

# Asian Farmers Over-use Pesticides

PESTICIDES, or residues of it, may be served with contaminated vegetables.

Asian vegetable farmers over-use pesticides. Pesticides are applied on vegetables, for example, up to harvest — a practice widespread in Indonesia, Malaysia and the Philippines.

In Malaysia, a 1983 survey found significant levels of residues on tomatoes. At least four tomatoes out of six samples analysed were found to contain pesticide residues in excess of safe limits. Most of the residues, however, were found on the peels and could be removed through washing.

In the Philippines, pesticide residues have been detected in 1988 on string bean obtained from various markets in Manila. About 16 per cent of 96 samples were found to contain significant levels of insecticide residues.

On cabbage, detectable residues were concentrated on the outer leaves. A considerable amount of the residues can be removed by washing a removing the outer leaves.

Early in 1987 in Malaysia, a rapid residues check found seven types of vegetables with excessive insecticide and fungicide residues. The vegetable — which included spring onions, Chinese celery and Chinese parsley — were declared unsafe for consumption.

It is now indisputable that the problems encountered in

vegetables in the Asian region on pesticide misuse are generally widespread, acute and grave," says L. Guan-Soon of the Pest Science Unit, Central Research Laboratories, Malaysian Agricultural Research and Development Institute (MARDI), Selangor State, Malaysia.

No less than 100 species of vegetables are cultivated in Asia. On average, the yearly per capita output for vegetable production increased from 884 in 1975 to 967 in 1985.

Tropical Asia is conducive for the proliferation of pests. Severe attacks of cabbage by the diamond back moth may cause damage anywhere from 40 per cent of crops in Vietnam to 100 per cent in Indonesia, Malaysia and the Philippines.

"In many parts of Asia," says MF Guan-Soon, "an attitude of desperation exists, leading farmers to resort to rampant use of pesticides. Many feel vegetable cultivation is not possible without the massive use of pesticides, and the faster a chemical can kill an insect pest the better it is."

A common practice is frequent pesticide spraying. In Malaysia, at least 50 per cent of farmers surveyed spray two or three times a week against the diamondback moth. The continuous search for more potent products to replace less effective ones on use is common.

Another common practice is the use of pesticide

"cocktails." About 65 per cent of Malaysian vegetable farmers surveyed in 1977 commonly mixed two or sometimes more pesticides for spraying cabbage crops. In the Philippines, half of farmers interviewed in 1982 said they used pesticide mixtures.

Because of excessive use pests are developing resistance to pesticides. Resistance against fungicides has also been reported.

**The problems of over-using pesticides in Asian farms are now widespread, acute and grave**

"Farmers are subtly trapped into the cycle of pesticide dependency and constantly forced to seek more potent and effective pesticide," says MF Guan-Soon.

Pesticide poisoning is on the rise. In the Philippines, 97 cases of pesticide poisoning with 14 deaths were reported between 1980 and 1982 by Benguet General Hospital in the Mountain Province, a major vegetable-growing area. In Thailand, there were 4,046 cases of pesticide poisoning in 1985 alone. One alternative may be Integrated Pest Management or IPM. In 1987 there were more than 107,000 hectares of vegetable in China raised under IPM. This meant

growing the vegetables naturally, using whenever possible insect predators to fight pests and using organic fertilisers. Pesticides and fungicides are used only when necessary — for example, if the number of pests cannot be controlled anymore by other means.

These vegetable farms (found in 200 cities in 22 provinces) produce 6.4 million tonnes of vegetables. By IPM, pesticide residues were maintained below the tolerance limit. About 85 per cent of losses caused by pests can be saved. IPM is estimated to fetch a net profit of 1.8 billion yuan a year.

In Indonesia, Thailand and Vietnam, IPM packages are also practised for some vegetables. An important part of these programmes includes the natural enemies of pests.

In Vietnam, it gives priority to using natural enemies, complete post-harvest clearing, periodical surveillance for pest every three to five days and intercropping cabbage and tomato.

In the Philippines, only limited testing of IPM for vegetables has been done, aimed at the diamondback moth on cabbage, late blight of potato, and thrips of cucurbits, tomato and sweet potato. The priority is to use resistant varieties as the first line of defence, the full use of natural predators

against pests and using safe pesticides when necessary.

The beneficial impact of IPM can best be illustrated by the successful project of the Food and Agriculture Organisation for rice-growing in the Indian sub-continent and Southeast Asia. It was shown that IPM can guarantee that yields of rice will not go down even if pesticides use was reduced.

The project showed that IPM guarantee that farmers will save money, usually from reduced pesticides use. For example, insecticide costs were reduced by more than 50 per cent.

On a national level, because almost all pesticides are imported, this much reduction achieved through IPM means a large saving to national economies, amounting to US\$65-10 million per year to the Philippines and Thailand, and as much as US\$50-100 million per year to Indonesia, according to Mr Guan-Soon.

Vegetables are increasingly an important source of food income for small farmers, especially near cities. Now that large areas of Asia are covered with new high-yielding varieties of cereal crops, vegetables could well be the next major frontier in the fight against malnutrition and hunger.

— DEPTHNEWS ASIA

**G**HANA is unwittingly nurturing an environmental disaster by allowing the use of asbestos waste in households and in lane and road building.

Tonnes of waste from a major processing plant have been dumped at sites around Accra, even though asbestos has been shown to be highly toxic. The waste from the Fulgrip Asbestos Processing Factory has been unloaded at about 40 locations around the city. Each site holds about three tonnes.

Several tonnes of the waste have also found their way to villages surrounding Accra. Madina Naa Kwale, in Amartia, 30 kilometres from the city, says she has been told the waste is "low cost cement."

Some homeowners paid truck drivers to bring waste from the Fulgrip plant, which is near the military hospital in Accra. The buyers use the waste to fill potholes and to level up spaces in the yards of compound houses.

Medical experts have shown about seven diseases could result from the inhalation of airborne asbestos fibres. They include asbestosis, a respiratory disease that scars lung tissues. Doctors say that symptoms of asbestosis include a dry, crackling sound in the lungs when breathing.

Breathing in the fibres can also lead to lung cancer and other cancers of the internal organs including the kidney, larynx and esophagus.

Professor Dorm-Adzobu, director of programmes at the Ghana Environmental Protection Council, said investigations showed that the Fulgrip

# DEADLY ASBESTOS USED IN VILLAGE HOUSEHOLDS

Asbestos fibre, known for its fire resistance but also for causing diseases like asbestosis, is rarely used in the industrialised world anymore in places where it will come into contact with people. In the developing world asbestos is still used for many commercial purposes with dangerous side-effects for people in contact with waste asbestos. Gemini News Service reports how asbestos waste in Ghana is being sold to villagers who unwittingly use it for things like filling potholes. By Gerge Frank Asmah

factory had contacted the Waste Management Department of the Accra Metropolitan Authority about disposing the waste.

Dorm-Adzobu charges that the department "sold the toxic asbestos wastes to households, communities and petty road contractors."

BM Laryea, principal environmental health officer of the Accra Metropolitan Authority, denies that Fulgrip had ever contracted his organisation to dispose of the toxic waste. But local residents say drivers from Fulgrip are still selling them asbestos.

In Ghana asbestos is used mainly for water and waste pipe products and roofing sheets. These products use as

bestos fibres bound together with other raw materials like cement.

Environmental experts say landfilling is the safest way to get rid of asbestos. They recommend that a special landfill be put aside for asbestos, although no such facility exists in Ghana.

Once landfilled, asbestos should be covered within 24 hours with a minimum of six inches of non-asbestos material, including heavy clay or cement. The waste should receive an additional 30 inches of fill after that.

Despite expert advice, Ghana still has an asbestos problem and the hazardous waste keeps mounting daily in several locations.

— GEMINI NEWS

fronted Amazon is under threat: "After 15 years of relentless exploitation for the pet trade, scientists warn that the species may be on the verge of a population crash in Argentina."

As Argentina's wild bird populations diminish, trappers are turning to neighbouring countries. Brazil, Paraguay and Bolivia have banned the export of their wild birds, but certificates signed by Argentine officials disguise the fact that birds trapped illegally in neighbouring countries are being laundered through Buenos Aires airport.

Knights wants a European ban on wild-caught birds. The EIA, together with the Royal Society for the Prevention of Cruelty to Animals (RSPCA) and the Royal Society for Protection of Birds (RSPB), is lobbying the European Commission with some hard facts: more than four million birds are trapped for Europe alone, but three million do not survive to reach the pet shop.

Last year a KLM flight containing 8,000 birds for a dealer in the United States, passed through Heathrow airport in London where 1,200 birds were discovered to have died already — among them flamingos in crates too small for their bodies.

Caroline Jackson, a British Member of the European Parliament, has prepared a report for the European Commission outlining the cruelty of the trade and the threat to the survival of over 40 species of birds — 30 of them parrot species.

The Indian government has passed laws severely restricting the number of species that can be trapped. But practically all the restrictions and licensing schemes agreed by 119 countries over the last 15 years, are simply being ignored — nothing less than a total ban will do, says Knights. In the US a bill has been introduced to end the trade. — GEMINI NEWS

## Environment Protection: Could Switzerland be a Model Pupil?

### Switzerland — 700 years after

The Swiss minister of the interior and the environment, Flavio Cotti is surprised to see "how much Switzerland succeeds in protecting the environment arouse admiration (abroad)". This is a fact: according to surveys conducted by the Swiss National Tourist Office, such qualities as tidiness, clean air and general environmental concern are part of the image of Switzerland in many countries. So could this small country in the heart of Europe serve as a model pupil where environmental protection is concerned?

S

WITZERLAND'S laws

with international regulations

on the subject: its rules are

more strict than in the

European Community, and

limits imposed on toxic products

are more rigorous and more

widely applied than in many

other countries. For example,

taking the number of its

inhabitants into account,

Switzerland has the weakest

dioxide emissions: its rules on

exhaust fumes from motor

vehicles are, along with Austria's,

the strictest in Europe. Its air

protection regulations

drastically limit the emission of

harmful fumes from industrial

production. In world terms,

Switzerland belongs to the

small circle of states which are

the most advanced in the fight

against chlorofluorocarbons (CFCs).

In June 1990, it

launched a programme aimed

at banning CFCs and other

substances suspected of

destroying the earth's ozone

layer. The government has

announced its firm intention

to reduce chemical products

and eventually ban them within

a matter of a few years. Aerosol sprays containing gas in which

CFCs are used will already be

banned from 1991.

Towards International Harmonisation

Switzerland has no intention to

strict rules only on its own

territory. It is actively and

succes-

s-

fully involved in moves to

wards harmonising environ-

mental

mea-

sures

at the

international

level.

&lt;p