

# How to Make and Apply Organic Pesticides



## WHAT IS IT?

These recipes offer locally available, organic solutions to pesticides that are environmentally friendly and cost very little to prepare.

## WHY DO WE DO IT?

Tephrosia (*Tephrosia vogelii*), neem (*Azadirachta indica*), and melia (*Melia azadirachta*) all have several insecticidal properties that are of great use to the farmer, both on crops and in post-harvest storage. Extracts and powders on the leaves of these plants can help protect crops from pests like aphids in the field and protect harvested grain against weevil infestations.

Neem/melia oil is effective against most chewing and sucking insects on crops. Neem does not kill pests outright; it merely disrupts their feeding mechanisms so they eventually die. Neem is also good at controlling fungal outbreaks (such as early and late blight) on tomatoes, as well as controlling powdery mildew on squash and other cucurbits.

## Garlic and Chili Peppers Recipe #1

### STEP 1

Gather the following ingredients:

- 1 bulb of garlic
- 1 small onion
- 3 hot chili peppers
- 50 g soap

### STEP 2

Crush 1 garlic bulb together with 1 small onion.

### STEP 3

Add 3 crushed chili peppers and mix with 1 L of water.

### STEP 4

Let soak for 1 hour and then filter out the solids

### STEP 5

Dissolve 50 g of soap in a small amount of warm water and then add to the filtered garlic and pepper solution. Mix thoroughly.

### STEP 6

Spray or splash on infected areas. The solution will wash off in the rain or after watering.

## Garlic and Chili Peppers Recipe #2

### STEP 1

Gather the following ingredients:

- 2 hot chili peppers
- 2 large onions
- 1 bulb of garlic
- 1 liter of glycerin soap

### STEP 2

Mix all ingredients together in a bucket or other container.

### STEP 3

Cover with warm water and allow the mixture to steep for 24–36 hours.

### STEP 4

Strain the mixture to filter out the solids.

### STEP 5

Dilute 1 part mixture to 1 part water.

### STEP 6

Spray or splash on infected areas. The solution will wash off in the rain or after watering.

## Oil Recipe #1

### STEP 1

Gather the following ingredients:

- 1 cup cooking oil, such as canola or vegetable oil
- 1 tablespoon liquid dishwashing soap

### STEP 2

Mix all ingredients together in a bucket or other container.

### STEP 3

Dilute 1 tablespoon of this mixture in 1 cup of water.

### STEP 4

Sprinkle on affected leaves with a grass brush or bundled twigs. Can be used weekly.

## Oil Recipe #2

### STEP 1

Gather the following ingredients:

- 25 ml of baking soda or bicarbonate of soda
- 15 ml cooking oil, such as canola or vegetable oil
- 15 ml vinegar
- 25 ml liquid soap or 15 ml glycerin soap
- 1.5 liters warm water

### STEP 2

Thoroughly mix all ingredients together with warm water.

### STEP 3

Sprinkle on affected leaves with a grass brush or bundled twigs. Can be used weekly.

# Recipes

## **Tephrosia, Neem, and Melia Leaves: Instructions for Crop Protection**

### **STEP 1**

Crush 2 kg green leaves of tephrosia, neem, or melia.

### **STEP 2**

Mix crushed leaves in 5 L of water. Soak for 24 hours.

### **STEP 3**

Filter the solution.

### **STEP 4**

Spray on plants affected by aphids and other sucking/chewing insects.

## **Tephrosia, Neem, and Melia Leaves: Instructions for Post-harvest Protection of Stored Grain**

### **STEP 1**

Dry tephrosia, neem, or melia leaves in the shade.

### **STEP 2**

Once leaves are dry, grind them into a powder.

### **STEP 3**

Mix powder with stored grain, using a mixture ratio of 2 kg of powder for every 20 kg of grain.

## **Neem or Melia Oil**

### **STEP 1**

Collect, de-pulp, and rinse clean the ripe seeds of neem or melia.

### **STEP 2**

Dry the seeds in the shade for 3–7 days. Any bad seeds should be thrown out.

### **STEP 3**

Crush seeds in a mortar or other vessel. Mortars used for edible crops should not be used.

### **STEP 4**

Mix crushed seed with water, using a mixture ratio of 50 g of seed per 1 L of water. Let the mixture sit overnight.

### **STEP 5**

Filter the liquid through a cloth and put it in a container for use. Liquid can be used directly. If a concentration greater than 50 g seed to 1 L water is used, the mixture should be diluted before application. Using a sprayer or brush. Experiment with different levels of concentrations in field trials.

### **STEP 6**

Use no more than once a week; every 10–15 days is the optimal interval.