Mahatma Phule Krishi Vidyapeeth, Rahuri

All India Coordinated Research Project on Fruits

1.	**Year of Start**	:	2014 (merging of Tropical & Sub Tropical Fruits)
2.	**Contact Details**	:	
	Postal Address	:	AICRP On Fruits, Department of Horticulture, MPKV, Rahuri.
	Phone No.	:	02426-243344
	Email	:	rhrmpkvfrts@gmail.com, fruits.mpkvah-mh@gov.in
3.	**Objectives/Mandates**	:	• Collection, maintenance and evaluation of citrus germplasm. • Improvement of sweet orange and acid lime with emphasis on suitable high yielding types for biotic and abiotic stresses, high summer cropping. • To undertake research on management of insect pests viz., black fly aphids, psylla, leaf miner, fruit sucking moth, mealy bugs; diseases viz., foot rot and gummosis, twig blight, canker, tristeza and greening. • To transfer the technology evolved /standardized to farmers field viz., spacing, nutrition, training, crop geometry, water requirement, fertilizer doses, weed control, pest and disease management. • Fertigation scheduling through drip. • To supply genuine planting material of sweet orange and the acid lime variety Sai Sharbati, Phule Mosambi and Phule Sharbati. • Establishment of mother block of sweet orange for supply of disease free planting material. • Standardization of leaf nutrient standards for macro and micro-nutrients. • To study the nutritional requirements of grapevines. • To evaluate seedless and seeded varieties and hybrids for yield and quality. • To study the performance of different seedless hybrids and varieties for raisin making. • To workout suitable chemical control measures for major diseases like downy and powdery mildew. • To study the effect of different weather parameters on development of downy mildew and bacterial blight diseases of grapes. • To find out suitable integrated pest management method for major insect pests. • Survey and surveillance of pests and their natural enemies and studies on crop loss assessment and bio-ecology.
4.	**Infrastructure**	:	
	Land	:	Guava, Grape, Mango- 6.26 ha Citrus- 8.39/ha, Shrirampur 4.52ha
	Irrigation facilities	:	Yamuna canal &Borewell

5. Human Resource :

Technical Staff :

SN	Designation	Discipline	Remarks
1	Horticulturist	Horticulture	Filled
	Horticulturist	Horticulture	Filled
2	Jr. Horticulturist	Horticulture	Filled
3	Jr. Horticulturist	Horticulture	Filled
4	Jr. Plant Pathologist	Plant Pathology	Filled
5	Jr. Plant Pathologist	Plant Pathology	Filled
6	Jr. Entomologist	Entomology	Vacant
7	Senior Research Assistant	Agril. Chemestry & Soil Science	Filled
8	Senior Research Assistant	Horticulture	Filled

Non-Technical Staff :

SN	Designation	No of posts	Remarks
1	Agril. Assisttant	05	Filled - 4 Pooled- 1
2	Clerk Cum Typist	01	Filled - 1
3	Mali	04	Filled - 2 Vacant - 2
4	Lab Attendent	02	Filled - 1 Vacant - 1

6. Research Achievements :

Varieties : 02

Recommendations : 62

7. Ongoing Research :

A. Citrus

1. Collection, Characterization, Conservation, Evaluation and Utilization of germplasm.
2. Clonal selection in sweet orange.
3. Clonal selection in acid lime
4. Evaluation of promising clones of sweet orange
5. Evaluation of promising clones of acid lime
6. Evaluation of promising clones of grapefruit
7. Evaluation of promising clones of acid lime (MLT-II)
8. Evaluation of promising rootstock for sweet orange
9. Nutrient management under high density planting in sweet orange
10. Nutrient management under high density planting in acid lime
11. Studies on residual and cumulative effect of nutrients in sweet orange
12. Studies on residual and cumulative effect of nutrients in acid lime
13. Identification of critical stage of water requirement in acid lime
14. Standardization of stage wise water requirement in acid lime
15. Assessment of phenology, productivity and incidence of insect pests and diseases in sweet orange.
16. Assessment of phenology, productivity and incidence of insect pests and diseases in acid lime
17. Effect of severity of pruning on growth, yield and quality of old sweet orange trees.
18. Effect of severity of pruning on growth, yield and quality of old acid lime trees.
19. Fertigation studies in Sweet Orange.
20. Micronutrient studies in sweet orange.
21. Status of emerging insect pests and their natural enemies in Citrus

22. Evaluation of various management modules of fruit sucking moths and fruit flies
23. Testing of crop phenology based citrus insect pest management for Ambia crop
24. New and Emerging diseases of citrus
25. Screening of promising rootstocks against root rot
26. Identification and Characterization of CTV isolates of citrus
27. Identification and Characterization of citrus yellow mosaic virus
28. Studies on greening disease
29. Integrated management of citrus greening disease
30. Evaluation of different fungicides against stem end rot of sweet orange

B. Grapes:

1. Evaluation of coloured table varieties
2. Evaluation of raisin varieties
3. Evaluation of juice varieties
4. Evaluation of commercial grape varieties on different rootstocks
5. Assessment of post-harvest losses
6. Development of irrigation schedule for protection of vineyard during drought conditions .
7. Development of organic package of practice for grapes
8. Survey of grape growing areas for important diseases in grapes to develop digital disease map.
9. Validation of online interactive weather information based disease and insect pest risk assessment
10. Effect of gamma irradiated chitosan on powdery mildew of grapes
11. Survey and surveillance of major insect pests of grape and their natural enemies: (Roving survey/ Fixed plot survey)
12. Growth stage specific management of insect and mite pests in grapes

C. Guava :

1. Testing the performance of promising hybrids/selections
2. Evaluation of substrate dynamics for IPNM in guava
3. Development of organic package of practice for guava
4. Evaluation of new hybrids of guava
5. Evaluation of Arka Microbial Consortium (AMC) for guava
6. New emerging insect pests in guava
7. Studies on seasonal incidence of different diseases of guava.

D. Mango :

1. Evaluation of germplasm
2. Development of organic package of practice for mango (*Mangiferaindica* L.) cv. Keshar
3. Ultra high density planting studies in mango
4. Studies on influence of bagging on fruits quality of mango cv. *Keshar*
5. Documentation and monitoring of population of pollinators
6. Seasonal occurrence of different diseases of mango
7. Identification and characterization of pathogens associated with stem end rot in mango