



Mahatma Phule Krishi Vidyapeeth, Rahuri

All India Coordinated Research Project on Safflower Solapur

1.	Year of Start	:	1 st April 1980			
2.	Contact Details	:				
	Postal Address	:	All India Coordinated Research Project on Safflower, Krishak Bhavan, 97, Raviwar Peth, Solapur-413 002(MS)			
	Phone No.	:	02172372408			
	Email	:	safflowerbreeder@yahoo.com			
3.	Objectives/Mandates	:	<ul style="list-style-type: none">Breeding varieties for- Earliness, High seed yield with high oil content, Resistance/tolerance to insect pests (aphid) and diseases (leaf spots and wilt)and, Tolerance to droughtTo develop suitable agro-techniques for increasing the productivity per unit area under dry land conditionsTo find out effective and economical management measures against insect pests of safflowerTo find out effective and economical management measures against diseases of safflower			
4.	Infrastructure Land	:	The Project has no separate land. The land owned by ADR Solapur (4.0ha) and Agril. Tech. School, Solapur (2.0ha) is used for conducting the research trials.			
	Irrigation facilities	:	One well			
	Laboratory	:	The Project has no separate laboratory. The Laboratory facilities available at NARP, ZARS, Solapur are being used			
	Advanced facilities	:	<ul style="list-style-type: none">Trinocular Microscope alongwith Image Analysis Software for microscopic analysis of disease samples.Leaf area meter & Infrared thermometer for physiological observations			
5.	Human Resource	:				
	Technical Staff	:	SN	Designation	Discipline	Remarks
			1	Associate Professor of Agri. y	Botany	Filled
			2	Assistant Professor of Agri. Botany	Botany	Filled
			3	Assistant Professor of Agronomy	Agronomy	Filled
			4	Assistant Professor of Entomology	Entomology	Filled
		5	Assistant Professor of Plant Pathology	Plant Pathology	Filled	
	Non-Technical Staff	:	SN	Designation	No of posts	Remarks
			1	Jr. Research Asstt. Agronomy	1	Filled
			2	Jr. Research Asstt. Pathology	1	Filled
			3	Jr. Research Asstt. Botany	1	Vacant
			4	Agril. Assistant Entomology	1	Filled

6.	Research Achievements : Varieties : 06 Recommendations : 27
7.	Ongoing Research : <p>a) Safflower Breeding</p> <p>Coordinated Programme:</p> <ul style="list-style-type: none"> ➤ Multilocation testing/screening of germplasm under early <i>rabi</i> situation. ➤ Initial Varietal /Hybrid Trial ➤ Advanced Varietal /Hybrid Trial-I ➤ Advanced Varietal /Hybrid Trial-II <p>Station Programme:</p> <ul style="list-style-type: none"> ➤ Generation of breeding material and their testing ➤ Fresh hybridization programme ➤ Multiple crossing, Biparental mating, Mutation breeding, Population improvement Programme ➤ Development of hybrids based on GMS system ➤ Study of F₁ to F₅ generations ➤ Preliminary yield trials of varieties (I, II , III and IV) ➤ Preliminary yield trials of hybrids ➤ Station trial for high yield and high oil ➤ Regional Varietal Trial ➤ State multilocation varietal trial <p>b) Safflower Agronomy</p> <ul style="list-style-type: none"> ➤ Assessing safflower based cropping systems productivity and resource use efficiency under different land configurations, crop geometry and IPNM in different rainfall patterns. ➤ Resource characterization of safflower growing areas. ➤ Comparative performance of safflower under selective mechanization vis-à-vis farmers practice in terms of seed yield, economics and energy budgeting. ➤ Technology validation after concluding by pooled analysis and conduct on farmers field. Validation of the best treatments (OFT's) – Effect of sowing time on oil content of safflower. ➤ Ascertaining the response of safflower to different levels of potassium. ➤ Nutrient management studies in drip irrigated safflower. ➤ Determination of component technology in yield of safflower. ➤ Frontline Demonstrations <p>c) Safflower Entomology</p> <ul style="list-style-type: none"> • Screening early generation breeding materials against safflower aphid (RVT, SMVT, ST, STHO, PYT-I, II, III) • Screening advanced generation breeding materials against safflower aphid (IVT & AVHT) • Study of uniform pest nursery (UPN) • Evaluation of promising/elite entries for aphid Resistance (Field testing) • Population dynamics of important insect pests of safflower (normal sowing and treated & untreated blocks)

- Survey of safflower pests and their natural enemies in different agro-climatic regions. (Solapur, Sangli, Osmanabad & Latur Dist. blocks)
- Pesticide compatibility, Pest and Disease Management in Safflower
- Validation of Pest Management Techniques: Aphid Management through Clothianidin/Chlorpyrifos + Cypermethrin A: Farm trial & B: Research farm

d) Safflower Pathology

- Survey of safflower diseases in different agro-climatic regions
- Screening of safflower germplasm/ advanced material/parental lines against major diseases (ALS)
- Screening of safflower germplasm/ advanced material/parental lines against major diseases (Wilt)
- Confirmation of Host Resistance against Major Diseases (ALS)
- Confirmation of Host Resistance against Major Diseases (Wilt)
- Screening of Selected Elite Material against Major Diseases (ALS)
- Screening of Selected Elite Material against Major Diseases (Wilt)
- Uniform Disease Nursery (Wilt)
- Identification of races of *Fusarium oxysporum* f. sp. *carthami* prevalent in the safflower growing areas by using selected differential lines.
- Effect of priming of safflower seeds with bioagents and recommended fungicide on disease incidence, growth and yield of safflower under dryland conditions
- Disease Development in Relation to the Weather Parameters (*Alternaria* Leaf spot)