

Arkansas' Inter-Agency Africanized Honeybee Action Committee

In 1998, the Arkansas State Plant Board collected Africanized Honeybee action plans from state which had already been invaded by this species of honeybees. Agencies that could be affected by this pest were called together and by early 1999 had drawn up and accepted a working action plan for the state so that there could be a coordinated statewide effort in dealing with this situation.

Because the AHB can be a problem for many facets of our state's economy and its citizenry, many agencies needed to be involved with this process and the subsequent follow-through. The action committee encompasses any agencies involved in agriculture, education, health and safety, first responders, natural resources, etc.

The original meetings were to form the committee, agree on a plan, decide on goals and objectives and to be pro-active so as to be prepared for the arrival of these bees. Following are the committee assignments, which lay out the goals and objectives and some of the agencies and organizations that are active in this on-going process:

Regulation & Quarantine Committee

Objectives:

Regulate

Quarantine

Lead agency:

Plant Board

Other members:

USDA- APHIS

Beekeepers

Regulation and Quarantine

Based on previous experience with the spread of the Africanized honeybee through the Americas, the natural spread of the Africanized honey bee is preceded by isolated colonies that swarm or abscond from the main population centers. The Advisory Committee feels that substantial benefits would result by rapid detection, identification and eradication of these isolated colonies. The procedures outlined in this regulatory and quarantine plan parallel those contained in the APHIS Action Plan for isolated Africanized honey bee infestations that have arrived through accidental introductions. Immediate quarantines and destruction of confirmed colonies and appropriate surveys of prescribed dimensions around these early isolated "finds" should temporarily stabilize the situation. Available data indicates that swarming colonies do not travel beyond the 100-mile distance that dictates the need for a secondary level of restriction on bee movement. This tiered approach around these initial "finds" allows state and federal regulatory agencies to deal effectively with these isolated swarms and still permits free movement of European honey bee colonies within the larger 100-mile quarantine zone needed for crop pollination and honey production. It is believed that such action also would encourage beekeepers to voluntarily cooperate by remaining in the area and not attempting to break quarantine. This could avoid the possibility of spreading undetected Africanized colonies great distances from these initial "finds."

A rapid and well-defined regulatory response to the first few positive "finds" of Africanized honey bee in Arkansas is critical to the perceived effectiveness of the Arkansas Africanized Honey Bee Plan by both the beekeeping industry and general public. Such a response will go far in reassuring regulatory officials in sister states who work with Arkansas migratory beekeepers and will reduce the amount of sensational coverage by the news media, thus lessening the potential panic reaction by the general public.

The following combined state/federal regulatory responses are planned to take effect as the swarms enter Arkansas:

Recommended Quarantine and Regulatory Actions (to be in effect until 5 distinct and separate geographic locations have been involved with a positive find):

1. When a speculative report of Africanized honey bee is received, the following procedure will be implemented:
 - A. If suspected colony or colonies exhibit aggressive characteristics, all colonies in apiary will be quarantined until laboratory results are received. No other quarantine will be established until Africanized honey bee is positively determined. If samples are negative, quarantine will be lifted. Drone and queen traps may be installed on all hives located in the suspect apiary to prevent the spread of reproductions.
 - B. Sample the colony or colonies under suspicion.
 - C. Send samples to qualified laboratory for identification.
 - D. If suspected colony is feral, a sample will be taken and the colony destroyed if Africanized honeybee is confirmed.
 - E. If the laboratory samples are positive for Africanized honeybee, more extensive quarantine zones will be established and an area survey will be initiated.
2. Quarantine procedure to be initiated following first Africanized honeybee confirmation:
 - A. Quarantine positive colony, colonies or apiary and all other colonies within a 2-mile radius. A survey will be conducted within the 2-mile radius to determine the extent of the infestation. No movement of bees will be allowed into or out of the 2-mile quarantine until all Africanized honeybee colonies have been destroyed and the survey completed. Quarantine will be lifted if survey indicates that no Africanized honeybee colonies are still present within the area.
 - B. An additional quarantine area covering all counties touching a 100-mile radius of a positive Africanized honeybee find also will be established. Movement will be allowed into, but not out of this quarantine area, and within this quarantine with the exception of colonies within a 2-mile radius of any positive Africanized honeybee find. To facilitate the survey, all colony locations within the 100-mile radius quarantine must be registered with the Plant Board and have operational

permits, where required. The Arkansas Highway Patrol and municipal police departments will be asked to cooperate by reporting any honeybee movement by trucks out of the quarantined area. Beekeepers who fail to comply with the quarantine are subject to penalties outlined in the Arkansas Apiary law and regulations.

- C. The 100-mile quarantine will remain in effect until the Africanized Honey Bee Advisory Committee recommends extension, modification or abolishment of said quarantine.

3. Survey and Eradication:

- A. All Africanized honeybee colonies will be destroyed (within the 2-mile quarantine area). The method of destruction of Africanized and feral colonies will be with currently labeled, effective insecticides administered according to label instructions and proper safety precautions.
- B. All colonies within a 2-mile radius of an Africanized honeybee confirmation site will be sampled. Mandatory requeening of these colonies with certified European honeybees may be required.
- C. If Africanized honeybees are found in a beekeeping operation that has other bees (maintained in Arkansas) outside the 2-mile quarantine, they will be sampled.
- D. Bees in requeened hives will be monitored for Africanized honeybee traits until released by the Africanized Honey Bee Advisory Committee.
- E. All feral swarms detected within the 2-mile radius will be destroyed.
- F. All feral colonies detected within the 100-mile radius quarantine will be sampled and destroyed if found to be Africanized honeybee.
- G. Survey within 100-mile radius to be conducted by inspectors and other designated cooperating agencies.
- H. All samples will be sent to approved identification laboratories.
- I. New confirmations of Africanized honeybee in all other areas within the 100-mile radius quarantine will be handled as outlined in the above procedures.

4. Memoranda of Agreement will be established between cooperating agencies outlining responsibilities of each agency in the program.

5. Regulatory Management:

- A. If/when the Africanized Honey Bee Advisory Committee determines, based on survey results and other scientific data, that Africanized honey bee has become established, it will recommend that depopulation cease and be replaced by a

management program as outlined by the Africanized Honey Bee Advisory Committee.

- B. When Africanized honey bee has been declared established in the 100-mile quarantine area, then under the authority of the Arkansas Apiary law and regulations, all colonies in the quarantine area will be required to be requeened annually with a clipped and/or marked queen (of known) European ancestry and mated to European drones). Upon annual inspection, if the beekeeper finds a clipped and/or marked queen in the colony, then replacement is optional. If during routine inspections, the inspector finds a colony(ies) may be Africanized, then that colony will be sampled and tested for Africanized honey bee. If a colony tests negative for Africanized honeybee, then the queen may remain in colony until the annual requeening. If a colony tests positive for Africanized honey bee, then the beekeeper will be given two weeks to requeen with clipped and/or marked European queen, or show evidence that he is attempting to requeen said colony(ies).
6. The Africanized Honey Bee Advisory Committee will review the regulatory program on a periodic basis to determine if any changes in the program are deemed appropriate.

Beekeeping Management Committee

Objectives:

develop techniques to:

- avoid AHB
- abate AHB
- maintain European stock
- work with the AHB

Lead agency:

State Beekeepers Assoc.

Other Members:

State Plant Board
Cooperative Extension.

Recommended Management Plan

The purpose of this management plan is to assure that domestic beekeepers have a strategy to maintain a viable honey bee industry for Arkansas.

Any effective management of the Africanized honey bee must occur with the beekeepers. The following management recommendations are suggested as "best practices" to be implemented at the discretion of the beekeeper by the time the state is declared Africanized honey bee infested. Queen management is expected and will be regulated under the Plant Board. Other management

techniques recommended are those currently available. New management techniques will be recommended when they become available from research.

Bee Management Techniques:

1. Queen Management (Also see Regulation and Quarantine Section recommendations)
 - A. Requeen annually for all colonies.
 - B. Requeen with marked and/or clipped queens (certified or known to be of European ancestry and mated to European drones), preferably at least once per year.
 - C. If an unmarked queen is found during annual inspections, it is recommended that she be destroyed and the colony requeened immediately with a marked and/or clipped queen of known European ancestry.
 - D. All aggressive colonies must be requeened or destroyed.
 - E. Maintain requeening records and sales receipts to be shown to Plant Board personnel upon request.
2. Drone Management
 - A. At least 10% of all colonies in an apiary should be managed for drone production according to established procedures.
3. Feral Colony Management
 - A. Place swarm traps (bait hives) near established apiaries.
 - B. Destroy all swarms captured.
 - C. Destroy all feral colonies discovered in nature in the vicinity of the apiary operation. The recommended method for destroying feral colonies is discussed in Section 3 of Regulation and Quarantine.

Research Priorities Committee

Objectives:

Prioritize
Promote

Lead agency:

Cooperative Extension

Other Members

State Plant Board
University System
State Beekeepers Assoc.

Research Priorities

1. The most pressing need is for a state laboratory that will be primarily responsible for testing samples from colonies suspected of being Africanized so that management and containment efforts do not become bogged down by an out-of-state identification laboratory's backlog. Identification techniques have improved over the last few years, making it cost effective to equip and staff a state lab to process large numbers of samples. This laboratory also will coordinate the distribution of Africanized honeybee samples to independent researchers and maximize communication between researchers, government, beekeepers, agricultural producers and the general public.
2. Queen Rearing (Artificial Insemination) - If the Africanized honey bees become established in Arkansas, then it will be essential to have stocks of known (certified) European colonies. At the present time most of the queen bee stock used in Arkansas comes from the southeastern states. Those sources of European honeybees may no longer be available if the Africanized honey bees become established in those states.

One solution to this problem is to develop and maintain a queen rearing facility at (where?) which will emphasize artificial insemination to assure that "known" stock is being used to produce queen honey bees for dissemination to beekeepers throughout the state.

The establishment of a queen rearing facility at (where?) that utilize artificial insemination to control the genetics of the queen bee program would benefit the state's beekeepers in several problem areas. First, it would provide certified European honeybee stock that could be used to re-queen Africanized honey bee colonies on an as needed basis. In addition, it could also be used to initiate research on developing honeybees that are resistant to tracheal and Varroa mites.

3. Development of a self-sufficient queen and package industry.

Recommendations:

- A. Breeder queens - Develop a state supported program to provide Arkansas certified artificially inseminated European honeybee breeder queens to the state's queen and package producers. Nurture existing queen and package producers currently operating in the state by:
 - a. Working with these businesses to obtain funding (grants, government loans) for expansion.
 - b. Providing technical assistance to improve product quality.
 - c. Encourage the development of new queen and package producers in the state.

Education & Training Committee

Objectives:

Produce materials & methods

Dissemination of educational programs to

(use the AR Law & Fire Academies Training Centers.)

for schools, emergency teams, civic organizations, public in general

Lead Agencies:

Cooperative Extension

Service

Other members:

Department of Education

Game & Fish Comm.

State Plant Board.

Education, Training, Information

The economic impact resulting from the Africanization of the domestic, European honey bee populations in most South and Central American countries has been substantial. However, this loss has paled in comparison to the attention and coverage given by the media to the encounters of man with the "killer bees" - real or imagined. Most people have an overwhelming fear of venomous animals. At times, this attitude takes on phobic proportions, making it difficult to maintain a clear perspective on the problem of stinging insects. The African bees' defensive nature and perceived health implications have taken on unrealistic proportions in some news reports. To deal effectively with the true impact of the Africanized honey bee requires an informed public. The general public will need to be educated on what to expect and how best to deal with the problem, especially in large urban centers. This will require an extensive educational and organizational effort by key municipal groups (elected officials, police, fire fighters, emergency medical technicians, physicians and others) and cooperating beekeepers.

As its primary goal, the educational effort will provide beekeepers, agricultural producers, livestock operators, public officials, municipal action groups and the general public with factual information, which will be useful in making decisions involving economic enterprises and public health.

Objectives for the educational program include:

1. The development of an "Africanized Honey Bee Reference Manual" that will serve as the primary information source for County Extension Agents, Extension Specialists and other key educational personnel and groups and with other cooperating state agencies and associations. This loose-leaf, 3-ring binder reference will serve as a primary source used to inform the Arkansas public. Having available accurate, objective and interpretive information is the key to an effective educational program.

2. To complement the "Reference Manual", several fact sheets are proposed that target specific public clientele and provide answers to the primary questions/concerns anticipated. The targeted clientele include:
 - A. Beekeepers (both hobby and commercial).
 - B. Agricultural producers who have an economic interest (pollination service), provide apiary sites on their property or may have concerns about adverse impacts involving the introduction of Africanized honey bee.
 - C. Livestock operators, especially confined operations.
 - D. Municipal "action groups" organized to deal with the influx of Africanized honeybee in urban environments (police, fire fighters, physicians, emergency medical technicians, pest control operators, private consultants, et al.)
 - E. The general public.
3. The discovery of the first Africanized honeybee in Arkansas will be a major news story, generating possibly hundreds of press inquiries. It is expected that there will be several days, perhaps a week or more, of intense media interest. It is vital that the press be supplied with accurate information about the Africanized honeybee; there is great risk that the story will be sensationalized to the extent that the general public may over-react to the arrival of the Africanized honeybee to the point of hysteria. Preparations must be made for the logistics involved in handling a large contingent of reporters. These include costs for telephones to accommodate the press and to handle inquiries from the general public. Press materials must be prepared and mailed to news outlets in advance of the bees' discovery in Arkansas. Materials for television and radio news outlets also must be prepared for use in advance of the bees' arrival.
4. Conduct workshops, symposia, seminars and meetings with organized groups to create greater awareness and knowledge.
5. Develop audio-tutorials, video tapes, slide sets, graphic visuals, etc., for use by organized groups and by the print, television and radio media.