

# 5. Storage Pesticides

## Topic 5c

### How to Apply Storage Pesticides

# FACT SHEET

## 5. Storage Pesticides

### Topic 5c: How to Apply Storage Pesticides

The first step in applying a storage pesticide is to **select the best product** taking the following into consideration:

- Know the pest to prevent or control.
- Select a product you know how to apply.
- Select a product for which you have the right application equipment.
- Select a product that will not harm people or the environment.
- Read the label.
- Protect yourself.
- Calculate the dosage before applying the pesticide.

Do the following **after** applying the pesticides:

- Clean the protective equipment, application equipment, and yourself.
- Record the application: product used, pests targeted, date of application, and any remarks.

#### 1. Applying fumigants

When applying fumigation and aerosol foggers, the following actions should be taken:

##### **Prepare area for fumigation:**

- Place warning signs outside the fumigation areas with a re-entry date.
- Get the equipment ready for application.
- Get the protective clothing ready for use.
- Seal off the infested stored products. If not sealed off, the fumigants will escape and will not kill the pests.
- Calculate the quantity of fumigants needed as recommended on the label.
- Get the correct amount of fumigants ready for application.

##### **Apply the fumigants:**

- Put on the protective equipment.
- Spray with care and close supervision.
- Be ready for any emergencies.

##### **Monitor fumigated area:**

- Monitor the fumigated area daily to ensure that nothing goes wrong.

- Keep warning signs until the area can be re-entered.

**Ventilate fumigated area:**

- Protect yourself. The possibility of intoxication is high.
- Open windows and doors and ventilate properly.
- Keep people away from the area.

**Clean up:**

- Remove all empty canisters, equipment and residues of fumigants. Some fumigant leave traces behind that look like dust or ashes.
- Remove warning signs.

**2. Applying surface spray to stored products**

When applying surface spray, the following actions should be taken:

**Prepare for spraying:**

- Protect yourself.
- Organize the area by removing all loose items. Sweep the floor and close open bags.
- Measure and mix as described on the label.
- Do not allow any other people in the spraying area.

**Apply the insecticide:**

- Apply as a coarse spray if you use a pressurized sprayer.
- Apply as a fog if you use a fog generator applicator.
- **Never apply directly on food or grains unless the label tells you to.**
- Spray surrounding areas, such as floors, pallets, and walls.

**3. Prepare and put out bait**

When applying bait, the following actions should be taken:

**Select a bait:**

- Select liquid bait if there is food in the store. Select solid bait in areas where there is no food available, such as the external area around the store.

**Prepare:**

- Plan the location of each bait station.
- Mark each bait station on a basic floor plan of the store.
- Protect yourself.

**Put out the bait:**

- Put the bait stations out as planned.

**Monitoring:**

- Inspect the bait stations weekly.
- Refill bait when needed.

# INSTRUCTIONS

## 5. Storage Pesticides

### Topic 5c: How to Apply Storage Pesticides

#### Materials needed:

- Flip-sheet board with flip-sheets
- Markers (1 black, 1 blue, 1 green, 1 red)
- Colored cards
- Kraft paper (or other large piece of paper)

**Time needed:** 1 hour

#### Preparations:

- Flip-sheet with the heading *How to apply storage pesticides*
- The 3 flip-sheets from session 5b listing the different storage pesticides and their active ingredients
- 3 pesticide labels: 1 fumigant label, 1 surface spray label, and 1 rodenticide bait label
- An agri-input store: Mark an area on the floor (3x3 meters) with masking tape. Put a few plastic bags labeled *seeds* on the floor. Put insects (cut from paper) and mouse droppings (little balls of paper colored black with a marker) on the floor.

## Set up

**Attention:** Welcome the participants to your storage area. Tell them that you are the proud owner of this great storage place where you store your seeds. Continue by saying that you always make

sure the place is very clean. Start another sentence and look down to the floor. Do not finish your sentence but start screaming: "Insects, mouse droppings! Ooh, I have insects and probably mice in my storage area. I have just learned that there are different pesticides to control these pests. But I do not know how to apply them. Could you all give me a hand?" Make sure that everyone says: "Yes, of course we can help!"

- Title:** Tell participants the title while showing the flip-sheet with the title: *How to apply storage pesticides*.
- Credibility:** Explain your experience with pesticides.
- Objectives:** To explain how to apply storage pesticides.
- Benefits:** The application is the last step to prevent or control stored products pests. If you know how to apply the pesticides you can avoid loss of products.
- Direction:** During this session, we will focus only on storage pesticides, not on any other type of pesticides.

## Delivery

### Explanation, Demonstration, Exercise, and Guidance:

1. Tell the participants that we have learned that there are different **stored product pests** and **different pesticides** that can control them. Refer to the flip-sheets of the previous session that list the different storage pesticides.
2. Tell them that we have a highly infested store. We have decided to first apply a fumigant and then a surface spray. Last, we will put out bait stations for the mice population. There are some things we have to do **before applying** storage pesticides. Ask if anyone has an idea. Make sure they mention:
  - Know the pest to prevent or control.
  - Select a product you know how to apply.
  - Select a product for which you have the right application equipment.
  - Select a product that will not harm people or the environment.
  - Read the label.
  - Protect yourself.
  - Calculate the dosage before applying the pesticide.

Continue by telling participants that when selecting the best pesticides, you need to know what the problem is: type of insect or mice and rats.

3. There are also a few things to be done **afterward**. Ask for ideas and make sure to mention:
  - Clean the protective equipment.
  - Clean the application equipment.

- Clean yourself.
  - Record the application: product used, pests targeted, date of application, and any remarks.
4. Tell participants that we will now look at the actual **application**. Divide the participants into three groups. Give each group one pesticide label. Each group must read the label and discuss how to apply this pesticide. Every group must demonstrate the application to the others. Tell the groups that you will give **points** for their demonstrations. Give them time for discussion.  
**Note:** When giving points to each group, consider how many points they mention and if there are any mistakes made. You do not have to take this too seriously; the points are mainly for fun.
  5. Ask the **fumigation team** to demonstrate their application. After their demonstration, give them a round of applause. Ask if the other groups agree, have questions, or want to add anything. Do not linger too long, but stick to the key points. Repeat what the group demonstrated and add points. Make sure all points in the fact sheet under fumigation are mentioned. Take time to explain the points and even demonstrate them if necessary.
  6. Continue with the **surface spray group**. Let them conduct their demonstration and discuss in the same way.
  7. End with the **bait group**. Let them conduct their demonstration and discuss in the same way.
  8. Tell the groups how many points each group scored and give a big applause for the best group.

## Finish

- Summary:** Summarize by mentioning what to do before and after applying storage pesticides, and how to apply fumigants, surface sprays, and baits.
- Questions:** Ask if anyone has a question or comment.
- Evaluation:** Ask them how what to do before applying a storage pesticide. Ask what is important when applying fumigation. Ask them why you need to read the label.
- Next step:** Now, participants have information about stored product pests and how to prevent and control them. They can now protect their stored products and advise their customers on how to do the same.

Distribute the **fact sheet** to all participants.

