

General African Bee Presentation Guidelines:

Before giving the General African Bee Presentation, please consult the corresponding Edis documents: “What to do about African Honey Bees: A Consumer Guide,” and “Frequently Asked Questions about the Africanized Honey Bee in Florida.” This document is not meant to be read verbatim to an audience, but it instead provides general guidelines for the speaker’s content. Each number corresponds to the slide number.

1. The AFBEE Program (the program responsible for this presentation) is an extension and education cooperation between the University of Florida and the Florida Department of Agriculture and Consumer Services Division of Plant Industry geared toward producing and distributing information about the African honey bee in Florida. Further information about the AFBEE Program and Africanized honey bees can be found at <http://www.afbee.com>.
2. This presentation will feature information on African honey bee biology and behavior, as well as present useful suggestions and precautions.
3. There are many subspecies or races of honey bees in the world. Here we see a map of Africa and parts of Europe. The honey bees kept by beekeepers are actually the same species as the African honey bee in the Americas. *Apis mellifera Ligustica*, the Italian bee (you can see “*Ligustica*” over Italy on the map), is very popular among beekeepers. The bee we are concerned with today is the African honey bee in Florida which is from southern Africa and is called *apis mellifera scutellata*.
4. In the 1950’s, a Brazilian scientist went to Africa in search of a honey bee better suited to produce honey in the tropical South American climate. He brought back *scutellata*, but it was accidentally released.
5. Map shows the north and westward spread of *scutellata*—newly released on the continent
6. Map shows the distribution of the AHB (African honey bee) in the US Southwest
7. Florida counties currently reporting AHB finds. Florida Dept of Agriculture and Consumer Services (FDACS) personnel expect all counties in Florida to report AHB presence at some point within the next few years.
8. More feral or wild colonies each year are turning out to be Africanized honey bees. We determine this by laboratory testing of samples from the colonies. FDACS personnel expects this percentage to be 100% within the next few years as well, meaning every wild or feral honey bee colony found in Florida will consist of African bees.
9. Despite the fact that AHB populations are increasing, it is impossible to differentiate them from European bees by looking at them. This is important; you cannot look at a honey bee and tell if it is an African bee.
10. How then can one find out if a bee is an African bee? This photo shows one of the methods (morphological measurements) used to determine whether a honey bee is Africanized. Dr. Jamie Ellis is measuring relationships between venations of a honey bee wing being projected onto a smart board.
11. First picture: Common image people associate with AHBs—exhibiting defensive behavior and beekeepers wearing full suits and veils. Second pictures: Jamie Ellis working African bees in South Africa—note the variance in behavior, and the difference in protection (short sleeves, no gloves)

12. “Where do they nest?” is one of the questions that causes potential for public concern
13. There are very few places that the AHBs will not settle for; this is very different behavior from EHB (European honey bees) that have very specific qualifications for nesting site locations. The AHB tendency to nest virtually everywhere results in more colonies showing up in highly populated areas. (Photos clockwise from top left: AHB colony exposed on tree branches, bee colony found under subfloor of house, underground AHB colony, above ground shot of the underground nest pictured)
14. Photos show common locations of AHB colonies
15. same as slide 14
16. List of additional common nesting sites
17. How far North will the African bee presence travel? The red lines show projected distribution limitations of the AHB; Florida is clearly within that range
18. **Nest usurpation:** AHB trait characterized by an AHB swarm landing on the outside of an established EHB colony and gradually moving inside until the original EHB queen is lost; eventually the entire colony becomes AHB.
Drone (male bee) abundance: AHBs produce proportionally more drones than EHB colonies; therefore, when a virgin queen goes on her mating flight, she is more likely to encounter an AHB drone than a EHB drone.
Dominance of African Alleles: AHB DNA is dominant when hybridization occurs with EHBs—the African/defensive traits remain although scientists have been trying to breed the defensiveness out of the AHB for years.
AHB Swarming tendency/ Reproductive: An AHB colony will swarm many more times per year (about 10 times) than does the EHB (2-3 times). This is a result of the reproductive superiority of the AHB—because the AHB’s native Africa generally has mild winters, the AHBs do not hoard as much honey as a food source for the winter as do EHB. Instead, AHBs focus on colony level reproduction and swarming.
Pest Resistance: AHBs have thus far shown to be much more resistant than EHBs to honey bee pests, including the varroa mite pictured here. Varroa mites are currently one of the most deadly pests of the honey bee.
19. The presence of AHBs will affect agriculture and beekeepers uniquely.
20. Possible negative impacts on beekeeping industry:
Frequent requeening can be expensive, but is necessary if clipped and marked EHB queen is lost (or dead).
Loss of apiary locations: Due to the threat of African bees, communities may not welcome or permit apiaries in the area as readily as they perhaps did in the past. This is especially true if there has recently been a stinging attack in a nearby area; loss of apiary locations may also be a result of legal liability; for example, if an African bee colony becomes established in the walls of a commercial building and a stinging incident occurs involving the company’s employees, that business may not advocate for beekeepers operating apiaries nearby.
Less honey: If an area is saturated with AHB feral colonies, there will be fewer foraging areas for managed bees to collect nectar, thus less honey production.

Loss of pollination contracts: This is especially true for groves or fields located in proximity to highly populated residential or commercial areas. The growers or farmers may not want to take the chance of being responsible for an AHB stinging attack, for if an attack occurs in the area, the community will look to the grower or farmer who contracts bee hives for use on his property.

Fewer hobbyists: hobbyist beekeepers are an important part of the industry, but with the spread of misinformation about the threat of AHBs, there may be fewer people who choose to take up beekeeping as a hobby due to the increased liability.

Liability (having and removing): if an AHB stinging attack occurs, community members will hold the nearby beekeeper (especially if that beekeeper's bees test to be AHBs) responsible, or the community will hold responsible the pest manager (or beekeeper) removing the swarm he thought were gentle EHB, but turned out to be defensive AHBs and disturbed the neighborhood. Because of these scenarios, there is greater liability involved in keeping bees.

Lower profit margin may be the result of each of these things: frequent requeening, loss of apiary locations, less honey production, loss of pollination contracts, etc.

21. Livestock may be affected if farmers are unable to get the alfalfa (which the cows eat) pollinated; also, with AHBs in the area, if a cow accidentally disturbs a colony, the bees will kill the cow without help from the farmer.
22. At risk groups include any outdoor penned, tethered, or caged animal. AHBs have already killed horses in Florida on several occasions.
23. If growers and farmers are unable to hire honey bees as pollinators, they will be unable to produce our food in the same abundance.
24. Food prices may be affected
25. Another at-risk group is made up of farm workers, especially those using tractors. The noise and vibration that tractors produce will almost certainly disturb any nearby feral honey bee colonies, and if the colony is AHB, the farmer will get stung.
26. Will the AHB affect tourism?
27. Education is the key to minimizing the AHB's affect on tourism.
28. Perhaps the groups most at risk are the elderly and the very young; again, education is the key to avoiding the chances of a stinging attack occurring.
29. Precautions for the public:

Use caution: most people will not approach a snake in the wild or stick their hand into an ant colony; this same respect should be given to all honey bees.

Never approach hive equipment: Most bees kept in hive equipment are gentle EHBs; however, with AHBs in the area members of the public should not approach any hive equipment without the supervision of the managing beekeeper.

Never disturb a swarm: although it is true that swarms generally are docile, it may be difficult to tell if comb is being built underneath the bees. Once comb is built, the colony becomes established and the bees will exhibit defensive behavior. In the picture shown it may be difficult to tell whether the bees form a colony or a swarm. (a colony not a swarm is shown in the photo)

Tractor operators take care: this includes not only farmers, but construction, land clearing, and other workers as well.

Be aware of buzzing insect activity because AHBs may nest nearly anywhere.

Examine suspect areas before entering or disturbing: this may include old sheds or outbuildings, overturned flower pots or containers, etc.

Be alert in all outdoor situations: being aware of the facts about AHBs and acting on that knowledge will make all outdoor activities safer.

Teach respect and caution of all honey bees since they are a vital resource to our lives.

30. Bee-proofing is an important to help prevent feral honey bee colonies and swarms from establishing on a property. (See also “Bee-Proofing for Florida Citizens” Edis document and “Bee-Proofing” ppt presentation.)
31. Important things to remember in the event of a stinging emergency
32. Most important to RUN and leave the area around the colony that the bees are defending!
33. Photo of honey bee stinging: the stinger comes out of the abdomen along with a venom sac. It is important not to “pinch” the stinger out as this will result in more venom being pushed under the skin; rather, scrape the stinger and sac out quickly to lessen the amount of venom injected. In all cases, if breathing difficulty or other severe allergic reactions occur, seek medical attention immediately.
34. In order to address the issue of African bees in Florida, FDACS along with the University of Florida created the AFBEE (African Bee Extension and Education) Program. The goal of the program is to educate every Florida citizen and visitor about the presence of and living with African bees.
35. The AFBEE Program accomplishes this goal by the use of the AFBEE website which serves as a clearing house for information about African bees in Florida. The site can be found at www.AFBEE.com, or you can Google “AFBEE Program” and the AFBEE website comes up as the first selection.
36. A shot of the site’s homepage—includes quick contact info, news updates, and links to the rest of the site. We will look at the “About the bee,” “Resources,” and “Bee Removal” sections.
37. the “About the bee” section provides general and pertinent information about the African bee in Florida
38. By either clicking on the links found at the top of the page, or by scrolling down the “About the bee” page, one can see the links to articles, websites, and videos
39. The “Bee Removal” section is very popular because it outlines for users the state’s recommendation regarding feral bee colonies, anticipates and discusses common concerns that many Florida residents have about bee removal, and links to FDACS’s list of approved bee-removal pest control operators
40. By scrolling to the bottom of the “Bee Removal” section, you can see a few links:
41. the first link brings you to a SolutionsForYourLife.com article about the disappearance of honey bees
42. the second link brings you to an Edis document about Colony Collapse Disorder
43. and the third link brings users to the excel file which lists all of the PCOs trained for bee removal in Florida

44. The “Resources” section of the AFBEE website is where the majority of the information can be found. This section is divided into 13 parts, each designed for specific clientele groups.
45. The Resources page for County Agents contains articles, fact sheets, and presentations specifically designed for use by county agents
46. Scroll down to see the rest of the County Agent Resources page
47. The AFBEE Site also includes a frequently asked questions section
48. Finally, there is a contact page which includes information for AFBEE Program personnel
49. Contacts for more information; also visit <http://www.afbee.com>
50. Credits page