

FOR INFORMATION  
DA-2005-36  
November 8, 2005

**SUBJECT:** Best Management Practices for Control of Imported Fire Ants (IFA) on Migratory Beehives and Bee Equipment

**TO:** STATE AND TERRITORY AGRICULTURAL REGULATORY OFFICIALS

APHIS has been evaluating several management practices that prior to shipment will exclude the IFA from beehives and equipment associated with beehive movement. When followed, these practices will minimize the likelihood the IFA will be found in beehives and associated equipment when leaving an IFA-infested area. Please distribute this information to those who may be planning to move beehives and associated equipment outside of the IFA quarantine.

### **General Sanitation**

- Help prevent the spread of IFA's by inspecting hives and eliminating IFA's *before* moving bees to new locations.
- Foraging worker ants are attracted to dead brood and other material near beehives. Discard these materials away from hives.
- To discourage ant colonies from moving into beehives, elevate the hives (or pallets) several inches on bricks or stones.
- Use high-pressure hoses to wash away fire ant nests and any soil debris from bottom boards, wooden pallets, and similar shipping materials. Do this prior to loading the beehives onto trucks for transport to non-infested areas.

### **Insecticide Use**

- Because bees can be poisoned, insecticides used close to beehives must be applied with care.
- A three-step treatment regimen is suggested as a management tool for IFA's.
  - Step 1 – Treat areas around hives or potential holding areas using IFA bait products registered for the site where hives are located; conventional bait formulas include hydramethylnon, fenoxycarb, pyriproxifen, and s-methoprene.
    - Treat a minimum of 10 feet from the edge of each pallet.
    - Treat the entire area including under the pallet, not just around the outside of the pallet.
  - Step 2 – Contact insecticide applications to support pallets or the soil area under beehives may be used effectively as barrier treatments to suppress foraging on equipment.
    - Contact insecticides should be applied prior to placement of bee colonies onto treated surfaces, and an untreated support pallet should always be used. Apply three – seven days after the bait treatment.

- Use soil treatment labeled rates of permethrin or chlorpyrifos.  
**Caution:** Both of these chemicals are toxic to bees when applied directly, so care must be taken when making applications.
  - Soil treatments should extend a minimum of 10 feet from the edge of where the pallet(s) will be placed.
  - A waiting period of 24 – 48 hours after contact insecticide application is recommended prior to placement of beehives.
  - Full labeled rates of application for IFA soil treatments of both chlorpyrifos and permethrin liquid treatments are effective for five – eight weeks at deterring fire ant forging and colony establishment on bee equipment.
- Step 3 – Contact insecticides should be applied to individual mounds per label instructions to quickly eliminate specific IFA colonies that pose an immediate hazard to beehives.
- Contact insecticides should be applied prior to placement of bee colonies onto treated surfaces, and an untreated support pallet should always be used. Apply three – seven days after the bait treatment.
  - Apply contact insecticide to targeted individual mounds per label instructions. Contact insecticides are formulated as granules, liquids, or dusts. Active ingredients include chlorpyrifos, diazinon, carbaryl, permethrin, or other similar agents.

**/s/ John H. Payne for**

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