the challenges for increasing food demand, improving livelihood of farmers and ensuring sustainable agriculture.
- Development of fortified varieties of crops, vegetables and fruits (Fe, Zn, Vit-A), milk production, fishery, poultry, beekeeping, goatry will be helpful to address the issue related to nutrition security.
- To mitigate the effect of global warming and climate change, university will develop climate smart varieties and technology, crop residue management practices carbon sequestration, mechanization (use of happy seeder, chopper, zero till drill, rotavator, mulcher, solar pump, etc.)
- University develop highly skill human resources in specialized area of agriculture, biotechnology, horticulture, Agriculture engineering, community science, dairy science, fisheries science and veterinary science.
- Developing efficient irrigation system required low volume of water, sustainable improvement of soil health and fertility, organic component emphasizing organic farming technology in prevailing production system. Use of IPM and IPNM technology for improving soil health and pest problem.
- The transfer of technology from lab to land by different KVKs will be taken much height through effective training of farmer and extension functionaries of line department, organize farmers fair in addition to demonstration and field day for

farmers, farm women and rural youth, creating facility for mobile soil and water testing unit, development of Agriculture museum and agriculture technology information centre, agro-clinics, agriculture technology park and participatory seed production programme at farmers field.

- Strengthening of fruit, vegetable, floriculture, herbal and spices research activity, post harvest technology of crop produce and value addition for increasing income and rural livelihood of the farmer.
- Promoting entrepreneurship in business like poultry, mushroom, fishery, piggery, goatry and dairy for diversification based agriculture.
- Farmers will be encouraged for establishing agro processing centre for post harvest management.
- Intensive use of ICT to disseminate technologies, problem identification and ready solution of different problems of the farmers will be undertaken in near future.
- University committed to promote and encourage farmer producer organization (FPO) and commodity based farmers interest group (FIG) for production and marketing.
- University will also develop mechanism to regular monitoring the change in agriculture at state level as well as national level and also develop frame work to respond to change for benefit of the farmer.

#### **SEED MONEY POLICY**

Seed Money Policy provides seed research grant to the faculty members and scientists under different areas of research to motivate their ideas which may lead to bigger projects/programs to be sent to National/ International funding agencies. **Seed Money** will be provided as per the requirement for conducting research in different areas of agricultural and allied sciences.