



DIY Activity – Fruit Fly Pest Traps

INTRODUCTION



- Bait traps are used as a non chemical monitoring tool and pest control tool in your greenhouse and your garden to protect against Fruit Flies.
- Fruit fly is a serious pest for both home gardeners and commercial growers. Fruit fly attacks a wide range of fruits and fruiting vegetables, leaving them inedible
- This DIY Activity will take you through the steps to be able to make your own fruit fly traps. This is a great activity for students and uses readily available non toxic products.
- Food Ladders Fact Sheets 5.001 Organic and Biological Pest Control, and 5.112 Pest Control in the Greenhouse give detailed information on pest control for your fruit and vegetable crops.
- Fly populations start to build up through spring as temperatures rise, reaching a peak in late summer. The female flies lay their eggs in small groups, just below the skin of the fruit. When the maggots hatch, they feed on the fruit, causing it to eventually rot and drop to the ground
- Fruit fly traps can be placed in various locations in your greenhouse and garden close to the fruiting plants. Place them where they are accessible so they are easy to check each day.



MATERIALS AND TOOLS REQUIRED

<p>Old Soft Drink Bottle</p>  <p>A 1.25 or 2lt soft drink bottle is best for this activity.</p>	<p>Knife and Marker</p>  <p>To mark and cut the plastic bottle.</p>	<p>Hole Punch</p>  <p>To make 3 or 4 holes around the top of the bottle.</p>
<p>Sugar</p>  <p>You will need approximately one spoonful of sugar for each fruit fly trap you are making</p>	<p>Water</p>  <p>You will need between 500ml and 1lt of fresh water for each trap depending on your bottle size</p>	<p>Vegemite</p>  <p>This is the key ingredient. You will need one large spoonful of vegemite for each fruit fly trap you are making.</p>
<p>String</p>  <p>For hanging the fruit fly trap in your garden or greenhouse.</p>	<p>Spoon</p>  <p>To mix the ingredients together</p>	<p>PPE</p>  <p>Gloves for use when cutting the plastic</p>



MAKING YOUR FRUIT FLY PEST TRAP

Once you have all the materials and equipment for the project, you are ready to get started. Ensure students are supervised when using the knives.

Depending on the age of the students, teachers may want to prepare some steps prior to the student activity. These traps work by creating a funnel that directs the fruit flies into the trap and makes it difficult to get out. The flies will then drown in the liquid.

The recipe used in this activity is just one of many DIY fruit fly trap recipes that can be found in books and online. This activity uses vegemite and sugar as the lure, or bait. Orange juice is another popular ingredient in fruit fly traps. It is good practice to replace the liquid mixture in the trap every 2 weeks.



Mark around the bottle a third of the way down from the top.

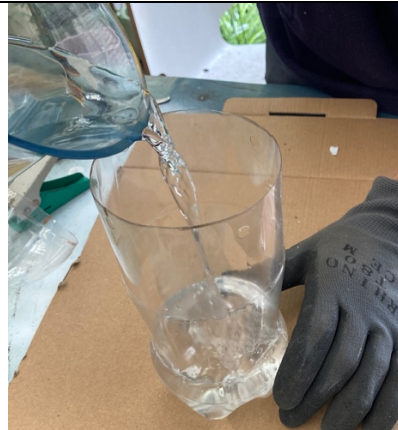
Cut the soft drink bottle as marked using a retractable knife. It is a good idea for students to be wearing gloves and to be supervised by a teacher / adult when undertaking this step.



Place the top section of the bottle upside down in the bottom section of the bottle, and using the hole punch, make 3 or 4 holes about 1cm down from the top. These will be where you tie the string to hang the trap. It is much easier to do this step now before you have liquid in the trap.



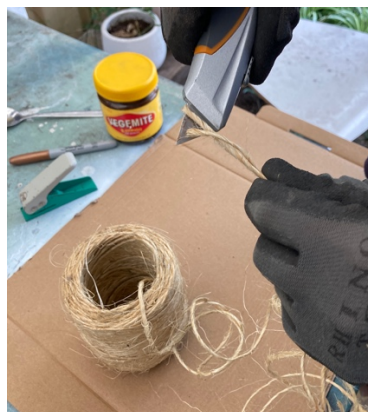
Remove the top section of the bottle and add water to the bottom section. To check that you have the right amount of water, place the top section back in place, and the water should be at least 3cm below the top section. Warm water will make it easier to dissolve the ingredients.



Add a spoonful of sugar, and a spoonful of vegemite and mix until both the sugar and vegemite are fully mixed with no lumpy bits.



Place the top section of the bottle back in place. Cut your lengths of string to about 40cm long and tie one end of each string through the holes you made earlier around the top edge of the bottle.





Gather the top of all the strings and tie into a knot



You are now ready to hang your trap in the garden or the greenhouse and start catching fruit flies.



MONITORING FOR PESTS

Once your fruit fly pest traps are set up in the greenhouse or in your garden, they will start attracting the fruit flies. They may also attract other insects. Each day they can be checked to see if any fruit fly and other insects have fallen into the trap. If you need to have a better look at the insects you have caught in the trap, remove the top of the trap, and pour the liquid into a sieve. Then put the insects from the sieve onto a sheet of white paper and you will be able to look at them closely with a magnifying glass or under a microscope. To continue using the traps, make up a new mixture of water, sugar and vegemite, and hang the trap back in place. Have a look at Food Ladders Fact Sheet 5.112 Pest Control in the Greenhouse for how to monitor for pests, and how best to identify the insects you are trapping. Food Ladders fact sheet 5.001 Organic and Biological Pest Control also has lots of useful information for controlling insect pests in the garden. Another related fun activity for students is to make a Sticky Pest Trap. An activity sheet for this can also be found on Food Ladders Education Platform.





OTHER RESOURCES RELATED TO THIS FACT SHEET

These resources can be located on the Food Ladder Education Platform: <https://edu.foodladder.org>

5.001 Organic and Biological Pest Control

5.112 Pest Control in the Greenhouse

5.006 Activity: DIY Sticky Pest Trap

SOURCES

Food Ladder Specialists, Nigel McLean, Scott McDonald

<https://agriculture.vic.gov.au/biosecurity/pest-insects-and-mites/priority-pest-insects-and-mites/queensland-fruit-fly/controlling-queensland-fruit-fly-in-home-gardens>

<https://www.bhg.com.au/how-to-control-fruit-fly>

<https://www.thegardengurus.tv/story.php?country=433&id=3891>

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