**The Use of Volunteers in Exotic Pest Surveys**

The value of engaging the general public in detecting injurious invasive pests is widely recognized. Many significant detections of exotic pests have been made by private citizens. PPQ leadership recognizes the value of enlisting the general public for searching for exotic pests, as outreach to the general public is included as a major focus of the PPQ Strategic Plan (Road Map to 2015: A Strategic Plan for Plant Protection & Quarantine). In the plan, Overarching Goal 1is devoted to strengthening outreach to the public and stakeholders. PPQ leadership also recognizes the value of involving the general public in surveying for exotic pests, including a strategy for surveying in the Strategic Plan (“Overarching Objective 1.2: Encourage and train public and stakeholder groups to participate in pest surveillance and detection activities through formal volunteer programs…”). Actionable Strategies 2 and 3 under this objective define steps that will be taken to support this objective:

Actionable Strategy 2. Work with State Plant Health Directors, the Extension Service and NGO’s to build on existing or establish formal volunteer programs which would provide training and mechanisms for reporting findings.; and

Actionable Strategy 3. Continue to build on the current regulatory studies curriculum in the land grant university system and other educational institutions and **promote the volunteer survey initiatives**. (emphasis added).

Actionable Strategy 4 under Program Objective 2.1(Enhance plant pest/disease data collection and analysis to deploy resources efficiently to detect pests as early as possible.) further supports the use of the public in surveying for exotic pests by calling for PPQ to “Engage the public and other governmental and NGO’s to participate in pest detection activities in addition to implementing a formal volunteer program referenced in Overarching Goal 1.”

Although the value of involving the general public in “surveying” for exotic pests is recognized, a question exists as to the meaning of the survey results and whether negative data (i.e. the absence of a pest) should be reported in survey results databases (such as the National Agricultural Pest Information System, or NAPIS). Data entered into NAPIS are based on survey activities undertaken by trained professionals following scientifically verified and approved protocols. The challenge of validating negative data from surveys conducted by trained professionals is acknowledged in the PPQ Strategic Plan in Program Objective 2.4 (Enhance the Cooperative Agricultural Pest Survey (CAPS) Program to better involve and serve stakeholders). Actionable Strategy 2 under this objective states “Standardize PPQ approved national survey protocols regarding traps and lures used, sampling procedures and diagnostic and identification protocols **to capture valid entry of negative data**.” (emphasis added). Surveys undertaken by untrained volunteers generally do not follow such rigorous standards.

Engaging volunteers to search for exotic pests should be encouraged. The international plant regulatory community allows for the use of data generated by the public to survey for exotic pests. The International Plant Protection Convention published ISPM 6 “GUIDELINES FOR SURVEILLANCE”, in 1997, and this standard specifically includes the general public as a source of pest information in its “General Surveillance” section. PPQ has already undertaken several efforts to engage the public in surveying for exotic pests. These efforts range from a “passive” Beetle Detectives volunteer survey program, in which volunteers are asked to go to a website (BeetleDetectives.com) to read fact sheets and view short videos to “self-train” about the pest and signs and symptoms of damage and report their survey results in the web site, to a more “active” volunteer survey program such as the Forest Pest Survey and Outreach project, where trained professionals hold in-depth training sessions about the exotic pest in question – its appearance, life cycle, host(s) of the pest, host identification, when the pest is active, symptoms of damage, etc. Although there is much value in engaging the public in surveying for exotic pests, the use of data from surveys by untrained volunteers should be approached cautiously. Data generated by non-professional volunteers should not be considered to be of similar validity as data generated by trained professionals following scientifically-approved protocols.

If untrained volunteers are to be formally enlisted to survey for exotic pests of quarantine significance for which the results will be used to support the absence of such pests in an area (“negative data”), the following recommendations should be considered:

- Volunteers that have some type of knowledge or experience working with the host of the exotic pest, such as (for tree pests) licensed foresters, arborists, power company tree-trimming crews, city public works crews, etc., should be targeted to participate in the survey;

- A formal training program should be undertaken to train the volunteers about the pest, including appearance, life cycle, hosts of the pest, host identification, signs and symptoms of damage caused by the pest, etc.;

- Suspects must be referred to trained professionals for follow-up;

- Negative data should be entered into a “citizen exotic pest” database, where the results can be recorded and mapped.

In this way, volunteers can still be enlisted to assist in the search for exotics pests, but their data will not be combined with data generated by trained survey professionals, gathered under stringent protocols, that is provided to our trading partners. Data collected by volunteers through such general surveillance programs can still be used, according to ISPM6, to “support NPPO (National Plant Protection Organization) declarations of pest freedom”.

Summary: Volunteer survey programs for exotic plant pests should be encouraged by PPQ and be supported by PPQ resources (training and support from PPQ staff, follow-up on suspect exotic pest samples, etc.). This will help ensure confidence in the survey data. Survey data generated from volunteer efforts should not be reported in the same manner as surveys conducted by trained professionals under prescribed protocols but should be reported in a “parallel” database. The data generated by the surveys can provide evidence, in addition to official surveys conducted by National Plant Protection Organizations, of the absence of exotic pests in a state, region or country.

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