



# Section 7

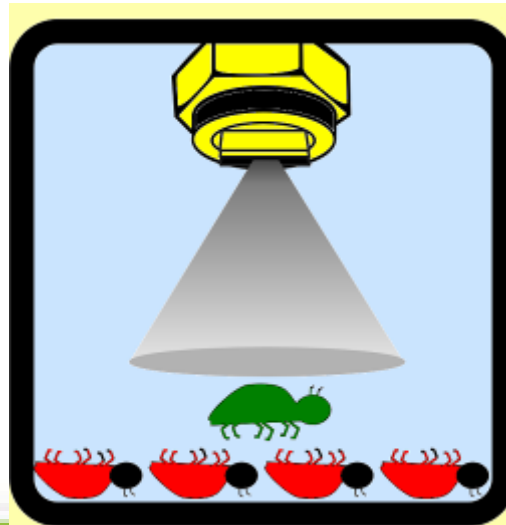
## Managing Pest Resistance

**Grower Pesticide Safety Course Manual © 2006**

**The page number at the top right corner of each slide tells you where to find the information in the Grower Pesticide Safety Course Manual. Follow along in your manual as you review each slide.**

# What is Pest Resistance?

- occurs when you apply a pesticide at its rate, and it no longer controls the pest
- these resistant pests will reproduce the next generation - and they will not be controlled by the pesticide



# Site of Action

- the way the pesticide works to control the pest

## Pesticide Groupings for Ontario

- grouped by Site of Action

**GROUP 1 HERBICIDE**

Example of  
the wording  
on the label.

Herbicide Groupings for Ontario		
Group	Site of Action	Single Sites of Action
1	Inhibitors of acetyl CoA carboxylase; ACCase	Acclaim Super, Achieve, Assure, Assure II, Excel Super, Poast Ultra, Select, Venture

# Resistance in Ontario

- **Some weeds have become resistant to:**
  - **Herbicides in Groups 2, 4, 5, 7, 9 and 22**



# Resistance in Ontario

**Some insect pests have become resistant to insecticides:**

- organophosphates (Guthion, Zolone)
- carbamates (Sevin, Furadan)
- synthetic pyrethroids (Ripcord)

**Some diseases have become resistant to a fungicides:**

- Apple Scab: dodine (Equal)
- Botrytis Bunch Rot of Grapes: Rovral

# How Can You Manage Pest Resistance?

- 1. Scout regularly and identify the pests.**
- 2. Use alternatives to pesticides when you can.**
- 3. Apply pesticides only when necessary.**
- 4. Follow the pesticide label.**

# How Can You Manage Pest Resistance?

- 5. Rotate crops when possible.**
- 6. Know the chemical families and rotate their use.**
- 7. Keep records of crop rotations and the pesticides you use.**
- 8. Learn about resistant pests in your area and how to manage them.**



# Do You Have a Resistant Pest?

## **Rule Out:**

- application errors**
- equipment failure**
- environmental conditions**
- pest identification errors**

# Answer these questions:

- **Did the pesticide do a good job of controlling the other pests listed on the label?**
- **Did a pesticide from this same Grouping fail to control these pests last year?**
- **Did you use pesticides from the same Grouping frequently in this field, year after year?**



# If you think that you have a resistant pest:

Reference  
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## Contact

- a crop consultant or specialist

- OMAFRA:

**Agricultural Information Contact Centre**

**1-877-424-1300**

**[www.omafra.gov.on.ca](http://www.omafra.gov.on.ca)**