

SAFE USE PROGRESS IN ASIA

Dr. H S Chiang (China), Marjudin Kusnawiria (Indonesia)
& Sayan Sawangduam (Thailand).

CropLife Asia, through its various National Associations, actively supports and co-finances a number of Crop Stewardship programmes throughout Asia. One of them, the Safe Use programme relates to showing farmers the correct way of dealing with Crop Protection Products, from measuring doses to delivering the product to the crop.

CropLife Asia supports projects in nine countries in Asia; here we take a snapshot look at three – the newest and the oldest programmes.

CHINA

At present, Crop Protection Products (CPP) are still the main tool for controlling pests and diseases in China. However due to the ever-increasing number of new CPP products and formulations, mixed products being used and lack of guidance and training of Chinese farmers, coupled with the use of forbidden CPP, the abuse of CPP is fairly common phenomenon. As a consequence cases of CPP poisoning happen from time to time and CPP residue in vegetables/fruit/tea often significantly exceed MRL standards. Therefore the need for safe use knowledge has become an imperative task.

Over many years, member companies of the Crop Protection Association of China (CPAC) and the National Agricultural Technology Extension & Service Centre (NATESC) have cooperated on a wide range of subjects. In 2001 the emphasis moved to Safe Use and CPAC's Safe Use committee initiated a joint project with NATESC for farmers' training and education on the safe use of CPP.

CPAC SU Progress - 2001

Starting in June 2001 both parties jointly launched a "Popularisation & Train-

ing Cooperative Program of Safe Use Technology on Vegetables" Project which set up demonstration sites in five villages in five provinces across the nation for popularising Safe Use technology, training farmers and curbing the use of inappropriate CPP on vegetables.

A ceremony to kick off the CPAC/NATESC cooperative project was held in August 2001 with participation from the Chinese Ministry of Agriculture, the Beijing Municipal Government, and CPAC member companies. Five demonstration sites for CPP safe use have been set up in Daxing in Beijing, Minhang in Shanghai, Liuyang in Hunan, Conghua in Guangdong and Leting in Hebei, and trainings courses were held in each village between August and November, 2001. All the training sites are in counties with vegetable planting area of over 1 million Mu (66,000 hectares) each.

The Next Step

An evaluation of the effect of the first half-year will be done on 20/21 February 2002. Five more training courses will then be done in March/April 2002. Sixty representative farmer families will be selected at each site to check and test their safe use knowledge, field operation, CPP application, as well as CPP residue levels in vegetables before and after the program in order to evaluate the program impact.

The Future

Although starting small it is imperative to keep the momentum at the existing sites and extend the program to more provinces. CPAC will carry on the safe use project in a model similar to that of 2001/2002, but plans to include more provinces in order to spread the message of CPP safe use gradually to all over China. In addition training will be modified to extend from

CPP safe use to scientific use within an Integrated Pest Management (IPM) strategy, i.e. applying the right CPP at the right time and in right dosage so to achieve optimum effect with lowest cost; and to extend from vegetables to safe use CPP on fruits, flowers, traditional Chinese medicines, tea, etc.

INDONESIA

The Safe Use Project (SUP) in Indonesia was officially opened by the Director of Plant Protection of Department of Agriculture in Jakarta on March 16, 1999. The launch of the project was carried out in the Brebes District on June 15, 1999. Brebes has been chosen as a project area due to intensive misuse of Crop Protection Products. The main crop grown is shallots. The SUP was originally planned for a six-year duration and will be reviewed afterwards. The success of SUP will be depend on a measurable change in farmers' behaviour on the use of CPP thus for this purpose, baseline data was collected by an independent third party in 1999. The SUP now has two full-time staff that report to Indonesian Crop Protection Industry Association (ICPIA).

Starting Up

Two villages with a total 2,435 farmers/land owners were chosen as pilot project areas. From this number, 160 farmers were trained on Safe Use, of whom 10 have been selected as farmer trainers. The training on CPP offered 10 topics within a two hour session on pesticides; formulation; toxicity; risk & contamination; safety; purchasing, transportation & storage of pesticides; first aid; label reading; use of protective clothing; and the correct application techniques

Also around 36 housewives also received training on risk & contamination; safety;

purchasing, transportation & storage of pesticides; and first aid. In addition government researchers conducted a practical demonstration on production of organic fertilizer using Effective Microorganism and the Local Department of Health, supported financially by SUP, has conducted Cholin Esterase tests in the project areas, which gives an indication of exposure to organophosphate pesticides. Results from a total of 51 trained farmers and 45 untrained farmers showed that in one village, 15 % of trained farmers were contaminated against 30 % of untrained farmers and in a second village those figures were 25 % against 45 %.

Media use has been limited with the SUP activities published three times in newspaper, contained in six radio broadcasts and appeared twice on TV.

Monitoring

In addition to behaviour surveying by a third party, SUP also conducted an observation survey. This survey watches the practice in handling the CPP. At the end of observation, the observer may interview the farmers. The time spent on the observation survey was high thus the number of farmers observed was low. SUP, however, is keeping this survey going in order to monitor the real practices or behaviour of farmers. Comparisons from 73 trained against 19 untrained farmers show:

- Wearing long trousers: 81 % vs 84 %
- Wearing long shirt: 97 % vs 74 %
- Wearing face mask: 85 % vs 42 %
- Reading label before spray: 93 % vs 53 %

The behaviour opinion survey is underway and will be implemented.

Impact

As the third party survey is not yet complete there are no independent records on the change of farmer behaviour in handling CPP, however based on the farmers' feedback during the meetings and from the observation survey data, the programme appears to have been beneficial.

THAILAND

By far the longest running of the Safe Use Projects is that in Thailand. The Thai Crop Protection Association (TCPA) and CropLife Asia jointly initiated the Thailand Safe Use Program (SUP) in 1991. From the very beginning of this programme several Thai government agencies including the Department of Agriculture



Safe at arms length: Just what SUP training strives to change.

(DOA), the Department of Agricultural Extension (DOAE) and the Food and Drug Authority (FDA) lent their support. Additionally, TCPA's on-the-ground partners are the Royal Project (founded by H.M. The King of Thailand) and Thai Worldview, an NGO. The main geographical focus for this program is in the northern four provinces of Thailand.

SUP Objectives

- To train farmers in the correct and judicious use of crop protection methods, as part of an IPM strategy. TCPA supports the IPM principle that pesticides should only be used when pest levels may be judged to threaten adequate economic returns (economic threshold levels).
- To provide information on the Safe Use of crop protection substances, with a view to minimising cost, optimising produce quality and ultimately improving farm income.
- To assist the government and NGO sectors through the provision of resource materials, personnel and training on the Safe Use of crop protection products.
- Ensure all TCPA members conduct their activities relevant to crop protection in compliance with the FAO "International Code of Conduct on the Distribution and Use of Pesticides."
- To support sustainable agriculture development in ways which benefits farmers, consumers and environment.

Major Activities

Farmer Training: Farmers are offered intensive training on safe and correct use of pesticides. This work is mainly targeted at the farmers working within the 35 centres of the Royal Project Foundation. The "Mixed Media Mobile" technique is used. This is designed to encourage "farmers to teach farmers" through the use of a variety of media e.g. publishing media, broadcasting media and visual media. To date about 6,000 farmers have been trained through

this method.

Farmer Training by TCPA staff members: To date more than 800,000 farmers have been trained over the ten years.

Train the Trainers: To date more than 2,000 government officials and NGO staff have been trained in the Safe Use of crop protection products, so they in turn may train farmers in Safe Use.

Retailer Training: In collaboration with the DOA, now more than 12,000 retailers of pesticides have been trained on how to advise farmers on the safe and correct use of pesticide.

Medical Training: In collaboration with the FDA, more than 1,900 medical officials have to date received training on the treatment of pesticide poisoning.

Education: More than 127,000 students in 632 schools have attended courses on the safe use of pesticides. In addition, a course entitled "Safe and Effective Use of Pesticides" has been adopted and is being taught at Kasetsart University's Faculty of Agriculture.

Protective clothing: More than 459,000 items of protective clothing and safety equipment for use in pesticide application have been distributed throughout the country.

The Future

During its 11 years of operation, the Safe Use Program has demonstrated that farmers can change the way they use CPP if they are given appropriate support. The achievements of the Safe Use program are the result of significant investments in time, knowledge information, specialist support and the coordination of inputs from the government, industry and NGO sectors.

It is this combination of all three stakeholders that is the way forward, and should be used as model for other developing countries.