

Using Pesticides Safely

Learning Outcomes – Participants will be able to:

1. Understand that all pesticides are poisons, should only be used if necessary, and must be applied following strict safety protocols
2. Know how to interpret pesticide labels
3. Know how to safely handle, apply, and store pesticides
4. Know common pesticide poisoning symptoms

Pre-Requisites:

1. Integrated Pest Management

Timing of this Lesson: Any time prior to use of pesticides

References:



Crop Life Intl. 2004. [Guidelines for Personal Protection When Using Crop Protection Products in Hot Climates.](#)



CFU. 2014. [Spraying and Herbicide Information Booklet.](#) Conservation Farming Unit, Lusaka.

FAO and ILO. 2015. [Protect Children from Pesticides!](#) Food and Agriculture Organization and International Labor Organization.

Materials Needed:

1. Flip chart or large-format paper
2. Magic markers
3. Samples of locally-available pesticides – include various types if possible (i.e. liquids, powders, etc.)
4. Rubber gum boots, rubber gloves, long-sleeved shirt.
5. Materials to make their own safety equipment (polythene sheet, plastic jug)
6. “Using Pesticides Safely” poster

Preparation:

1. Read the labels of the sample pesticides and be sure you understood and can explain them.
2. Review all discussion questions and be prepared to guide the discussion appropriately.
3. Research what pesticide safety/abuse issues are important in the area.
4. Research what safety equipment is available in your area.
5. Test all safety and spraying equipment and be sure you know how it works.

Learning Activities (3-4 hours)

I. Introduction: (30 minutes)

A. Role play:

A farmer comes in from spraying pesticide and has leftover pesticide in a soda bottle which he leaves on the table near where his children are playing. He tells his pregnant wife to wash his spraying clothes and asks his children to wash out his spraying equipment in the river near their house.

B. Discussion Questions:

1. What mistakes did you see in the way this family uses pesticides?
2. Have you seen people in your community doing these things?
3. What other dangerous pesticide practices have you noticed in your local community?
4. Have you or anyone in your community experienced health problems from using pesticides?

C. Explain that the goal of this lesson is to understand how to minimize the risks of using synthetic pesticides including application, storage, and follow-up

II. Pesticide Toxicity (30 minutes)

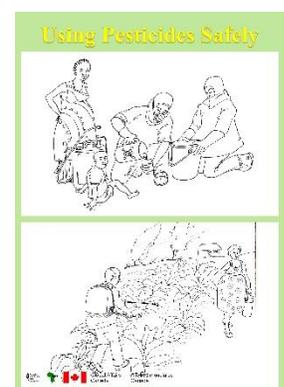
A. Activity 1: Pesticide Labels

1. Using the locally available pesticide containers which you have brought, ask one of the farmers to read all application information, re-entry interval, pre-harvest information, storage information, and safety precautions (translate into the local language if necessary)
2. Point out the Hazard class of the pesticide, and the Pictograms to the participants, and explain what each one means (see Appendix A).

III. Discuss “Using Pesticides Safely” Poster (1 hour)

A. Before Pesticide Application:

1. **Point out the top picture**, and ask participants to list what good pesticide safety practices are being used
2. What should these farmers do differently? *Allow the participants to give their answers, but be sure they discuss the following:*
 - Use **rubber gloves** when mixing pesticides.
 - Wear a **protective apron**.
 - Always use a **face shield or goggles** when mixing pesticides.



- **Never mix pesticides in a container used for other purposes** (drinking, washing clothes, etc.)
- **Never allow pregnant/nursing women or children** near where pesticides are being prepared.

B. During Pesticide Application:

1. **Point out the bottom picture**, and ask participants to list what good pesticide safety practices are being used
2. What should these farmers do differently? *Allow the participants to give their answers, but be sure they discuss the following:*
 - **Rubber gum boots are essential** for ALL pesticide applications (fabric and leather shoes will wick liquid in).
 - **Wear light fabric clothing with long sleeves.**
 - **Wear rubber gloves.**
 - Don't spray during the hot part of the day or if it's too windy.
 - Don't walk in areas which have already been sprayed.
 - Always spray down wind.
 - **Respirators** are essential for some products, and recommended for others.
 - Never allow pregnant/nursing women or children near where pesticides are being sprayed.
 - **Never eat, drink, or smoke** while applying chemicals!
 - If you feel signs of pesticide poisoning, stop immediately and go to the nearest health centre.

C. After Pesticide Application:

1. **Ask participants to list what precautions should be taken after spraying.** *Allow them to give their answers, but be sure they discuss the following:*
 - **Inform the neighbors** – Let them know where you have applied pesticides and that no one should enter. Mark the field with a sign, red piece of cloth, etc.
 - **Wash your body completely** with soap and water immediately after applying pesticides. Do not wash in a stream or lake as this could contaminate the water source.
 - **Equipment and clothes should be washed separately from other items**, at least 10 m away from water sources. Children and pregnant/nursing women should never wash pesticide-contaminated equipment or clothing.
 - **Dispose empty pesticide containers properly.** They should be rinsed, punctured so that they can never be used for other uses and buried. They should *never* be burned!
 - **Store unused pesticides where children cannot access them.** Never store pesticides in water bottles or soda bottles where they might be confused for something edible.

IV. Practical Demonstration: Sprayer Use (1 hour)

A. **Demonstrate proper use of a backpack sprayer** using just water (no pesticide). Make sure you cover the following points:

- **Maintenance** – ensure your equipment does not leak by filling it and spraying with clean water before adding pesticide!
- **Mixing of chemicals** – mixing in the sprayer itself, not in a separate container
- **Wind** – Always spray downwind so that the chemical is carried away from you, and begin spraying from the downwind side so that you don't walk through plants you've already sprayed. *Avoid spraying if it is too windy!*
- **Never eat, drink, or smoke while spraying.**
- **Keep children and pregnant/nursing women away** (they should *not* be asked to bring water to the field for spraying!)
- **If a hose or nozzle gets clogged**, do not blow it out with your mouth (demonstrate how to clean it with a water bottle)

B. **Ask for other volunteers to demonstrate safe sprayer use**

1. After each volunteer tries spraying, ask the other participants to critique their technique.

V. Concluding Discussion (30 minutes)

1. **What should you do if someone is exposed to pesticides?**

- Key message: *get treatment at the local health centre immediately.*

2. **Are there local beliefs and practices which people believe will reduce the effects of pesticide poisoning** (e.g. drinking milk as an antidote). Explain that the effects of pesticide poisoning add up over time. Even if you see no immediate effects, long-term damages to health are potentially more serious.

3. Ask if they have any unanswered issues.

4. Ask what they will put into practice on their own farms.

Appendix A: Pesticide Label Explanations

HAZARD CLASS, SYMBOL & COLOUR BANDS ON THE PESTICIDE LABEL

I			EXTREMELY HAZARDOUS
II			HIGHLY HAZARDOUS
III		=	MODERATELY HAZARDOUS
IV		=	SLIGHTLY HAZARDOUS

PESTICIDES & TOXIC CHEMICALS CONTROL BOARD

Contact us for more information:
 Pesticides & Toxic Chemicals Control Board, NAREI Compound, Mon Repos, ECD, Guyana, S.A.
 Tel: 592 220 8880 | Website: www.ptccb.org.gy

PICTOGRAMS FOUND ON A PESTICIDE LABEL

ACTIVITY	Handling Liquid Concentrate	Handling Solid Concentrate	Application
ADVICE	Gloves	Boots	Eye Protection
	Respirator	Two Piece Garment	Apron
STORAGE	Keep Locked away and out of reach of children	Wash After Use	
WARNING	Dangerous & Harmful to Animals	Dangerous & Harmful to fish. Do not contaminate lakes, rivers, ponds and streams	

Contact us for more information:
 Pesticides & Toxic Chemicals Control Board, NAREI Compound, Mon Repos, ECD, Guyana, S.A.
 Tel: 592 220 8880 | Website: www.ptccb.org.gy

PESTICIDES & TOXIC CHEMICALS CONTROL BOARD