If pests continue to cause damage…

Choose your pesticide wisely. Many pesticides harm bees, but some are particularly known to kill bees. Avoid using pesticides from these chemical classes:

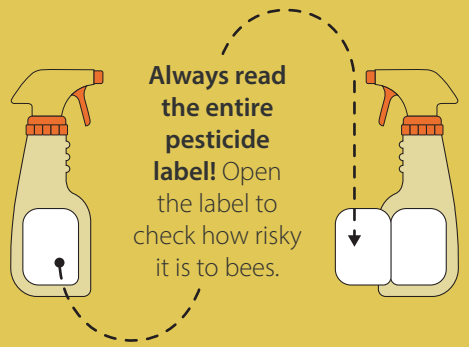
- Organophosphates
- N-methyl carbamates
- Neonicotinoids
- Pyrethroids

Do not apply pesticides to blooming flowers. Remove flowers from the affected plant and mow adjacent flowering weeds.

Do not apply pesticides on windy days. Winds may cause pesticides to drift onto neighboring flowers.

Wait until bees aren't flying. Apply at dusk or when temperatures drop below 55 degrees Fahrenheit.

Only treat affected areas. Target plants suffering from pest damage and apply the minimum amount to control the pest.



Always read the entire pesticide label! Open the label to check how risky it is to bees.

Remember that the pesticide label is the law!

QUESTIONS?

If you are interested in learning more about how you can help to protect your backyard bees or have any questions regarding pesticide risk, please visit **www.pollinators.msu.edu**.

MICHIGAN STATE UNIVERSITY

BEE AWARE

Are you killing your friendly backyard bees with pesticides?

Insecticides are chemicals designed to kill insect pests. However, insecticides can also kill your insect friends: honey bees, wild bees, and other beneficial insects.

Before you pick up that pesticide bottle…

Prevent pest outbreaks. Choose plant varieties that are known to be pest-resistant.

Identify your insects. Not all insects are pests! Many insects won't bother your plants, or are even beneficial.

Monitor for damage. Seeing a pest insect doesn't mean your plants are automatically at risk. A few pests won't inflict much damage and may be food for beneficial insects. Intervene only when pests reach damaging levels.

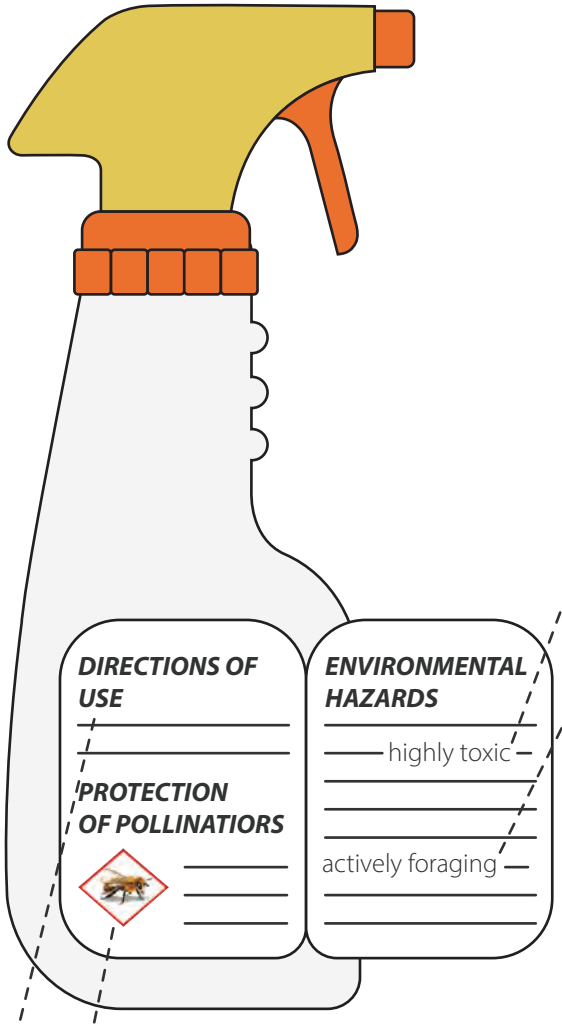
Control pests with other methods. First try non-chemical methods, such as...

Physical control: kill or exclude the pest with traps and barriers, or hand removal

Cultural control: make the affected plant's surroundings less suitable to the pest

Biological control: release natural enemies, like predators, that feed on the pest

How to read a ***PESTICIDE*** label



1 Read the **directions of use section** carefully for any warnings about using the pesticide around bees.

2 Look for a **bee advisory box**, which is a picture of a honeybee in a red diamond. It will give you additional instructions on how to safely use the pesticide around bees.

3 Look at the **environmental hazards section**. If you see the words **"toxic"** or **"highly toxic to bees"**, the pesticide will kill bees if applied to blooming flowers.

4 Different pesticides take different amounts of time to break down. Look at the **environmental hazards section**. If you see the words **"foraging"** or **"visiting"**, the pesticide will remain toxic to bees for more than 8 hours. Do not apply to blooming flowers! If you see the words **"actively foraging"** or **"actively visting"**, the pesticide will remain toxic to bees for less than 8 hours. Wait until bees aren't flying!

! **A pesticide label may not say that it is dangerous to bees, but that does not mean it is safe! Currently, only some bee-harming pesticides are labeled as damaging to bees…**

Pesticides may last for years in a bee's hive or nest, causing long-term exposure to adult and developing bees.

Even if a pesticide doesn't directly kill a bee, it may change the bee's behavior, development, and lifespan.

Using two or more pesticides together may have a total effect that is greater than each pesticide's effect – for example, exposure to some fungicides can increase the toxicity of insecticides to bees up to 1000-fold.