

Nature and Availability of Commercial Tick Control Services Survey

Supporting Statement B for a New Generic Information Collection Request

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B. Collections of Information Employing Statistical Methods

The intention of this survey is to draw inferences from the results in order to provide direction for future development of tick control strategies and technologies that reduce human exposure to ticks that transmit the pathogens that cause Lyme disease, anaplasmosis, and babesiosis. Collection of information from this survey is not designed or intended to develop incidence or prevalence estimates - this survey is not intended to yield results that are statistically projectable, nationally representative, or precise estimates of population parameters. Information gathered under this gen-IC will not be used for the purpose of substantially informing influential policy decisions.

1. Respondent Universe and Sampling Methods

The target population for this data collection is pest control firms that offer services to reduce populations of *Ixodes scapularis* ticks in the high incidence state of New Jersey. Surveys will be targeted at the business level to determine the type of tick control products they offer and the frequency of their use. The number of businesses sampled depends on the outcome of interest (e.g., prevalence of using a certain prevention method, tick exposures) for a particular survey and the power calculation (described below in B.2).

As an example of a survey, Stafford et al. (1997) assessed the use of insecticides for tick control by commercial applicators in CT. A questionnaire was mailed to nearly 900 business with ornamental and turf pesticide applicator licenses. In total, approximately 350 responses were used to determine the nature of the business (lawn care vs landscape vs tree care), percentage that offered tick control services, type of acaricide deployed and percent of business dedicated to or responsible for tick control. A nearly identical survey was conducted by Schulze et al. (1998) to determine availability and nature of commercial tick control services in NJ. These surveys in particular were conducted ≤ 20 years ago which underscores the need to update this information for Lyme endemic areas of the US.

The proposed surveys will be conducted to determine the nature and availability of commercial tick control services. Survey coordinators will identify pest control firms in the selected target area, New Jersey. Business contact information will be acquired through recruitment of professional associations that represent firms licensed in Pesticide Applicator Categories that permit control of ticks. Once selected, we will offer the survey to all member firms through professional association websites.

2. Procedures for the Collection of Information

For this one-time survey, all firms who indicate interest in study participation will complete the survey electronically. The questionnaire will be made available electronically through respective websites of the New Jersey Pest Management Association (NJPMA) and the New Jersey Landscape Contractors Association (NJLCA). The survey includes a brief introductory statement explaining the nature and purpose of the survey. This survey is voluntary and respondents arrive at the survey page by their own choice by clicking on a provided link to the survey.

This survey will be designed to collect information on the size of the firm (number of employees), the type of tick control strategies and technologies being offered, frequency and timing of tick control efforts, and relative costs for technologies being offered.

Sample Size Estimation

The survey will be offered to all members of professional associations that represent firms licensed in Pesticide Applicator Categories that permit tick control. The only data known to date reporting the frequency of responses comes from two studies conducted in the late 1990’s. The survey proposed here will be conducted ≤ 20 years later and much of the survey will ask about availability of products that were not available when these previous surveys were conducted. Therefore, we propose sample size estimates based on these previously published studies.

Sample Size Estimates for Nature and availability of Commercial Tick Control Services:

Table 1: Sample size calculation for % frequency of firms; Example: tick control

General Information	Anticipated frequency (%)*	Confidence (%)	Number of pest control firms in sample**
# employed	38	95	850
Tick control offered	53	95	850
Tick control strategies	25	95	850
% of business related to tick control	20	95	850
Administration	20	95	850

*Based on: Stafford III, K. C. 1997. Pesticide use by licensed applicators for the control of *Ixodes scapularis* (Acari: Ixodidae) in Connecticut. *J. Med. Entomol.* 34: 552-558.; Schulze, T.L., R.A. Jordan, and R.W. Hung. 1998. Availability and nature of commercial tick control services in established and emerging Lyme disease areas of New Jersey. *J. Spirochetal Tick-borne Dis.* 4:44-48.

The proposed information collections will improve upon these numbers by allowing data collection thru surveys supported by members of professional associations.

**Our proposed range of respondents for this information collections is 400-850 (see Supporting Statement A). This range accounts for the sample sizes estimated above being achieved in several different geographic areas (e.g., multiple states).

3. Methods to Maximize Response Rates and Deal with Nonresponse

Earlier surveys on the nature and availability of commercial tick control services conducted in CT (Stafford et al. 1997) and NJ (Schulze et al. 1998) via mail resulted in response rates of 38.8 and 30.4 –

44.1%, respectively. No follow-up mailings were conducted in either study. We aim to enroll 400-850 participant firms for this survey.

4. Tests of Procedures or Methods to be Under-taken

No tests of procedures or methods will be undertaken.

5. Individuals Consulted on Statistical Aspects and Individuals Collecting and/or Analyzing Data

All persons listed below may be involved in design, collection and analysis of proposed data

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