



Mahatma Phule Krishi Vidyapeeth, Rahuri

Seed Technology Research Unit [AICRP (NSP-Field Crops)]

1.	Year of Start	:	11 TH July, 1983
2.	Contact Details	:	
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3.	Objectives/Mandates	:	1. To standardize the seed production technology for improved varieties and hybrids of University 2. To standardize and review the field and seed standards for seed certification 3. To study the characteristics of improved varieties and hybrids of University 4. To test the seed quality and genetic purity of Breeder seeds produced in the University 5. To increase the storability of improved varieties and hybrid of different crops 6. To study the different insect pests and diseases of different crops and use of bio-fungicides botanicals for control of different seed borne diseases and storage pests
4.	Infrastructure	:	
	Land	:	5.00 ha
	Irrigation facilities	:	Canal Irrigation and Farm pond
	Laboratories	:	Seed Testing Laboratory, Seed Physiology, Seed Entomology and Seed Pathology
	Advance facilities	:	1. CO2 analyzer 2. ELISA Testing
5.	Human Resource	:	
	Technical Staff	:	

	Supportive Staff :	SN	Designation	Discipline	Remarks
		1	Tech. Asstt. (Sr. Research Assistant ,)	Plant Pathology	2 sanctioned posts filled
		2	Tech. Asstt. (Sr. Research Assistant ,)	Agril. Entomology	1 sanctioned post filled
		3	Field/ Lab. Asstt. (Junior Research Assistant)	Botany	1 sanctioned post filled
		4	Field/ Lab. Asstt. (Junior Research Assistant,)	Agronomy	1 sanctioned post filled
		5	Tech. Asstt. (Sr. Research Assistant ,)	Plant Pathology	2 sanctioned posts filled
	Non-Technical Staff :	SN	Designation	No of posts	Remarks
		1	Jeep Driver	1	Filled
6.	Research Achievements : Varieties : Nil Recommendations : 74 (Joint AGRESCO -23 and Annual Group Meeting – 51)				
7.	Ongoing Research : A. Seed Production and Certification <ol style="list-style-type: none"> Optimization of seed rate in Soybean (<i>Glycin max</i> L.) Redefining isolation distance of IMSCS 2013 in Pigeonpea Assessment of mungbean seed quality treated with organic and in organic seed treatments during storage. Genetic purity testing of Breeder Seed lots (GOT) B. Seed Physiology, Storage and Testing <ol style="list-style-type: none"> Validation of the validity periods of certified seeds of field crops- Wheat, Sorghum, Soybean and Groundnut (as per the IMSCS regulations) Hybrid purity testing using molecular markers in public sector hybrids of field crop-Cotton Physiology studies and development of priming technologies for enhancing planting value of seed in field crops (Kabuli Chickpea and Cotton) under optimal and sub-optimal conditions Influence of terminal heat stress on seed set, seed yield and quality in field crop- Sorghum C. Seed Pathology <ol style="list-style-type: none"> Monitoring and detection of rice bunt in processed, unprocessed and farmers' seed sample, and bacterial leaf blight & bacterial panicle blight at farmer's field. Monitoring of emerging new diseases of seed borne nature Studies on seed health status of farmers saved seeds of soybean Studies on seed health status of farmers saved seeds of paddy Studies on seed health status of farmers saved seeds of Groundnut Studies on seed health status of farmers saved seeds of Gram Studies on seed health status of farmers saved seeds of Wheat 				

8. Standardization of detection methods for seed borne pathogens of soybean
9. Management of *Alternaria solani* in tomato through seed treatment and foliar application of newer fungicides
10. Impact of different storage conditions on longevity of *Macrophomina phaseolina*, *Colletotrichum dematium*, in Black gram
11. Detection, location and transmission of seed borne *Macrophomina phaseolina* in sesame
12. Management of purple blotch and Stemphylium blight of onion through seed treatment by bio-agents and foliar sprays with plant products and fungicides
13. Standardization of biopriming techniques against management of seed and soil borne diseases of kabuli chickpea
14. Management of seed borne diseases of soybean through seed treatment and foliar application of fungicides

D. Seed Entomology

1. Survey and evaluation of seed health status of farmers' saved seed with respect to insect infestation .
2. Effect of solarization on bruchids (pulse beetle) infestation and quality of pulse seeds (Modified)
3. Survey and monitoring of insecticide resistance in storage insect pests infesting seeds in storage godowns
4. Efficacy of commercially available neem products on storage pest management during storage under ambient condition
5. Evaluation of pre-harvest spraying of insecticides and botanicals for management of pulse beetle (*Callosobruchus* sp.)
6. Studies on the effect of insecticidal seed treatment on seed viability during storage under ambient condition.
7. Effect of organic and inorganic seed treatments on infestation of pulse beetle in stored chickpea seed.
8. Effect of organic seed treatments on infestation of rice weevil in stored sorghum seed.
9. Resistance of legume seed to pulses beetle (*Callosobruchus* spp) infestation and its relation with morphological and biochemical traits