

SAFE USE INDIA

TEACHING STEWARDSHIP

CropLife India's Safe Use of Pesticides Project touched every life in two agricultural villages.

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ON the coast of Andhra Pradesh state in southeast India lies Guntur District. While the state of Andhra Pradesh is well known for intensive agriculture with its high yielding cotton, chillies, rice, pulses, vegetables, oilseeds, sugarcane, and fruit, one-third of the state's crop is typically lost to pests despite the farmers' use of 22.5% of the total pesticides produced and marketed in India, and nowhere in the state are more pesticides used than in Guntur District.

The farmers of the district are beset by many problems: low literacy, the indiscriminate use of pesticides, non-adoption of safe use practices during storing, handling, and using pesticides, lack of knowledge of equipment maintenance, and locally made, defective sprayers all contribute to the area's disturbing situation.

But for two villages in Guntur Dis-

trict, a helping hand was extended that ultimately could extend and improve the lives of everyone it touched.

That hand came from CropLife India, which chose Guntur District for the launch of its Safe Use Pesticide Project. With support from CropLife Asia, CropLife India selected the villages of Vinjanampadu and Kattavaripalem — two villages with farmers known for liberal pesticide use and non-adoption of safety measures — as the settings to launch the project. The people of those villages would soon see their lives change for the better.

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Training offered by CropLife India's multifaceted Safe Use Project included sessions in the field, in school classrooms, and in clinics.



The Project Begins

The mission began in 2002 with 50 farmers in each village, and each year, 50 more farmers from each village were added to the project.

The most immediate need was to educate the farmers and pesticide applicators, and teach them proper safety measures when dealing with pesticides. This involved weekly residential and field training to create awareness of proper use, and to allow the farmers and applicators to learn the techniques through practice.

The project leaders also learned from the farmers: based on local needs, topics were developed to transfer needed technologies to the farmers and applicators. These topics included pre-seasonal orientation, cropping, variety selection, ecosystem analysis, integrated pest management (IPM), and judicious use of pesticides. The farmers were taught to identify crop pests and beneficial fauna, they were introduced to the concept of resistance, they were taught to scout their fields and to identify the proper chemical, dosage, and use practice for each pest problem. They learned about personal protective equipment (PPE), proper upkeep of spray equipment, safe handling and storage of pes-

ticides, proper disposal of containers, and complete lifecycle management of the pesticides they used.

Whole Family Approach

CropLife India was aware that farmers and applicators are not the only stakeholders when it comes to safe use. Since pesticide use affects everyone, everyone was involved in the project. Female family members and the children of farmers and applicators were educated about the importance of safe handling and use of pesticides. Local school teachers were involved in the program, and organized essay writing, debate, and drawing competitions centered on the environment and safe use. These efforts helped teach the younger generation the same important lessons that their parents were taking to the fields.

The project also extended to numerous gatherings that would be well attended by area farmers. The project was involved with an IPM Field Day organized by the Indian Department of Agriculture at Ananthavarappadu; it participated in Farmers Day at Lam, Guntur, which was attended by 10,000 farmers; and it spread its message at a Field Day project sponsored by Bayer Crop-

Science as well as a number of other exhibitions organized by the Indian Department of Agriculture.

The word was also spread through a campaign of radio broadcasts on All India Radio (AIR) including a talk from the project coordinator and a recorded broadcast on the progress of the project. On top of this, local media such as area newspapers were involved as much as possible, and materials produced by the project were distributed — including color posters and handouts demonstrating safe use practices and written in local languages, as well as diagrammed for those who could not read.

Spreading Safety

The project endeavored to improve the health of the communities through several strategies to build awareness of health issues and treatment options.

A training program was created to teach doctors and clinic workers about pesticide poisoning, first aid, and treatment. It also organized free medical camps at both villages with the help of other community groups to tend to the farmers. These camps were used by over 500 farmers in each village. Animal health camps also were conducted at both villages, and all of the project farmers and applicators were provided with complete protective clothing kits and taught how to use them properly.

Lifesaving Impact

The project was re-evaluated by follow-up visits in 2004 and compared to a

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survey originally conducted in 2002. The results were telling, and showed that not just the farmers involved in the project had benefited, but since the survey was given to other farmers and applicators who also improved their pesticide use practices, it shows how the entire area was uplifted.

Measurable Results

While the first survey measured that only 64% of farmers and applicators read product labels before using a pesticide, 100% of those answering the follow-up survey reported that they examined labels. Pesticide applications were reduced dramatically, from between 20 and 25 applications on cotton down to 10 to 15; from between 20 and 30 applications on chillies down to 10 to 15; and from two to six applications on rice down to two to four. Safety awareness about pesticide poisoning had skyrocketed, from less than 5% having any awareness of poisoning to over 90%. The number of farmers storing pesticides in their homes dropped from 48 to five while the number keeping them outside rose from seven to 50. The number with special designated storage areas also increased, from four to 10.

Pesticide application methods and

technologies improved as well. The number of farmers and applicators using locally made sprayers dropped from 94 to 50, while other, safer brands increased in use from six to 50. The method of mixing pesticides in water changed thanks to education efforts: in 2002, 20 farmers reported mixing chemicals with their bare hands, while 80 used stirrers. In 2004, none of those surveyed reported using their hands, while 95 used stirrers and five used plastic mugs.

Hygiene was another major area of improvement. The original survey logged 25 farmers or applicators who used soap to wash their hands and faces following an application; in the follow-up survey, 95 reported doing so. Originally, only 15 reported bathing, while the follow-up survey showed 90 doing so. The original survey only had 25 report that they changed their clothes and washed them; in the follow-up survey, that number rose to 95.

Container disposal also improved. Originally, 65 respondents said they leave their containers in the field after use and 22 said they re-use the containers, while only 13 bury, burn, or return the containers to retailers. In the follow-up survey, only five said they leave con-

tainers in the field and three said they re-use containers, while 40 buried them and 45 burned them.

Lastly, the use of PPE and other protection also grew considerably. In the initial survey, no respondents wore gloves, goggles, or caps (though 10 wore turbans) during applications. In the follow-up survey, 85 wore gloves while another 85 covered their hands with a waterproof material, 90 wore caps and 109 wore turbans, and 40 wore goggles. Similarly, the original survey demonstrated that no respondents wore face shields to prevent inhalation, and only five so much as covered their faces with cloth. After the project, 90 reported using face shields while another 70 covered their faces with cloth, and 85 wore the complete protective clothing as recommended.

The numbers tell a remarkable story. By all measurable standards, the project worked. Awareness was raised, and practices were improved.

But the real success of the project may not be so easily measurable. To the people living in Guntur District, the Safe Use Project's success is a matter of improved health and safety. There's no telling how many poisonings have been avoided or how many years of healthy living have been salvaged for the families of Guntur District.

The project aimed to give the villages training and education — but it also gave them life. 🌍

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