

Nature and Availability of Commercial Tick Control Services: A Survey of the Pest Management Industry

The blacklegged tick, *Ixodes scapularis*, transmits the pathogen that cause Lyme disease, the most commonly reported vector-borne disease in the United States, with over 33,000 confirmed and probable cases reported in 2014 alone. This tick also transmits the disease agents that cause human granulocytic anaplasmosis and human babesiosis. Therefore, reducing the abundance of this tick is a public health priority. We would like your help in determining the types of tick control services offered by the pest management industry and would appreciate your time in completing this survey concerning your firm's involvement in managing this important tick vector.

Section 1. *General Information*

1. How many field personnel/technicians does your firm employ?
 a. less than 5
 b. 5-10
 c. 11-20
 d. more than 20

2. In what counties does your firm provide tick management services? (list all)

3. Does your firm offer tick control services?
 a. yes
 b. no

4. If you answered "no" to the previous question, what are the reasons? (check all that apply)
 a. lack of client interest
 b. too expensive for most clients
 c. technically too difficult
 d. liability too great
 e. lack of reliable control technologies
 f. other (please describe _____)

If your firm does offer tick control services, please continue.

**If your firm does not offer tick control services, the survey is complete.
Please submit/return. Thank you.**

Section 2. *Tick Control Strategies*

1. If your firm offers tick control services, are they

- a. specific for tick control alone?
 - b. part of a lawn care/landscaping package?
2. Does your firm survey the client's property for ticks before attempting control?
- yes
 - no
3. If you answered "no" to the previous question, why not?
- a. too expensive
 - b. don't know how
 - c. decision to treat based on the presence of tick habitat
 - d. client complained of tick bites
 - e. other (please describe _____)
4. On what basis does your firm decide to treat a client's property to control ticks? (check all that apply)
- a. client request
 - b. routinely included as part of a lawn care/landscaping package
 - c. recommended based on presence of tick habitat
 - d. results of tick surveys
 - e. other (please describe _____)
5. How often do you treat a client's property to control ticks?
- a. once/year
 - b. twice/year
 - c. three times/year
 - d. four or more times/year
6. Against which stage(s) of ticks does your firm direct control efforts? (check all that apply)
- a. nymph
 - b. larva
 - c. adult
7. If your firm targets nymphs, when do you initiate control? (check all that apply)
- a. January-March
 - b. April-June
 - c. July-September
 - d. October-December
 - e. not applicable, we do not treat against nymphs
8. If your firm targets larvae, when do you initiate control? (check all that apply)
- a. January-March
 - b. April-June
 - c. July-September
 - d. October-December
 - e. not applicable, we do not treat against larvae
9. If your firm targets adults, when do you initiate control? (check all that apply)

- a. January-March
- b. April-June
- c. July-September
- d. October-December
- e. not applicable, we do not treat against adults

10. When attempting to control ticks, what areas do you treat? (check all that apply)
- a. lawn
 - b. landscaping
 - c. woodland edge
 - d. woodland

Section 3. Tick Control Technologies

1. What tick control methods does/has your firm used? (check all that apply)
- a. application of conventional synthetic acaricides
 - b. habitat management (e.g. trimming back vegetation, leaf litter removal)
 - c. application of pathogenic fungus (e.g. Tick-Ex)
 - d. application of plant-derived natural products (e.g. EcoEXEMPT)
 - e. exclusion (e.g. deer fencing)
 - f. deployment of host-targeted devices (e.g. Select Tick Control System [TCS] rodent bait boxes, 4-Poster deer treatment stations, Damminix)
 - g. distribution of educational materials
 - h. other (please describe _____)

2. If your firm uses conventional synthetic pesticides, plant-derived natural product, and/or pathogenic fungal pesticides to control ticks, what equipment does your firm use? (check all that apply)
- a. backpack/knapsack sprayers
 - b. high pressure hydraulic sprayers
 - c. mist blowers
 - d. drop or cyclone spreaders
 - e. chest-mounted cyclone spreaders
 - f. mist blowers modified to apply granules
 - g. other (please describe _____)

3. If your firm uses conventional synthetic pesticides to control ticks, please list.

4. If your firm does not use Select TCS rodent bait boxes, why not? (check all that apply)
- a. didn't know the technology existed/don't know much about the technology
 - b. not requested by clients
 - c. too expensive
 - d. concerned about liability
 - e. delay in efficacy
 - f. not sure they work
 - g. other (please describe _____)

5. If your firm does not use 4-Poster deer treatment stations, why not? (check all that apply)
- a. didn't know the technology existed/don't know much about the technology
 - b. not requested by clients
 - c. too expensive
 - d. concerned about liability
 - e. delay in efficacy
 - f. not sure they work
 - g. other (please describe _____)
6. If your firm does not use Damminix, why not? (check all that apply)
- a. didn't know the technology existed/don't know much about the technology
 - b. not requested by clients
 - c. too expensive
 - d. concerned about liability
 - e. delay in efficacy
 - f. not sure they work
 - g. other (please describe _____)
7. If your firm does not use plant-derived natural products, why not? (check all that apply)
- a. didn't know the technology existed/don't know much about the technology
 - b. not requested by clients
 - c. too expensive
 - d. concerned about liability
 - e. not sure they work
 - f. other (please describe _____)
8. If your firm does not use pathogenic fungus, why not? (check all that apply)
- a. didn't know the technology existed/don't know much about the technology
 - b. not requested by clients
 - c. too expensive
 - d. concerned about liability
 - e. delay in efficacy
 - f. not sure they work
 - g. other (please describe _____)

Section 4. Administration

1. Regarding tick control, to what extent do the following types of clients make up your business? (list percentage for each)
- % homeowners
 - % government agencies
 - % private industry
 - % other (please describe _____)
2. What percentage of your business is tick control?
- a. less than 10%

- b. 10%-25%
 - c. 26%-50%
 - d. more than 50%
3. What is the average amount your firm charges to treat a 1 acre property to control ticks with conventional synthetic pesticides/visit?
- a. less than \$100
 - b. \$101-\$150
 - c. \$151-\$200
 - d. more than \$200
4. What is the average number of applications of conventional synthetic pesticides does your firm make to client properties/year?
- a. 1
 - b. 2
 - c. 3
 - d. 4
 - e. more than 4
5. If your firm was convinced that least toxic or “eco-friendly” alternatives to the use of conventional synthetic pesticide applications were effective in controlling ticks, would you consider offering/using these technologies alone or as part of an integrated tick management program?
- yes
 - no
6. If your firm offered least toxic or “eco-friendly” alternatives to the use of conventional synthetic pesticide applications to control ticks, do you think your clients would pay more for tick control?
- yes
 - no
7. If you answered “yes” to the previous question, how much more?
- a. 50%
 - b. 100%
 - c. 200%
 - d. more than 200% more
8. If your firm offers host-targeted alternatives, what does your firm charge/acre deployment?
(check and complete all that apply)
- Damminix Tick Tubes (charge/acre deployment = \$ _____)
 - 4-Poster deer treatment stations (charge/acre deployment = \$ _____)
 - Select TCS rodent bait boxes (charge/acre deployment = \$ _____)
 - not applicable, our firm does not use host-targeted technologies

May we contact you for clarification or additional questions?
 yes

name: _____

name of firm: _____

telephone number: _____

e-mail address: _____

__ no