All India Coordinated Research Projects

Government of India Schemes

All India Network Projects

Rice Research Centre, ARI, Rajendranagar

Name of Research Station	Rice Research Centre
Year of Establishment	1928
Latitude	17^{O}.19 N'
Longitude	78^{O}.23 E'
MSL	542m
Soil type/ P_H	Black (Vertisols) / 7.60-7.71
Area under Cultivation	17.85acre
Area under Roads	1.57 acre
Total Area	19.42 acre

Mandate

- Development of high yielding, medium and short duration varieties with multiple resistance to pests (mainly brown planthoppers (BPH), panicle mite) and diseases (blast) for rainy season (*kharif*) and short duration varieties with resistance to cold and salinity for post-rainy season (*rabi*).
- Development of short duration high yielding hybrids for both the seasons.
- Development of quality rice (extra-long, long and mediumslender grain types) including bio-fortified rice for export.
- Standardising agro-techniques for rice cultivation through mechanization and direct seeding and make rice as a more profitable crop.
- Developing protection technologies including low cost and eco- friendly control for major insect pests and diseases existing in Telangana State.

Significant achievements

- Since its establishment, 16 varieties (right from Hamsa-1968 to Telangana Sona-2015) have been released. Tellahamsa, Sugandha Samba, Krishna, Shobhini, Telangana Sona are widely cultivated.
- Various agro-techniques like green manuring preceding rice, standardization of NPK doses for STZ, cold management in nurseries, mitigation of Zn deficiency, new cultivation methods and several new herbicide molecules were identified and recommended to farmers.
- Comprehensive organic farming package was evolved.
- Gundhi bug was noticed in severe proportions in Jangaon during 1999s and management technology *viz*., spraying of Malathion or chlorpyriphos from field periphery to the centre of the field was recommended.
- Comprehensive damage evaluation scale for rice panicle mite, *Steneotarsonemus spinki* was developed.
- Several novel pesticide molecules were identified to combat major pests and diseases of rice.
- Generated information on the new compatible pesticide combinations, and given as recommendation. acephate @ 1.5g and Merger @ 2g; chlorpyriphos @ 2.5ml and Kasugamycin @2.5ml; chlorantraniliprole @ 0.3ml,carbendazim @ 1g andmancozeb @ 2.5g; chlorantraniliprole @ 0.3ml andpropiconazole @1ml; chlorantraniliprole @ 0.3ml andisoprothiolane @ 1.5ml;chlorantraniliprole @ 0.3ml and Nativo @ 0.4g.
- A new disease, crown rot has been emerging in paddy caused by bacteria was identified as *Erwinia chrysanthimi.*

Future thrust areas of research

- Development of hybrids (25% increase) and varieties (10% improvement) to increase productivity in the state.
- Develop the varieties and technologies for efficient water use.
- Development of varieties with resistance and allied technologies to reduce cost of cultivation, maintain ecological balance and to promote ecofriendly agricultural practices.
- Development of varieties (especially for direct seeding in *kharif* and *rabi*) and technologies for total mechanization in rice.
- Development of varieties and allied technologies suitable for direct seeding in *rabi* so that, the problem of cold is tackled and the crop is harvested by March end. In *kharif* productivity (5.0 to 5.5 t/ha) has to be increased in 110 duration varieties so that, the cold is avoided at reproductive stage by developing varieties and agronomic practices.
- Standardization of protocols for machine transplanted rice.