

IPM Tactics For Tick Control

Ticks are not insects. They are arthropods that are more closely related to spiders. Adult ticks have eight legs while insects have six legs. Ticks are ectoparasites which means that they must have a host for each stage of their life cycle in order to survive and reproduce. The tick life cycle includes an egg, larval, nymphal, and adult stage. The larval stage of the tick has six legs, but when it molts to the nymphal stage there are eight legs. Ticks are more resistant to drying out than other insect pests.

Types Of Ticks

The American dog tick, *Dermacentor variabilis* (Say), is the most common tick in Alabama (Figure 1). Larvae, nymphs, and adults are commonly found on dogs but rarely on humans. The body length of an unengorged adult is about 1/8 inch, but can extend to 1/2 inch when fully engorged after a blood meal.



Figure 1. The American dog tick, *Dermacentor variabilis*. Female left, male on right. (Photo by Gary R. Mullen, Professor, Entomology, Auburn University.)

Some species of ticks can carry disease-causing agents. The Lone Star tick, *Amblyomma americanum*, is a confirmed carrier of human ehrlichiosis (Figure 2). Sixty-eight per cent of all ticks recovered from humans are the Lone Star tick.

While the Lone Star tick species is a known carrier of disease, each individual tick is not infective. This concept is true for other tick species that have been confirmed to carry disease-causing agents.

The "black-legged tick" (commonly called the "deer tick"), *Ixodes scapularis*, is associated with Lyme disease. The preferred host for the adult ticks is white-tailed deer. Small rodents and lizards are suitable hosts

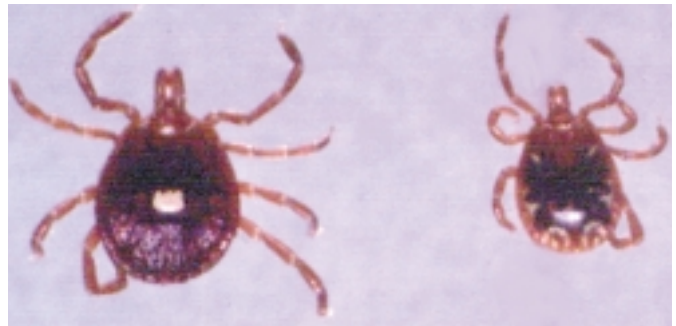


Figure 2. The Lone Star tick, *Amblyomma americanum*. Male on left, female on the right. (Photo by Jerry F. Butler, Professor. Used by permission, Entomology Department, University of Florida.)

for the larval and nymphal ticks. The bite from a nymphal stage tick is most often associated with Lyme disease because the nymph is small and may go undetected. Lyme disease is primarily a problem in the Northeast and upper Midwest United States, but there have been many reports of people getting this disease in Alabama.

The American dog tick, *Dermacentor variabilis*, is the most common carrier of the disease causing agent for Rocky Mountain spotted fever. A few cases of this disease have been reported in Alabama. Dogs are the preferred host for adult ticks of this species. Larval and nymphal ticks readily attach to rodents.

Method Of Travel

Ticks do not travel very far on their own and most likely hitch a ride on a host. Hosts will include dogs, mice, squirrels, other rodents, and lizards.

Controlling Ticks

Identify

First, identify the tick. A species identification can give you information that will be useful in devising a control plan. Place ticks in rubbing alcohol and submit for identification to your county Extension office.

Use Integrated Pest Management

In general, the best solution is to use an Integrated Pest Management (IPM) approach. IPM methods incorporate all available control methods into a pest management program. Control methods include sanitation and exclusion and chemicals techniques.

Sanitation And Exclusion

- Treat or eliminate the host animal because ticks are ectoparasites. Wash pets with an insecticidal/acaricidal soap registered for pet care or with a mild detergent. Treat pet resting areas on the same day. Acaricides are chemicals that kill ticks while insecticides are chemicals that kill insects.

- If you don't have pets, look for signs of rodent or other wildlife activity and set traps to remove these animals or keep them out with a fence.

- Keep garbage cans tightly covered to discourage opossums, raccoons, and other wildlife from frequenting your property to feed.

- Keep shrubs trimmed and grass cut, especially along pathways frequented by animals. This increases chances of desiccation and enhances the penetration of any chemicals used.

Chemical

- Selectively use an acaricide. See Extension Circular *ANR-500B, Alabama Pest Management Handbook—Volume 2*, for current recommendations. Acaricides alone are not effective in eliminating a tick problem but can help. Ticks can survive long periods of time between meals. Therefore, it is important to treat pet areas on the same day that you treat the pet to avoid re-infestation.

Acaricides generally will not work well unless the tick is hit directly. You may also elect to treat a specific area, such as a portion of your yard just before a picnic. Be sure to always follow label directions and allow sufficient time for the acaricide to dry before allowing people and pets to enter the area.

- Applications at 2 to 4 week intervals may be necessary to eliminate ticks.

Professional Pest Control

Consider using the services of a professional pest control operator who has the training and equipment to take care of ticks, rodents associated with ticks, and other wildlife. They may be able to offer you assistance

in wildlife removal in addition to chemical control. If you do use the services of a pest control operator, ask questions about the plan to control your pest problems and get estimates from at least three reputable firms.

Minimize Exposure To Ticks

Minimizing your exposure to tick bites is important because some ticks can carry disease-causing organisms. Tick bites can also result in prolonged itching.

- Wear light colored clothing in wooded areas or places that ticks are known to infest. Ticks are easier to see on light colors so you can remove them before they attach.

- Tuck pant legs into socks, boots, or shoes to prevent ticks from crawling up under clothing.

- Apply an insect repellent containing DEET to boot or shoe tops, around the waist, and on exposed skin. In heavily infested areas, you may want to use permethrin on clothing. Permethrin is not for use on skin. Make sure that clothing treated with permethrin dries for at least 2 hours before use. Most insect repellents for mosquitoes usually work well against ticks.

- Examine yourself carefully for ticks after leaving the woods or tick infested area. Check especially the hair, shoulders, armpits, waist, and inner thighs.

Normally, ticks must attach for several hours before a disease agent is passed from tick to man. Therefore, if you remove ticks promptly, you greatly reduce your chances of getting Lyme disease or Rocky Mountain spotted fever.

- Remove attached ticks carefully. Using a pair of fine tweezers, firmly grasp the tick at the point closest to where it is attached and pull with a slow steady motion. You should hear a "pop" as the tick's mouthparts are pulled free. Disinfect the bite with rubbing alcohol or iodine. Avoid removing ticks with bare fingers. If the tick is crushed, you could introduce the disease agent with infected tick tissues through cuts or abrasions of the skin.

- Check your pets, especially dogs, for ticks as often as possible. Outside pets can pick up ticks and bring them into the home. Remove ticks from pets in the same way you remove ticks from yourself.

Faith M. Oi, *Extension Entomologist*, Assistant Professor, and **Renee Anderson**, *Graduate Research Assistant*, both in Entomology at Auburn University.

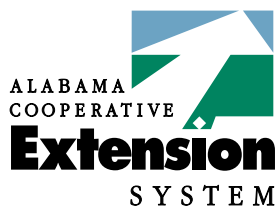
Use chemicals only according to the directions on the label. Follow all directions, precautions, and restrictions that are listed.

Trade names are used only to give specific information. The Alabama Cooperative Extension System does not endorse or guarantee any product and does not recommend one product instead of another that might be similar.

For more information, call your county Extension office. Look in your telephone directory under your county's name to find the number.

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