

Need to Know

- Straight talk for professionals about pests and pest control products

Volume 2

Issue 6

Date: April 28, 2005

Tick Management for Professionals

With the onset of spring, tick season is upon us again. Do you have a management program in place for those customers that will be calling? If not, now is the time to study and prepare a plan that is suitable for your area and customer needs.

General Information

A tick's body is divided into two main regions. Larval ticks have 6 legs and the nymph and adult stages have 8 legs. There are about 80 species of ticks in the U.S., but only about 12 are considered pests. Ticks are organized into two families and are known as hard ticks (Ixodidae) or soft ticks (Argasidae). PMP's are most frequently involved in the management of hard ticks. Some common hard ticks include: the blacklegged tick or "deer" tick, American dog tick, lone star tick, and brown dog tick.

Importance of Ticks

All ticks are blood sucking ectoparasites that attack mammals (including man), birds, and reptiles. In addition to the annoyance that ticks cause they are vectors of human diseases. Lyme disease is the leading vector-borne disease in the U.S. It is associated with the bite of *Ixodes* ticks, primarily the blacklegged tick. Lyme disease has been on a steady increase since it was first discovered and is most prevalent in the Northeast and upper Midwest (Fig. 1).

Lyme Disease Incidence by County of Residence
United States, 2001

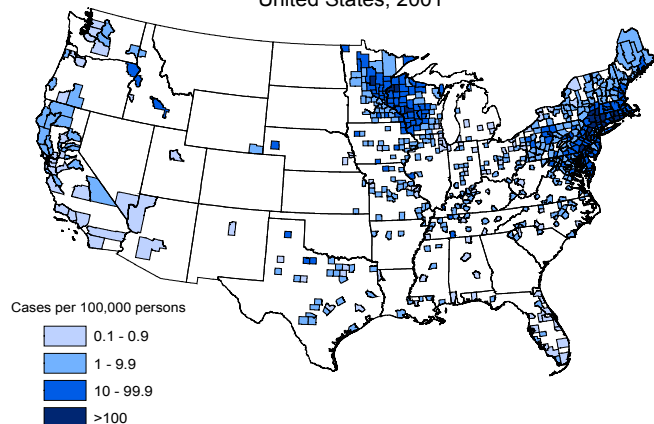


Fig. 1. Reported cases of Lyme disease in U.S., 2001.

The American dog tick and Rocky Mountain wood tick are important vectors of Rocky Mountain spotted fever. See Stafford III (2004) for more information on tick diseases.

Tick Management

Pesticides are the most effective means of reducing ticks, especially when combined with changes in the landscape that reduce tick habitat (Stafford III, 2004). Studies on the distribution of the blacklegged tick, for example, showed that they were found mainly in wooded areas and in the ecotone (transition area between woodlands and open areas). Very few ticks were found in the bright, sunny areas of the lawn. Effective tick management programs will provide a tick managed area around homes including walking trails or other areas that are used by family members. It's generally not necessary to treat the entire property.

Reduce Tick Habitat: Customers can help reduce tick habitat around their properties. Here are just a few of the steps that will help:

- Keep grass mowed
- Remove leaf litter, clear away brush and weeds at the edge of the lawn
- Discourage rodent activity
- Keep firewood piles away from the house
- Trim trees and shrubs around the lawn edge to let more light in
- Move swing sets out away from the lawn edge
- Widen trails through wooded areas

Chemical Treatment: There are several effective treatment options available to professionals. The **Maxforce® Tick Management System™** is available to professionals located in the Northeastern U.S. and upper Midwest. The Maxforce Tick Management System works when rodents are attracted to and enter a bait box. While investigating the box the rodent receives a small dose of fipronil insecticide from a wicking device. A single dose is enough to control blacklegged ticks on rodents for approximately 40 days. Thus, the mouse is protected and the tick is eliminated. Trained professionals place the child resistant boxes out in the spring, return in the summer with replacement boxes, and again in the fall to remove the second set of boxes. For more information on this system see www.MaxforceTMSpro.com.



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Residual sprays (**Suspend® SC**, **Tempo® SC Ultra**, **Tempo® Ultra WP** and **Tempo® Ultra WSP**) and/or granular insecticide treatments (**DeltaGard® G**) are effective in reducing tick numbers. Populations of blacklegged ticks were reduced by 92% following a single application of Tempo around homes (Curran et al. 1993). In field studies conducted by Goddard (1998), Suspend SC provided 100% lone star tick control. Schulze et al. (2001) found that a single application of DeltaGard G to woodland edges in late spring reduced populations of blacklegged ticks and lone star ticks by 95 and 100%, respectively (Fig. 2). A combination treatment of granular and liquid formation can also be quite effective. Applications should target the lawn and woodland edge, along walking trails and other tick habitats that are frequently used by homeowners. When treating large properties, power spray equipment is most effective. Granular treatments of DeltaGard G can be made using a hand-held spreader or walk behind spreader. Treatments are most effective when applied in the spring to control nymphal stages of the ticks and again in the fall to control adult ticks. Timing of applications will vary somewhat depending on your geographic area and weather conditions.

References

- Curran, K.L., D. Fish and J. Piesman. 1993. Reduction of nymphal *Ixodes dammini* (Acari: Ixodidae) in a residential suburban landscape by area application of insecticides. *J. Med. Entomol.* 30(1): 107 – 113.
- Goddard, J. 1998. Residual effects of selected pyrethroid insecticides on lone star ticks. *J. Environ. Health.* Nov. 17-22.
- Goddard, J. 2004. Ectoparasites, part two: mites & ticks, pp. 461 - 493. *In: Mallis Handbook of Pest Control, 9th Ed.* S.A. Hedges and D. Moreland, Eds. GIE Media, Inc., Cleveland, OH.
- Schulze, T. L., R. A. Jordan, R. W. Hung, R. C. Taylor, D. Markowski, & M. S. Chomsky. 2001. Efficacy of granular deltamethrin against *Ixodes scapularis* and *Amblyomma americanum* (Acari: Ixodidae) nymphs. *J. Med. Entomol.* 38 (2): 344-346.
- Stafford III, K. C. 2004. Tick Management Handbook. The CT Agric. Experiment Station, 68 pp. (electronic format available at www.caes.state.ct.us)

Web sites:

- www.aldf.com (Amer. Lyme Disease Foundation)
- www.cdc.gov (Centers for Disease Control)
- www.MaxforceTMSpro.com (professionals)
- www.MaxforceTMS.com (consumers)

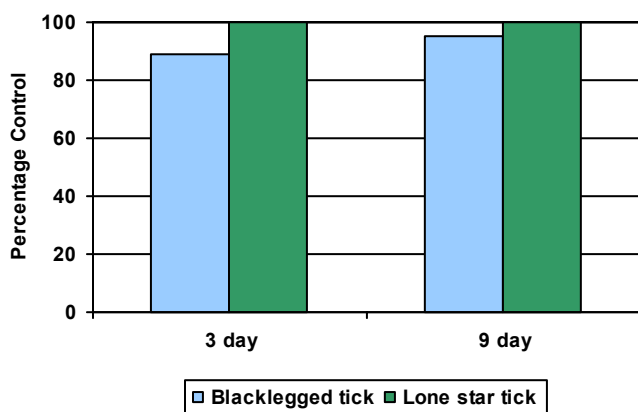


Fig. 2. Control of ticks with DeltaGard G.

Suspend® SC
with DeltaGard

TEMPO®
ULTRA

BACKED
by **BAYER™**

DeltaGard® **MAXFORCE**

