

## **Orobanche Management Measures**

A team comprising Scientists of ICAR-CTRI, Managers from Tobacco Board and Tobacco Trade visited Southern Light Soil and Southern Black Soil areas in Prakasam and Nellore Districts of Andhra Pradesh to assess the incidence of *Orobanche cernua* infestation in FCV tobacco fields, to analyse the causes for severely infested fields during this season and to suggest the measures for keeping the infestation below the threshold level of damage. Severe infestation of *Orobanche* is threatening the cultivation of FCV tobacco in SLS and SBS areas. The following management measures were suggested by the Team members.

The ability to add large quantities of seeds to the soil is the major strength of *Orobanche* (a single *Orobanche* plant can release lakhs of seeds and remain viable for 15-20 years in the soil). Hence, reducing the seed bank and arresting the addition of new seed are best components of *Orobanche* management.

No single method is effective for *Orobanche* control. Integrated approach is the effective method for management of *Orobanche* combining following viable measures.

1. Management of soil through deep summer ploughing ( about 60 cm deep)
2. In highly infested tobacco fields, grow other crops particularly trap crops like sesame, jowar, blackgram, greengram for a minimum of two seasons in the FCV tobacco growing fields.
3. The spread of *Orobanche* infestation may take place from field to field by spread of seeds through farm implements and grazing animals. Hence, Cleaning of implements after its use in the *Orobanche* infested fields and restricting the movement of grazing animals in tobacco cultivating fields is to be followed.
4. Addition of fresh farm yard manure may enhance the *Orobanche* infestation. Hence, application of fermented farm yard manure is to be followed to reduce infestation
5. Application of 80 to 100 kg of quality neem cake per acre in the final field preparation.(2-2.5 q/ha)
6. Physical removal of *Orobanche* before it flowers is essential even at very low levels of infestation. The collected shoots should be burnt at far off place from the tobacco fields.
7. To take up early plantings wherever possible so as to escape from *Orobanche* seed germination. *Orobanche* seed germination triggers under low temperatures prevailed during December and January months.

At present, integrated management measures are only the available technology module. However, stringent research efforts are to be continued to put in place a viable practice for the control of *Orobanche* in FCV tobacco.