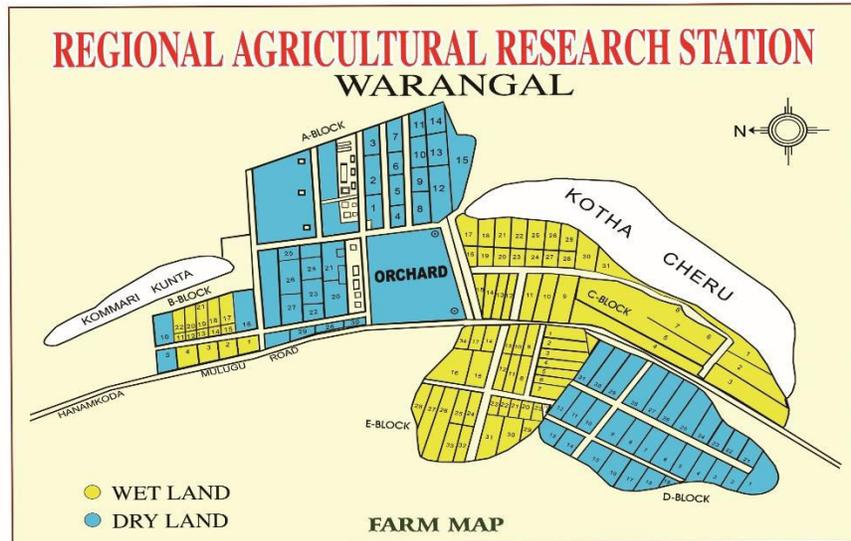


**Name of the Research Station: Regional Agricultural Research Station, Warangal**



**2. Geographical Layout**

1.	Geographical position	:	Latitude: 17° 58' North Longitude: 79° 40' East
2.	Total area (ha)	:	52.5 ha
3.	Cultivable area	:	35.0 ha

3. Year of establishment : 1933

4. Mandate

- To develop quality rice varieties / hybrids of different maturity groups with multiple resistance using traditional and biotechnology approaches
- To develop agro-techniques for higher rice productivity
- To develop gall midge (GM) and brown planhopper (BPH) resistant rice varieties
- To develop and identify high yielding, disease and pest resistant pigeonpea and short and medium duration varieties or hybrids to suit to different cropping systems.
- To develop and identify suitable pigeonpea varieties for *rabi* season
- To develop agro techniques for achieving higher yields in rice, pulses and cotton
- To develop management practices for major insect pests and diseases in pulse crops

- To develop high yielding *G. hirsutum* cotton hybrids and varieties suitable to rainfed and irrigated ecosystems
- To develop resource efficient, economically viable and sustainable integrated farming system modules and models for different farming situations.

## 5. Significant achievements

### RICE

- Warangal station has the distinction of developing Asia's first gall midgeresistant variety Kakatiya
- Warangal Samba, Varalu, Warangal Sannalu, Somnath were recently released rice varieties
- Production technologies for different systems of rice cultivation were developed
- Identified gall midge resistant donors for Biotype-1 and Biotype-4
- Mudgo, ASD-7, MILYANG-55, PTB-33 were identified as resistant donors to BPH
- Transferred gall midge and bacterial blight resistance genes into Warangal Sannalu and Tellahamsa
- Transferred two major blast resistance genes (*Viz.*, *Pil* and *Pi 54*) into Warangal Samba and Kavya

### PULSES

#### Varieties released:

a) Greengram - Yadadri (WGG-42), Blackgram (WGG-26), Redgram (WRG-27, WRG-53, WRG - 65)

b) Pigeonpea + Maize + Field bean (1:3:1) was identified as profitable intercropping system.

c) In redgram, the following donors were identified

Drought tolerance            TTB-7, JSA-41, WRG-38, WRG-42

Wilt resistance                WRG-18, ICPL-96053, ICPL-96058, WRG-145,  
BDN-2004-1, JKM-219, BRG-3

Sterility mosaic disease    ICP-9174, ICP-7035, ICP-8038  
(SMD)

*For Helicoverpa*                WRG-27, LRG-41, WRG-55, WRG-53  
tolerance

### COTTON

- WGHH-2 was released as Orugallu Krishna, is an early maturing hybrid with big boll size. It has wide adaptability with yield of 30-40 q/ha and a staple length of 26-28 mm.
- The first station to develop all agronomic package of practices for Bt cotton cultivation. Bt cotton hybrids gave higher kapas yield at a spacing of 90 x 60 cm and responded up to 120:60:60 kg NPK per ha.
- In late as well as early Bt.cotton hybrids, significantly higher boll number per plant and seed cotton yields were obtained by scheduling of N fertilizers at 20,40,60 and 80 days instead of 30,60,90 and 120 days after sowing.
- Identified Maize-safflower, Maize-Bengalgram as alternate crops to Bt cotton for rainfed vertisols.
- For the first time, reported tobacco streak virus and cotton stem weevil.
- Population dynamic studies indicated increased infestation of thrips with increasing temperature.

#### INTEGRATED FARMING SYSTEMS (IFS)

- Total six farming systems were identified in Warangal district. crop, crop and diary, crop, diary and goat/sheep, crop, diary, goat and poultry, crop, diary and poultry and crop and poultry.
- Among six farming systems, the net income after diversification was higher in Crop, diary, goat and poultry (Rs. 63,258); crop, diary and goat / sheep (Rs. 51,491) and crop only (Rs. 58,155) were the next best.
- In livestock diversification, introduced improved back yard bird (Vanaraaja) weight was increased to 2.4 kg when compared to local poultry bird weight of 1.0 kg in six months of age.