

A Farmers Participatory extension strategy for dissemination of cotton technology in Erode district

Background:

To inculcate cotton technology to the farmers, Farmers Field School approach has been adopted at four villages namely Erangattuthottam, Pudupalayam, Thaneerpandal and Chellampalayam of Anthiyur block of Erode district. Surabi and MCU-5 are the ruling varieties of this region. The cost of cultivation is high due to excessive use of pesticides and unavailability of agricultural labours, which are the major issues faced by the cotton farmers in this area.

Though a wholistic approach in cotton cultivation was being imparted, IPM technologies were emphasized as Pests and Diseases are the major cause for the indiscriminate use of pesticides. 100 farmers from four different villages were identified and four collaborators were selected from four respective villages. The short studies and long term experiments proposed were carried out in their field (Collaborator field).

Interventions:

Capacity building and demonstrations in all aspects of cotton cultivation viz., suitable varieties for the region, utility of cotton farm implements (Rotovator, power weeder), land preparation and seed treatment, proper spacing, mulching, skip furrow irrigation, thinning (1-2 seedling/hole), scattered sowing of maize, fermented castor trap solution, *Trichogramma chilonis* egg card release, micronutrient spray (for Cotton reddening), plant growth regulator spray (for Square dropping) and NPV application method were imparted to the FFS farmers. The CMRC (Community managed resource centre), a federation of SHGs and farmers group managed by the KVK was highly helpful in locating the active cotton growers of the district and also in organizing and conduct the Farmers Field School.

20 weekly sessions were held in which AESA (Agro ecosystem analysis) a regular feature was carried out every week in the field with the participation of FFS farmers to analyze the abiotic and biotic stress on the plant. The observations (Biometric and Fauna population) recorded in the field (Sub group) were pooled and the subsequent operations and conclusions were arrived by the farmers themselves.



Duraisamy from Erangattuthottam village opined that before attending the Farmers field school, he was not able to identify the insects in the field. Through Farmers field school, he came to know about the cotton pests and their natural enemies and their differentiation. Before attending the Farmers field school, he used to go for 6-7 chemical sprays in the field. But this time, he had sprayed only once. The cotton plants beared more squares and bolls. Through Farmers Field School; he said that he has developed the ability to take crop management decision by his own.

Padmavathi from Adireddiur village said that all these days, whenever the farmer come across any insect or disease problem in cotton, he/she fetches chemicals from shop and sprays in his/her field. After the intervention of MYRADA-KVK through Front line demonstration and FFS in cotton, they don't buy chemicals from shop instead, prepare organic amendments like panchakavya, Jeevamirtham, vermicompost and botanical pest repellent at their own farm and use them. By using these organic amendments, the cotton plants looked healthy with decreased incidence of insects and diseases. Padmavathi said that she got a yield of 12 quintals of cotton seed lint from an acre of land this particular year.

Seethalakshmi from Adireddiur village expressed that earlier she used to apply inorganic fertilizers like urea, potash and DAP to the cotton field. But after the cotton soil being tested and through the capacity building programmes (through FFS), inorganic fertilizers like urea, potash were decreased and usage of organic amendments like farm yard manure, neem cake were used by which the plant looked healthy with optimum yield (8 q/ha).

Kumar from Adireddiur village is a regular participant of Farmers field school. He said that apart from agricultural activities, the exposure being given on allied activities like mushroom cultivation, azolla cultivation and vermicompost production was very much helpful in enabling him to take up a self employment activity. He reported that he is earning RS.1000 every month by selling vermin compost.

Impact:

- Farmers were able to take the right crop management decisions at every stage of the crop.
- Farmers developed a regular habit of visiting their field and monitoring crop pest and diseases
- This extension approach (FFS) was found effective in imparting the required knowledge and skill related to cotton cultivation as there was a frequent contact (weekly) between the farmers and the facilitators and the farmers queries were cleared then and there
- 80% of the farmers were able to differentiate the pests and defenders of cotton and realized the importance of conservation of natural enemies.
- Few ITKs (Indigenous technical knowledge which was of low cost and effective) were recorded and the same was replicated in every individual FFS farmer's field.
- Though controversies on pesticidal vs Non pesticidal management of cotton production arose among the farmers, they ultimately accepted the concept of IPM technology in cotton cultivation.
- Group dynamics, participatory group presentation and discussion were a part of the Programme. As a result, a sense of cooperation and team coordination developed among the farmers which were helpful in spreading and sharing the technologies with each other.

Farmers in the learning process - Technological up gradation in cotton through Farmers Field School approach


