Mahatma Phule Krishi Vidyapeeth, Rahuri

All India Coordinated Research Project on Chickpea

1. Year of Start : 1994

2. Contact Details :

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3. Objectives/Mandates :

- To develop high yielding, wilt resistant varieties of chickpea suitable for rainfed, timely sown irrigated and late sown conditions.
- To develop high yielding, wilt resistant varieties of chickpea suitable for mechanical harvesting
- To develop high yielding, wilt resistant, extra large seeded kabuli chickpea varieties.
- To evolve high yielding, wilt resistant varieties of chickpea responsive to irrigation and fertilizer.
- To identify chickpea genotypes tolerant to Helicoverpa armigera.
- To develop integrated pest management (IPM) technology against pod borer.
- To demonstrate the improved production technology on research farm as well as on farmers field.
- To produce quality seed of chickpea varieties as per the allocated targets.

4. Infrastructure :

Land : 42.26 ha.

Irrigation facilities : Lift irrigation, Farm pond and Well

Laboratories : 01

Advanced facilities : Rainout shelter-1, polycarbonate house-1, Shednet-2

5. Human Resource :

Technical Staff :

SN	Designation	Discipline	Remarks
1	Principal Scientist	Pl. Breeding	Vacant
2	Sr. Scientist	Pl. Breeding	Filled
3	Scientist	Entomology	Filled
4	Scientist	Pl. Pathology	Filled

Non-Technical Staff :

SN	Designation	No of posts	Remarks
1	Agril. Assistant	03	Filled

6. Research Achievements :

Varieties : 13

Recommendations : 18

7. Ongoing Research :

A. Plant Breeding

i) Coordinated trials : 11
ii) ICRISAT Collaborative Trials : 03
iii) Station Trials : 04
iv) Regional Varietal trials : 08
b) Evaluation of Advance Generation Breeding Material 2018-19
c) Chickpea Germplasm Evaluation : No. of germplasm accessions - 370
d) Chickpea Hybridization Programme :

i) Single crosses : (7) To develop drought and heat tolerant, wilt resistant and suitable for machine harvest, chickpea genotypes.

ii) Three Way Crosses : (7) To develop early maturing, wilt resistant, drought / heat tolerant chickpea genotypes

e) National crossing programme

B. Entomology:

Screening of germplasm:

1. Field evaluation of IVT, AVT-I and AVT-II entries of Chickpea against *Helicoverpa armigera*
2. Screening of tolerant entries for confirmation of source of source of resistance to *H. armigera*
3. Field screening of State Multi Location Varietal Yield Trial (SMVT) in Desi chickpea against *Helicoverpa armigera*.
4. Field screening of entries in Regional Varietal Trial (RVT) of Chickpea against *Helicoverpa armigera*.
5. Field screening of Kabuli Chickpea entries against *Helicoverpa armigera*
6. Field screening of least susceptible entries (Previous year 2016- 17) Station trial of Chickpea against *Helicoverpa armigera*

Pest Management:

1. Seasonal abundance of insect pests of chickpea and their natural enemies throughout the cropping period (Long term)
2. Monitoring of pod borer, *Helicoverpa armigera* and *Spodoptera* moths using pheromone traps (Long term)
3. Estimation of crop losses in Chickpea due to pod borer, *H. armigera* and *S. exigua* (Long term)
4. Compatibility of insecticides with foliar nutrients in Chickpea (Medium term)
5. Evaluation of eco-friendly approaches for the management of gram pod borer, *H. armigera* in chickpea (Medium term)
6. Survey of the incidence of insect pest in Chickpea on farmers field (Long term)

C. Plant Pathology

1. Evaluation of IVT, AVT 1 and AVT 2 (desi, kabuli, rainfed, late sown, MH, DTIL, WRIL) entries against major diseases.
2. Evaluation of chickpea germplasm and advance breeding material included in state/station trials.
3. National nursery of elite lines (wilt).
4. Confirmation of resistance against wilt disease.
5. International chickpea wilt nursery(ICAR-ICRISAT collaborative programme).
6. Maintenance of disease resistance in released varieties.
7. Survey and surveillance of diseases.