



Mahatma Phule Krishi Vidyapeeth, Rahuri

All India Coordinated Research Project on Maize

1.	Year of Start	:	1967																								
2.	Contact Details	:																									
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3.	Objectives/Mandates	:	•																								
4.	Infrastructure	:																									
	Land	:	4.20 (Transfer from ATS K. Bawada this year)																								
	Laboratories	:	01																								
5.	Human Resource	:																									
	Technical Staff	:	<table> <tr> <th>SN</th><th>Designation</th><th>Discipline</th><th>Remarks</th></tr> <tr> <td>1</td><td>Maize Breeder</td><td>Botany</td><td>Filled</td></tr> <tr> <td>2</td><td>Assistant Maize Agronomist</td><td>Agronomy</td><td>Filled</td></tr> <tr> <td>3</td><td>Assistant Maize Entomologist</td><td>Agril. Entomology</td><td>Filled</td></tr> <tr> <td>4</td><td>Senior Research Assistant</td><td>Botany</td><td>Filled</td></tr> <tr> <td>5</td><td>Senior Research Assistant</td><td>Entomology</td><td>Filled</td></tr> </table>	SN	Designation	Discipline	Remarks	1	Maize Breeder	Botany	Filled	2	Assistant Maize Agronomist	Agronomy	Filled	3	Assistant Maize Entomologist	Agril. Entomology	Filled	4	Senior Research Assistant	Botany	Filled	5	Senior Research Assistant	Entomology	Filled
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	Non-Technical Staff	:	<table> <tr> <th>SN</th><th>Designation</th><th>No of posts</th><th>Remarks</th></tr> <tr> <td>1</td><td>Agril Assistant</td><td>03</td><td>Vacant 1</td></tr> <tr> <td>2</td><td>Jr. Clerk</td><td>01</td><td>Filled</td></tr> </table>	SN	Designation	No of posts	Remarks	1	Agril Assistant	03	Vacant 1	2	Jr. Clerk	01	Filled												
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2	Jr. Clerk	01	Filled																								
6.	Research Achievements	:																									
	Varieties	:	08																								
	Recommendations	:	11																								
7.	Ongoing Research	:																									

Breeding:

a)

STATION PROGRAMME

1. Evaluation:

Season: Kharif - 2018

1.1 Station Trial : 2

1.2.1 Multilocation Trial : 1

Locations: (6) Kolhapur, Gadhinglaj, Rahuri, Pune, Savalvihiir, Dhule

1.3 Inter-University Trial : 1

Locations: (3) Kolhapur, Buldhana and Parbhani, Aurangabad.

Season: Rabi-2018-19

1.4 Station Trials : 2

2. GENERATION OF BREEDING MATERIAL

2.1 Maintenance and utilization :The inbred lines received from DMR, New Delhi & Winter Nursery Hyderabad will be maintained through selfing and utilized for production of high yielding Single Cross Maize hybrids.

2.2 In bred line Development Programme:

The inbred line development programme in normal maize and specialty corn viz.; Pop corn, Sweet corn and QPM

2.3 Development of single cross hybrids

New diallel programme:

(A) Crossing programme: **White** (10x10)

(B) Crossing programme: **Yellow** (10 x 10)

(C) Crossing programme: **QPM** (7 X 7)

3. Seed multiplication

Kharif 2018: Breeder: 0.10 ha of each Parental lines of KMH-22168

Breeder: 0.10 ha of each parental line of QMH-1025

Breeder: 0.10 ha. of each parental line of QMHSC-1182

Rabi-2017-18: Nucleus: Area: 0.05 ha of each MPQ-13 (Karveer), African tall, Panchaganga, Manjri GPM-456, GPM-342, QMI-1401, QMI-1403, QMISC-1407, QMISC-1408.

4. Collection, maintenance and utilization of germplasm.

Sr. No.	Particulars	Type		
		Normal	QPM	Sweet Corn
1	Lines maintained & evaluated during Rabi-2016-17	432	27	6
2	No. of lines received during Kharif-2017 from Winter Nursery & CIMMYT Hyderabad (R-2016)	80	-	-
3	Lines maintained in germplasm block during Rabi-2017-18	512	27	6

b) COORDINATED PROGRAMME: - Kharif-2018 and Rabi-2018-19

Evaluation of All India Co-ordinated trials

Sr. No.	Name of the trials	Kharif	Rabi
1	Initial Evaluation Trials	4	3
2	Advanced Evaluation Trials (1 st year)	4	3
3	Advanced Evaluation Trials (2 nd year)	4	3
4	QPM Trials	1	1
5	Sweet corn	1	-
6	Pop corn	1	-
7	Baby corn	1	-
8	Zonal Trial	1	-
9	Rainfed Trial	6	
Total		23	10

LONG TERM PLANNING- (2015-2020)

1. **Germplasm** : Collection, maintenance, evaluation & utilization for crop improvement.
2. **Cultivar development**
 - 2.1 Evaluation of new inbreds & their utilization in production of Maize hybrids.
 - 2.2 Development and evaluation of diverse types of single cross Maize hybrids of normal, baby corn, sweet corn and QPM types and their release for general cultivation.
3. **Diversifying uses of maize:**

Collection and evaluation of specialty corn germplasm/cultivars for pop corn, sweet corn, baby corn and high oil content etc. for diversified maize based industrial products.

A) Agronomy:

Co-ordinated programme:

Expt. No. 1: Performance of pre-released QPM genotypes under varying planting density and nutrient levels.

Expt. No. 2: Performance of pre-released sweet corn genotypes under varying planting density and nutrient levels.

Expt. No. 3: Long term trial on Integrated Nutrient Management in maize system.

Expt. No. 4: Ecological intensification for climate resilient maize based cropping system.

State Programme:

Expt. No. 5: Weed management in maize systems.

Expt. No. 6: Effect of detasseling / detoping on maize under different fertilizer levels.

Entomology:

I) Coordinated Programme:

Expt. No. 1: Evaluation of maize entries against stem borer under artificial infestation.

Sr. No.	Expt. ID.	No. of entries	Replications
1	655	15	02
2	656	16	02
3	659	42	02
4	660	36	02
5	664	20	02
6	687	19	02
7	693	25	02

Expt. No. 2: Evaluation of maize entries against Fall Armyworm (FAW) under natural infestation.

Sr. No.	Expt. ID.	No. of entries	Replications
1	655	15	02
2	656	16	02
3	659	42	02
4	660	36	02
5	664	20	02
6	687	19	02
7	693	25	02

- Expt. No. 3:** Evaluation of maize inbred lines against stem borer under artificial infestation.
- Expt. No. 4:** Evaluation of maize inbred lines against Fall army worm (FAW) under natural infestation.
- Expt. No. 5:** Monitoring of Fall army worm *S. frugiperda* by pheromone traps with slow releasing NBAIR lure.
- Expt. No. 6:** Evaluation of insecticides as seed treatment against Fall army worm.
- Expt. No. 7:** Evaluation of insecticides for the management of Fall army worm.
- Expt. No. 8:** Evaluation of Bio-pesticides against Fall army worm, *S. frugiperda*.
- Expt. No. 9:** Study on incidence of spotted borer in relation to plant age and meteorological factors.
- Expt. No. 10:** Study on pest succession in *Kharif* sown maize.
- Expt. No. 11:** Assessment of yield loss due to FAW.

II) Station Programme:

- Expt. No. 12:** Evaluation of insecticides for the management of Fall army worm.
- Expt. No. 13:** Evaluation of Bio-pesticides against Fall army worm, *S. frugiperda*.