



Grow the Crop

Handout 14

Risks Associated with Farm Chemical

HEALTH AND SAFETY DURING PESTICIDE APPLICATION

Not all pesticides kill in the same way. Pesticides kill by disrupting or interfering with some vital function of the pest needed for it to survive. This is called the pesticide's mode of action. For, example, the mode of action of many insecticides is interfering with the insect's nervous system. It is important to know a pesticide's mode of action as this is the same way in which human 's could be harmed by pesticides. Therefore, pesticides can be very dangerous to humans.

Risks associated with exposure to pesticides

Pesticides can cause quick immediate (acute) or slow in the future (chronic) health effects. Some acute effects might be:

Damage to the nerves:

- Headache, dizziness and weakness
- Tremors
- A lot of spittle developing, sweating, tearing of eyes
- Blurred vision
- Nausea and vomiting
- Tingling fingers
- Numbness
- Convulsions

Damage to the lungs:

- ✦ Difficulty breathing
- ✦ Lungs fill up with fluid
- ✦ Failure to breathe leading to death

Damage to skin:

Rashes

Damage to eyes:

Eye irritations

Chronic pesticide exposure is linked to increased risks of developing cancer and disorders such as Parkinson's disease.

Some chronic effects may be:

- Permanent eye damage
- Developing allergies and/or asthma
- Cancer (e.g. leukaemia, brain tumours)
- Effects on the immune system
- Birth defects

- Not able to have children
- Developmental problems in children
- Neurological diseases
- Lung, liver and kidney problems
- Parkinson's disease

Some factors make people more susceptible to developing pesticide related diseases. These include:

- Children who are still developing/growing are very vulnerable to long term effects
- Drinking alcohol
- If the person has a liver disease
- Being undernourished for a long time
- Pregnant women
- Occupation (e.g. farmers, pesticide applicators and mixers, green house workers)
- Women and men of child bearing age
- Elderly
- Individuals with allergies, asthma or other respiratory diseases
- Individuals who are HIV positive or have AIDS
- Individuals with TB
- Individuals who are chemically sensitive
- Individuals who are chronically ill
- Individuals with genetic variations that leads to increased susceptibility

HOW ARE FARMERS EXPOSED TO PESTICIDES?

There are many ways in which farmers can be exposed to pesticides and their harmful effects:

- ✚ Chemicals used in the home to control cockroaches, ants, flies, bed bugs, etc.
- ✚ Chemicals used in agriculture – producing crops
- ✚ Food that you eat may have pesticide residues
- ✚ Pesticides in the water you drink

The four main ways that pesticides enter farmer's bodies are through getting pesticides on the skin, drinking/swallowing pesticides, pesticide splashes getting in the eyes and breathing in pesticides in the air.

HOW DO PESTICIDES ENTER THE BODY?

- ✓ Through the skin (dermal)
- ✓ Through the mouth (oral)
- ✓ Through the lungs (respiratory)
- ✓ Through the eyes (ocular)

Some ways of being exposed are:

- ◆ Handling/mixing pesticides, especially if you are not using gloves, respirator, plastic coveralls and boots
- ◆ When applying pesticides to the field, etc.
- ◆ Drinking contaminated water
- ◆ Eating food that has pesticides on or in them
- ◆ Dipping animals in pesticides
- ◆ Wearing a dust mask rather than a respirator (may breathe-in pesticide if mask is wet)
- ◆ Wearing improper gloves (e.g. latex gloves do not provide protection)
- ◆ Breathing in pesticides fumes that we or others spray
- ◆ Touching crops, flowers or other surfaces that have been sprayed
- ◆ Drinking water that has pesticides in it
- ◆ Walking barefoot on surfaces that have been sprayed
- ◆ Walking bare legged in wet fields where the pesticides get onto the legs from the wet plants
- ◆ Eating food that has pesticide residues in them
- ◆ Chemicals used in our homes
- ◆ Reusing pesticides containers, especially for storing water