Objective: Prevent and treat the harmful effects of mosquitoes.

**Trainer’s Note**

Mosquito bites can be at least itchy and annoying. Sometimes, however, they can transmit dangerous diseases. For this module:

- Review the information below on mosquitoes, West Nile Virus, and preventing mosquito bites.
- Ask workers to give examples of the harmful effects of mosquitoes.
- Review the important points.
- Have workers take the True/False test to check their learning.

**Background**

Mosquitoes prey on blood for nutrition. They feed on many different donors every day. They can contract diseases like malaria or West Nile Virus from any one of those donors. When they bite humans, they can pass those diseases to humans in their saliva.
Mosquito bites result in slight allergic reactions — they swell and itch. Too much scratching can lead to bleeding and scabbing. It can cause secondary infection. Take these steps to help control swelling and itching:

- Wash the area with soap and water.
- Put on some calamine lotion or anti-itch cream to help stop the itching.
- Place an ice pack on the bite; this will also help stop itching.

**West Nile Virus**

Mosquitoes can transmit serious diseases such as mosquito-borne encephalitis, malaria, and West Nile Virus. The West Nile Virus originated in Africa. It has now established itself in the United States.

Mosquitoes become infected when they feed on infected animals, especially birds. The mosquitoes can then transmit the virus to humans when they bite humans. During the bite, the virus is injected into the human where it multiplies and may cause disease.

Workers should be on the lookout for symptoms of West Nile Virus in particular. Mild symptoms include:

- Fever
- Headache
- Body aches
- Skin rash
- Swollen lymph glands

**Severe symptoms** of West Nile Virus include:

- Neck stiffness
- Disorientation
- Stupor
- Coma
- Tremors
- Convulsions
- Muscle weakness
- Convulsions and paralysis

If workers have either mild or severe symptoms, they should seek medical assistance quickly.

**Preventing Mosquito Bites**

- Stay indoors at dawn and dusk and in the early evening, if possible.
- Wear long pants and long sleeves outdoors.
- Use space sprays or aerosol foggers for rapid knockdown of mosquitoes.
- Apply residual sprays to tall grasses, weeds, trees, shrubs, and outbuildings one to two days before use of the area.

**Cautions**

- Use water solutions instead of oil-based formulations to prevent plant injury.
- Dead birds such as crows can be tested for West Nile Virus if they have been dead less than 48 hours. To handle dead birds, always use rubber gloves or a shovel.
Review These Important Points

- Mosquitoes can acquire a disease every time they bite an animal or a human.
- Mosquitoes can also transmit a disease every time they bite.
- Residual sprays applied to tall grasses, weeds, trees, shrubs, and outbuildings, one to two days before use of the area, are effective in preventing mosquito bites.

About These Modules

The author team for the training modules in the landscape and horticultural tailgate training series includes Dee Jepsen, Program Director, Agricultural Safety and Health, Ohio State University Extension; Michael Wonacott, Research Specialist, Vocational Education; Peter Ling, Greenhouse Specialist; and Thomas Bean, Agricultural Safety Specialist. Modules were developed with funding from the Occupational Safety and Health Administration, U.S. Department of Labor, Grant Number 46E3-HT09.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the author(s) and do not necessarily reflect the views of the U.S. Department of Agriculture or the U.S. Department of Labor.

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Mosquito Bites

Name____________________________________

True or False?

1. Mosquito bites can result in allergic reactions with discomfort and itching. T F

2. Mosquitoes become infected when they feed on infected birds. T F

3. Dead birds such as crows can be tested for West Nile Virus if they have been dead more than 48 hours. T F

4. Wearing long pants and sleeves outdoors help workers prevent the West Nile Virus. T F

5. Mosquitoes can transmit serious diseases such as malaria or West Nile Virus. T F