

## HOPE FOR CHILLI FARMERS

Having cleared their debts, chilli farmer Muvva Ramachandrao and his wife Annapurna can finally enjoy a sense of relief. They credit their family's good financial standing to this year's robust harvest of chillies, sold at prices 14 per cent higher than last year's average. Both farmers consider their adoption of new pest management techniques to be fueling the success.

For the first time in his 35 years of farming, 48-year-old Muvva is learning about integrated pest management, or IPM, for chilli farming. He has been introduced to new farming strategies that intend to drive pests away effectively, improve crop quality and raise productivity. He and his 27-year-old son Subbarao have attended more than 20 weekly IPM training sessions in the convenience of their South Indian village, Ravipadu.

Ravipadu is one of six villages participating in a pilot IPM project for chilli farmers in Guntur District of Andhra Pradesh, South India's largest state. CropLife India spearheaded the project with the help of dedicated extension officers that now mentor 25 farmers in every village. The positive response from local governments and farmers led to a recent project expansion to three more villages in Guntur.

### Big returns

Muvva has learned and adopted various techniques through his participation in the IPM project, including strategies concerning the close monitoring of crops. He often counts bugs in his field, identifying each kind as either harmful or beneficial. If the infestation numbers reach a critical point – known to extension officers as the economic threshold level, or ETL – Muvva takes action by treating his plants. He knows not to worry, though, about a few infested plants or leaves, because it is not worth the trouble of spraying crops when the losses would be negligible.

"I don't spray unless pests reach ETL – that's 10 per cent infested plants for thrips, five mites per leaf, 10 to 15 per cent infested plants for aphids," Muvva explains.

Muvva also now installs bug-traps in the corners of his field to protect the chillies from pest damage. His traps are filled with pheromones, which are biological substances that attract insects into the traps and away from his field. Besides ridding crops of pests, Muvva uses the trap to determine farm infestation based on catch size.



Muvva Ramachandrao of Ravipadu village grows chillies and cotton.

Every other day, Muvva walks through 1.2 hectares of chillies, inspecting a diagonal row of plants for thrips, mites, aphids, borers and other pests. He carries a lens to help spot tiny mites on the leaves. These activities take him an hour or two, and his son sometimes pitches in.

"I don't mind the added work because it benefits me," says Muvva, despite the arduousness of the task. In the past, he had been losing 30 to 40 per cent of his chillies to pest damage, but with careful monitoring, he could reduce losses to only 10 per cent or less. And, by treating the chilli crop only when necessary, he was able to cut his number of sprays up from 20-22 times down to 12-15 times a year. These improved farming practices led to yearly savings of 3,500 to Rs 4,000 rupees per acre.

### Household profits

Apart from ways to correctly deal with pests, Muvva's participation in the IPM programme has taught him strategies to use at early stages of planting. In the past, he would blindly apply fertiliser to his farm, which is often an inefficient practice. Aiming to encourage new

habits, project officers tested his soil to discover which nutrients it lacked, and now Muvva says: "I apply what is deficient only." He also discovered that treating his seeds with pesticides before sowing in the field saves five to six spray cycles. With these new practices, Muvva's family can now focus on other productive activities, instead of dedicating all of their time, money and energy to farming.

When his chillies started to look healthier, turning brighter in colour, Muvva realised that his new techniques were indeed producing improved crop quality. Soon, one of the biggest chilli exporters in India began to buy directly from Muvva's farm. A government institute at Kochi, set up by the Spices Board to test chillies for export quality, facilitated this process. Muvva knew his produce passed the test with flying colours when the exporter paid premium price for his harvest.

With the savings and improved earnings, chilli farming has turned out to be quite profitable for Muvva's family. Becoming debt-free was only one of the many benefits for the household pocket.

"We were able to host a community celebration for my son's wedding," Muvva shares, illustrating another example of his improved livelihood. And after the profits took care of household expenses, there was even enough left to buy gold for wife Annapurna and 25-year-old daughter Rajani. For Muvva's family and others in his community, gold is more than just a pretty accessory; it is an heirloom and wise investment for the future.

### Community benefits

Success is permeating into the rest of the community as well. When the IPM project started in Guntur, ETLs for different pests were painted onto village walls. Now Muvva knows these numbers by heart, and village farmers outside of the project are also gaining invaluable knowledge from the wall paintings.

Every day, dedicated project scouts monitor the pest situation around the village farms. Next to the wall paintings, scouts and extension officers write down treatment options to combat specific pests that are escalating in the fields. Any village farmer is free to use the advice and, thus, reap the benefits.



Village walls in Guntur are learning resources for farming communities.

### Safe and sound

IPM training has taught Muvva a variety of ways to deal with pests, but crop protection chemicals continue to be an important tool for him. Something has changed, however, in the way he uses these products as a result of his training experience.

A new consciousness about self-protection from chemical exposure has emerged: "I now wear long-sleeves shirt and long pants when spraying, whereas I did not care much about clothing choice before," Muvva explains.

Safety awareness also curbed the family's old practice of recycling empty chemical containers for household use. In fact, the new household rule is to store all chemicals outside the house.

### Champion

Muvva shows off his trophy from winning a farmer quiz run by an agricultural college. In the contest, he was asked to define ways to get rid of pests besides with the use of pesticides. His IPM practice of using pheromone traps was the first strategy that came to mind, and the answer helped him bag third prize.

As for his IPM example, Muvva is a champion in every way.