Mahatma Phule Krishi Vidyapeeth, Rahuri

Central Sugarcane Research Station, Padegaon

1.	**Year of Start**	:	1932
2.	**Contact Details**	:	
	Postal Address	:	Central Sugarcane Research Station, Padegaon, Tal. Phaltan, Dist. Satara, 415521
	Phone No.	:	02169-265333
	Email	:	csrspadegaon@rediffmail.com, csrspadegaon.mpkv@gov.in
3.	**Objectives/Mandates**	:	• Collection and maintenance of sugarcane germplasm. • Morphological/ Molecular characterization and registration of elite genotypes. • Development of high cane and sugar yielding sugarcane varieties for different Agro-ecological zones of Maharashtra through wide hybridization. • Development of sugarcane varieties resistant to drought, saline conditions, pests and diseases with the help of biotechnology tools and conventional breeding techniques. • Development of production technology viz., proper methods of tillage, weed control, water management, intercropping, crop rotations and ratoon management and insect pest and disease management. • Maintenance of soil fertility for sustainable sugarcane production. • Testing varieties for juice quality, sugar recovery, fibre content and nutrient requirement and identifying varieties for quality jaggery. • Use of biofertilizers, trash management and decomposition of trash. • Integrated Pests and Diseases Management. • Production and supply of breeder seed of important sugarcane varieties to sugar factories, Department of Agriculture and farmers in Maharashtra. • Dissemination of agro-techniques (Extension Education) through farmers rallies, training programmes to farmers, CDO's and Agril. Officers, exhibitions, farm visits and technology transfer through TV, Radio, Newspaper, books, leaflets/bulletins etc.
4.	**Infrastructure**	:	
	Land	:	This station possesses 125.30 hectares land out of which 94.14 hectares is under cultivation

Irrigation facilities : The source of irrigation is Nira Right Bank Canal, two farm ponds (1.81 crore litre capacity), 3 wells and 5 bore wells. The station comes under drought-prone area. The average annual rainfall is 517 mm.

Laboratories : This station have well equipped Soil, water and plant testing laboratory, Physiological study laboratory, plant protection laboratory and sugarcane quality testing laboratory.

Advanced facilities : This station has well equipped advance sugarcane quality testing laboratory facility with Rudolph Autopol machine.

5. Human Resource :

Technical Staff :

SN	Designation	Discipline	Remarks
1	Professor (Sugarcane Specialist)	Agronomy	Filled
2	Professor	Botany	Vacant
3	Associate Professor	Agronomy	Vacant
4	Associate Professor	Bio Chemistry	Pooled to Rahuri
5	Assistant Professor	Entomology	Filled
6	Assistant Professor	Soil Science & Agril.Chemisty	Filled
7	Assistant Professor	Microbiologist	Vacant
8	Assistant Professor	Physiology	On PhD study leave
9	Senior Research Assistant	06	Filled - 2 Vacant - 4
10	Junior Research Assistant	18	Filled - 8 Vacant - 7 Pooled - 3

Non-Technical Staff :

SN	Designation	No of posts	Remarks
1	Agril. Asstt.	26	Filled - 24 Vacant - 2 Pooled - 6
2	Superintendent	1	Vacant
3	Asstt. Superintendent	1	Vacant
4	Sr.Clerk	3	Vacant
5	Clerk cum Typist	5	Filled - 3 Vacant - 2
6	Wireman	1	Vacant
7	Tracer	1	Vacant
8	Live stock supervisor	1	Filled
9	Carpenter	1	Filled
10	Tractor Driver	1	Filled
11	Driver	1	Vacant
12	Counter	13	Filled - 7 Vacant - 6
13	Lab boy	11	Filled - 5 Vacant - 6
14	Peon	11	Filled - 7 Vacant - 4
15	Attendant	1	Filled
16	Watchman	4	Filled

		17	Labour	169	Filled - 64 Vacant - 105
		18	Ox man	18	Filled - 5 Vacant - 13
		19	Sweeper	1	Filled
		20	Naik	1	Vacant

6. Research Achievements :

Varieties : 12

Recommendations :

Crop production	: 14
Crop physiology	: 04
Soil science	: 10
Biochemistry	: 03
Entomology	: 06
Pathology	: 07
Agricultural microbiology	: 05
Extension education	: 03

7. Ongoing Research :

Sugarcane Research Scheme (State- Non Plan)

Sugarcane Breeding

A) State Programme:

1. Sugarcane Hybridization at Padegaon, Radhanagari and SBI Coimbatore.
2. Raising seedlings in ground nursery.
3. Evaluation of promising genotypes.

B) Experimental Trial:

1. Row Row trial
2. Station Trial Plant cane
3. Station Trial Ratoon
4. Multilocation Trial Adsali Ratoon
5. Multilocation Trial Adsali II Plant
6. Multilocation Trial Preseason Ratoon
7. Multilocation Trial Preseason II Plant
8. Multilocation Trial Suru Ratoon
9. Multilocation Trial Suru II Plant
10. Nucleus Seed production of commercially cultivated sugarcane varieties.
11. MLT of H X H hybrid cotton
12. MLT of H X B hybrid cotton
13. MLT of G. hirsutum cotton
14. MLT of Rajmah bean
15. Multiplication of all released sugarcane varieties

Sugarcane Physiology

1. Evaluation of new sugarcane genotypes for drought tolerance (Ist plant)
2. Effects of drought and recovery from drought stress on shoot and root growth in sugarcane.
3. Evaluation of different plant growing media for production of sugarcane settlings.
4. Water and Nutrient management for sugarcane ratoon under water stress condition (III rd ratoon) (Interdisciplinary Expt.)
5. Effect of foliar spray of Plant Growth Regulator (PGR) and fertilizer nutrients on yield and quality of sugarcane (Interdisciplinary Expt).

Sugarcane Agronomy

1. Performance of different sugarcane varieties for yield and quality under different row spacings. (3rd year).

2. Effect of harvesting dates of advanced genotypes of sugarcane on yield and quality (Suru) (3^{rd} year).
3. Water and Nutrient Management for Sugarcane ratoon under water stress condition (2^{nd} year)
4. Integrated Weed Management in preseasonal Sugarcane (2^{nd} year).
5. Ratoonability of advanced sugarcane genotypes for yield and quality under different harvesting dates of plant cane (2^{nd} year).
6. Evaluation of fertigation at varying irrigation levels for preseasonal sugarcane under subsurface drip. (2017-18).
7. Perfromance of different sugarcane varieties under different harvesting time in pre season. (1^{st} year 2018-19 planted in 2018).
8. Carbon sequestration assessment in sugarcane based cropping system (1^{st} year 2018-19 to planted in suru 2018).

Soil Science and Agril. Chemistry

1. *In situ* recycling of sugarcane crop residue and industrial wastes for soil health under sugarcane land use system in Inceptisol (II^{nd} ratoon).
2. Water and nutrient management for sugarcane ratoon under water stress condition (III^{rd} Ratoon).
3. Effect of foliar sprays of plant growth regulators (PGR) and fertilizer nutrients on yield and quality of sugarcane.
4. Follow up trial on STCR equations of Turmeric.
5. Multi Location trial on promising mutant of turmeric.
6. Demonstrations on STCR equations, INM, Organic farming and Fertigation on preseasonal sugarcane.

Sugarcane Pathology

1. Evaluation of performance of durable resistant sugarcane varieties to smut under artificially inoculated conditions in the field.
2. Evaluation of new sugarcane genotypes included in station trial (Early and midlate) for identifying disease free genotypes under natural field conditions.
3. Evaluation of sugarcane genotypes included in Station Trial Ratoon for identifying disease free genotypes under natural field conditions.
4. Evaluation of sugarcane genotypes included in multilocation varietal trial (Preseason) for identifying disease free genotypes under natural field conditions.
5. Evaluation of sugarcane genotypes included in multilocation varietal trial (*Suru*) for identifying disease free genotypes under natural field conditions.
6. Evaluation of new sugarcane genotypes included in Multilocation trial *Adsali* Ratoon for disease free genotypes under natural field conditions.
7. Evaluation of new sugarcane genotypes included in Multilocation trial Preseason Ratoon for disease free genotypes under natural field conditions.
8. Evaluation of new sugarcane genotypes included in Multilocation trial Suru Ratoon for disease free genotypes under natural field conditions.

Agril. Microbiology

1. Effect of set and seedling treatment of sugarcane with Glucanoacetobacter diazotrophicus and PSB formulations on growth and yield of sugarcane.

Sugarcane Entomology

1. Evaluation of zonal varieties/genotypes for their reaction against major insect-pests Survey and surveillance of sugarcane insect-pests
2. Monitoring of insect-pests and bio-agents in sugarcane agro-ecosystem
3. Standardization of simple and cost effective techniques for mass multiplication of sugarcane bio-agents
4. Formulation and validation of IPM Module of sugarcane insect-pests