

## FARMER'S NOTEBOOK

# A new concept called ecological engineering to reduce pests

Efforts are on to make the region a pesticide-free zone

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**E**rode district alone has 32,000 hectares under paddy cultivation. The district runs across the Cauvery and Bhavani river basin.

Due to unfavourable climatic conditions pest infestation such as rice stem borer, leaf folder, ear head bug, gall midge, rice thrips — all common in paddy cultivation — create havoc every season leading to nearly 30 per cent yield loss.

Many farmers mostly rely on chemical pesticides (insecticide and fungicide) for managing both pests and infestations. If they are advocates of organic farming then they use bio pesticides to keep the menace under control.

## Biodiversity

Presently a new technology called Ecological engineering for pest management has been introduced by National Institute of Plant Health Management (NIPHM), Hyderabad to aid farmers maintain the biodiversity and keep pests under control while at the same time maintaining the paddy eco-system.

Since in southern Tamil Nadu, it is season for paddy cultivation efforts are currently in progress to popularise this concept for promoting bio-intensive integrated pest management method.

The technology trial was adopted in Singiripalayam village and Mr. Karthikeyan, a paddy farmer who adopted this technology in his field, says:

“Due to excessive pesticide use farmers like me often encountered



**COLLECTIVE INVOLVEMENT:** Farmers visiting the field to see things personally.

— PHOTO:SPECIAL ARRANGEMENT environmental problems. The soil health also got deteriorated. I find the new technology encouraging, since there is a 45 to 50 per cent reduction in pest population.

“I have also observed natural predators on pests like damselfly, praying mantises and spider population have increased in my field.”

The specialist team conducted an analysis to study the pest defender ratio for plant health and found that the natural enemies are able to maintain the pest population which are infesting the paddy crop.

## Natural predators

“In normal situation we use to go for chemical spray, sometimes even three to four sprays to control pests and diseases. By adopting this technique no chemical spray is required. Natural enemies which prey on the pests are allowed to flourish in the fields. By adopting this method I could save nearly Rs.5,000 for a hectare towards the cost of purchase of chemical pesticides during one cropping season,” says

Mr.Haridas another farmer. The trial has been implemented for different crops such as blackgram, cowpea, green gram, mustard, sesame, marigold, tulsi, castor and sunflower and found effective.

The Kendra initiated a capacity building programme for farmers in the district and on farm training was given on production of bio-control agents and bio-pesticides to ensure the timely availability of bio-inputs at the farmer level.

## Community approach

“A collective approach by the farming community on adoption of this technology will not only suppress the pest population but also enhances the soil health through organic bio-fertilizer utility.

“About 25 farmers from Andhipalayam village near Gobichettipalayam and 30 farmers from Kallipatti in T.N.Palayam block have been initiated into this concept,” explains Dr. P. Alagesan, Programme Coordinator, Myrada Krishi Vigyan Kendra, Gobichettipalayam, Erode.

A three days field training was organized for the farmer club members, to get first hand information on this approach and an exposure visit was organized by National Institute of Plant Health Management (NIPHM), Hyderabad for a week.

In both the villages, farmers are collectively involved in the production of bio-inputs, predators and parasites for managing the pest population.

## Pesticide free

The community approach on this ecological engineering is expected to bring the region as pesticide free zone and enhance the soil microbial activity in the paddy eco system. Plans are on to introduce this method in other crops like cabbage, cotton and groundnut in the coming season.

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