

FUTURE PLAN

1. FUTURE RESEARCH AREA

1. **Development of biotic and abiotic stress tolerant varieties of crop plants for anticipated climate changes.**
2. **Conservation of genetic resources through the use of modern tools of biotechnology like DNA and gene libraries.**
3. **Biochemical basis of tissue culture response in recalcitrance crops in which tissue culture propagation is difficult.**
4. **Enhancing shelf-life and improving demand-driven commodity traits (colour, size, and aroma) of the perishable commodities through biotechnological approaches.**
5. **Research in protein engineering to generate novel useful products.**
6. **Research in biofortification of important cereals, vegetables and fruits.**
7. **Research in nutrigenomics, metabolomics, ionomics and metagenomics.**
8. **Identification of useful molecular markers for specific traits in different crops.**
9. **Transcriptomic analysis for different traits in cereal and horticultural crops.**

2. THRUST AREA FOR POST GRADUATE SEMINAR

- 1. Molecular intervention for stress (Biotic & Abiotic) tolerance in important crops (viz. rice, pigeonpea, chickpea etc.)**
- 2. Biotechnological approaches to improve the quality of plants (viz. protein content, iron content, oil quality, etc.)**
- 3. Hormonal effects on plant physiology, micro-propagation practice and tolerance to biotic and abiotic stress.**
- 4. Influence of recent technical innovation on agricultural biotechnology (viz. RNAi, Nanotechnology, Metabolic engineering, Bio-informatics).**
- 5. Molecular and biochemical advances for improving post harvest quality of important horticulture and floriculture crops.**

3. RESEARCH AREA FOR THE POST GRADUATE STUDENTS

- 1. Development of EST-SSRs in important crop species.**
- 2. Molecular and biochemical intervention to improve the shelf life of important horticultural crops.**
- 3. Identification of drought responsive transcripts and proteins in rice.**
- 4. Marker assisted breeding for major genes as well as QTLs in rice and other crops.**
- 5. Nanotechnological applications for increased crop productivity.**
- 6. Bioremediation and environmental biotechnology.**
- 7. Exploring effective and cheaper way to remove lignin from the plant biomass by use of biotechnology.**
- 8. Development of low cost micro-propagation protocol for high value horticulture and floriculture plants.**