CURRENT STATUS OF THE IMPORTED FIRE ANT QUARANTINE PROGRAM

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Two species of imported fire ants (IFA) were brought to the United States 40 to 60 years ago, and they have steadily become a pest of agriculture, a health hazard, and a nuisance to people in infested areas. The U.S. Department of Agriculture (USDA), Animal and Plant Health Inspection Service (APHIS), Plant Protection and Quarantine (PPQ) has authority under the Plant Quarantine Act, the Organic Act, and the Federal Plant Pest Act to establish a quarantine and regulations to prevent the spread of IFA within and throughout the United States. In addition, USDA is authorized to cooperate with infested States to eradicate, suppress, control, or retard the spread of IFA.

In exercising that authority, we conduct surveys in various States in locations which are likely to be infested with the ant. The intensity of the survey in States not identified as infested takes into account the distance of areas known to be infested and the volume of commerce with infested areas. Surveys in States that already have the pest are conducted to determine the perimeter of the infested areas, as well as to quantify the problem within infested areas. Delimiting surveys, which extend for several miles from the known area of infestation, are made along road shoulders, rights-of-way, open fields, and pastures. Detection surveys are conducted to locate infestations in areas remote or somewhat removed from known infested areas. Locations such as nurseries, warehouses, docks, trucking terminals, railroad yards, and community centers are likely to be surveyed to determine if IFA are present.

Annual surveys are made to guide program activities. Surveys are routinely made during the year when detection is most apt to occur. Surveys conducted since 1977 indicate that the northward spread of IFA due to natural means has slowed considerably. It has been suggested that the northward limit of progression of the red IFA, *Solenopsis invicta*, is the 10° F minimum temperature area. With minor exceptions, the red imported fire ant is approaching the limits of its ecological range in the Eastern half of the United States. Some natural spread to the west in Texas has occurred; however, we have no record of infestations west of the 102° meridian. Currently, *S. richteri* (or black imported fire ant) is found in northeastern Mississippi and northwestern Alabama. The red imported fire ant, *S. invicta*, has widely spread through the Southeastern United States. It is presently in the States of North Carolina, South Carolina, Georgia, Florida, Alabama, Mississippi, Louisiana, Arkansas, and Texas. *Solenopsis invicta* was detected in Puerto Rico in 1981. Total land area affected by IFA is approximately 230 million acres.

In locations where surveys show that IFA exists, quarantine regulations are imposed to prevent long-distance artificial spread of the pest. Items or articles identified as posing a threat to spread of IFA must be handled and treated in such a way as to remove the danger of spreading ants when they originate in regulated areas and are moved to noninfested locations.

Although care must be taken, articles that can be fumigated or cleaned free of soil can be readily certified. Plants with soil attached or grass sod cannot be certified as easily. When chlordane was available, treatment and certification of plants and sod were easily accomplished by incorporating the material into the soil. Since chlordane has been phased out, no replacement material with such effective use for certification purposes has been developed. Products containing chlorpyrifos can be used to treat soil or potting media in which some species of plants are grown. Label restrictions prevent its application to soil in which plants are grown and intended to be used as "food or feed." Potting media or soil containing chlorpyrifos causes phytotoxic damage to many succulents and some vegetable transplants. Certifying field-grown nursery plants has become more difficult because of the loss of chlordane. Immersion and pour-on treatments using a chlorpyrifos solution are current certification procedures for these plants.

With the cancellation of the use of mirex in 1978, no suitable material was available for areawide control applications. Without an effective registered pesticide, control activities ceased in 1978. Amdro®, manufactured by the American Cyanamid Company, was granted conditional registration in August 1980. This bait formulation can be used in areawide aerial applications but is restricted to noncropland areas. Cooperative control programs were resumed in August of 1980 using the Amdro material.

Where mirex was applied, IFA populations were kept at low levels and incidents of damage to agricultural products did not often occur. When mirex applications stopped, cooperative surveys indicated the IFA population increased quite rapidly in areas that had been treated; it rapidly spread to previously uninfested locations within the generally infested areas. The IFA population has continued to increase in many locations to the extent that damage to soybeans, pastures, and livestock is a common complaint. People living in locations with high ant populations are concerned about the growing health hazard.

The concerns of those living in infested areas were expressed with such clarity to Congressional and agricultural representatives that we developed a control plan in 1980 and discussed it with the affected States. The intent of the cooperative control program is to provide temporary relief in areas of infestation where agricultural damage and potential health hazards are apparent. In order for USDA to participate in cooperative control programs, there must be evidence of "need and interest" shown by the State. Funding for control programs is on a 50-50 cost-sharing basis between the Federal and State Governments, with the State having the option to recover part of its cost from farmers and householders. Control treatments are accomplished through aerial applications, ground applications, and mound-to-mound applications. All applications are made in accordance with label instructions.

Since resuming control activities, aerial applications have been made in 3 States, and ground applications have been made in 2 States. Small bag distribution programs for mound treatment have been conducted in 4 States. Amdro label restrictions and program funding have limited control applications to small geographical areas.

To ensure that treatments with Amdro do not cause unreasonable adverse environmental effects, control applications are monitored and evaluated for environmental impact. Specified environmental components are

collected for residue analysis. All chemical analytical residue work is done at our laboratory in Gulfport, Mississippi.

Within APHIS, the Methods Development Staff continues to field test alternate bait materials that have shown potential in the Agricultural Research Service's screening and testing program. PPQ is also developing and evaluating new materials and treatment techniques for regulatory purposes.

The continuing interest in an IFA program is reflected in the funding provided by Congress in Fiscal Years 1981 and 1982. The Department's appropriation both years included approximately $6 million for work on IFA. The PPQ position will continue to be one of support to affected States in order to reduce the impact of this foreign pest and to prevent its further movement to noninfested States.