

Apiary Inspection Protocol

When possible notify beekeeper of intent to inspect.

If beekeeper can be present try to schedule the inspection accordingly.

Notification is a courtesy – not a requirement.

Prior to conducting an inspection if a house or business is located on the premise – identify yourself and the purpose you are there.

Ask if they own the bees or know who does. Record name, address and phone # of beekeeper, if possible.

Ask if they know the property owner. Get name, address and phone # if necessary. If we cannot identify the owner of the bees the landowner may be held responsible for them.

Inspect colonies for AFB, aggression and yard for fire ants.

In yards of 10 or fewer colonies inspect all.

In yards of 11 or more inspect one half of the colonies. This is a guideline, you may inspect more. This decision is usually based upon the discovery of colonies found with AFB, or to confirm very high levels of varroa mites. It may also be advisable to inspect the entire yard if the beekeeper only has one yard.

Colony Inspection Protocol

Caution should be exercised when taking apart a colony. The condition of the equipment is variable and may require additional care to minimize damage. The cover should be removed first and put toward the back of the colony. The honey supers need to be separated with your hive tool in such a way as not to cause damage to the supers. The supers are squarely stacked on each other on the inverted cover and inner cover. This is done so the honey may drip into the inner cover. Any honey that has the potential of disease is then contained within that colony. When equipment is damaged the inspector should report it to the owner and record it under remarks on the PI-148. The supervisor should be kept advised of any damage.

It may be preferable to have the beekeeper or a representative of the beekeeper present to break down the hive. If the equipment is in poor condition you may wish to reschedule the inspection specifically for that reason.

A second area of concern when opening a colony is the use of the proper amount of smoke. Some days bees don't work well and colonies may be more defensive. The smoker should be lit so a lot of smoke is available when needed. A smoker that isn't lit well will result in people working the colony being stung more often. The inspector will have a hard time checking for disease, if he doesn't have control over the colony. The increase in bee stings carries on to the next colony in the bee yard when going to open it. If this is the case, you should wash your hands to eliminate the odor of the bee venom.

A third area of concern is the removal of the first frame from the brood chamber. Usually the frame next to the outside frame is removed first. However, if this frame gives resistance then another frame should be tried. The purpose of this precaution is not to roll and kill the queen, when removing the initial frame. Pry all four corners of the top bar to loosen the frame. Cut any brace comb from the adjacent frames so the comb doesn't crush bees when the frame is removed. The frame should be held by two fingers on each hand. Pulling the frame should have minimal resistance. Some drone combs at the bottom of frames or imperfection of the comb will cause resistance when removed. The queen can be caught in this situation and be rolled and killed. Great care should be taken to avoid killing the queen. The difficult colonies will require more time and patience.

The final step is the actual inspection of the brood comb for AFB. Ideally the inspector should have the sun to his back and the top bar of the frame toward your chest. Enough frames should be checked to determine the presence or absence of AFB. The best frames to check are the frames where the brood has just hatched. Any unhatched cells may contain disease. This can be in the form of chalk brood, sac brood, varroa, pesticide EFB or AFB.

Varroa mite inspection

We need to compile information addressing the effectiveness of Apistan and Cumaphos in New York State. Whenever possible ask the beekeeper if and when (month/year) they last treated with what (material). Attach this information to the sample bag. Take several samples of 200 bees from different hives for Varroa counts. These samples will be sent to lab.

This information will be compiled and shared with the beekeeper and you. It will be compiled with all data for use in determining the need for registration of new miticides.

Visual count: Below are the average mite counts from 2001 and 2002. When you take a mite sample of approximately 200 bees, shake the bag and observe the number of mites. Record the average under the remarks section of the inspection report. This number should represent the average number of mites from the sample taken. Compare (visually) with mite counts from previous years and comment under remarks on inspection report.

It is for comparison only.

Average Mites/200 Bees		
Month	2001	2002
May	1.9	4.0
June	1.4	3.2
July	1.3	4.5
August	4.2	4.1
September	5.1	5.7

American Foulbrood

American foulbrood is a destructive bacterial disease of honeybees affecting the brood. The disease is easily spread through management practices specifically the movement of extracted honey supers between hives and the transfer of brood frames between colonies.

The bacterium causing AFB exists in two forms (spore and vegetative). Bacterial spores can be thought of as seeds that assist the bacteria in spreading. The spores can survive outside the colony for more than 35 years. The spores are also resistant to a range of disinfectants.

The larva is given AFB spores in brood food. The spores germinate in the gut and turn into vegetative form. This form penetrates the gut wall of the larva, multiplies and consumes the larval tissues resulting in the mortality of the developing bee. When the vegetative stage has consumed all the larval tissues it becomes spores. A single diseased larva may contain more than 2.5 billion spores. House bees try to remove diseased larvae and prepare and in so doing become contaminated with spores. New larvae are infected when they are fed contaminated food.

Spread

The most common causes of AFB spread are beekeeping management practices:

1. The movement of extracted honey supers between hives.
2. Transferring brood frames between colonies.

Robbing can be a factor. Drift is not important.

Control

Because of the contagious nature of this disease and the appearance of AFB resistance to antibiotic treatments all colonies found to be infected with this pathogen must be destroyed in accordance with accepted control procedures. Control options include the destruction of the bees brood, honey, comb, frames, innercover, and the scorching of the hive body. This is accomplished by burning or deep burial under the supervision of a state apiary inspector. Alternatives to the above options must be made in writing to your local inspector and require the approval of the Director.

Closing Hives with AFB

The entrance of a diseased colony is normally closed prior to killing the bees. It is also important to seal all cracks in the hive. This should be performed in the evening or during rainy weather when most of the bees are in the hive.

When the entrance has been blocked and all other openings sealed a small amount of Kerosene (500ml) for a 1-2 story hive-more for a larger 3-4 story hives. Pour the material over the top bars as quickly as possible and close the hive. It will take 15 minutes or more to kill the bees.

Burning

Before burning the AFB hive a hole should be dug. The hole will contain the fire and will also ensure that any infected material not completely destroyed will be buried.

Before you dig locate a site far enough away from healthy hives, fences or buildings to avoid accidents since beehives will burn quite vigorously and flames can reach 2-3 times the height of the stack. We are advised to remind the beekeeper to check with the local fire department with respect to burning and to take safety precautions by having a fire extinguisher, shovel and water within reach. Similarly we must remind the beekeeper to use caution with respect to underground gas, telephone, cable lines, etc. that could be damaged in the process.

By definition, a facility is “something created to serve a particular function.” We normally think of a facility as a place (like a medical facility), but a facility could also be a thing – a pipe carrying gas from storage to a distribution center, is a gas transportation facility.

Damaging an underground “facility” (pipe, cable, conduit, etc.) and any resulting interruption of service (gas, water, electric, telephone, etc.) is a direct violation of NYS Public Law Title 16, NYCRR (New York Codes, Rules and Regulations), Part 753. This law has been passed to establish a guideline for safe excavation practices and the protection of underground facilities in New York State. The Attorney General has the authority to prosecute those parties that are found in non-compliance with Code Rule 753. Fines for non-compliance range from \$1,000 to an assigned amount based on damages and loss of services. Responsibility for compliance falls upon the excavator.

To help prevent interruption of service and any violation of this law, the NYS Public Service Commission has instituted a One Call notification network for anyone digging in New York State. Contacting the network is as follows:

- New York City & Long Island One Call Center, 800-272-4480, provides service for all five boroughs of New York City as well as Nassau and Suffolk Counties on Long Island.
- Dig Safely New York, 800-962-7962, provides service for the rest of the state.

How the system works:

1. anyone that is going to dig a hole, by law,, is to call the appropriate call center at least two (2) but not more than ten (10) days before digging.
2. the call center will notify the appropriate utilities
3. the utilities will mark and then notify the excavator where it is safe to dig

Referral: Excavator's manual

Windy conditions should be avoided, be sure the surrounding area is clear of any combustible material.

AFB Procedure

When you discover AFB, place the infected colonies under quarantine. No action will be taken until the sample taken by the Inspector is confirmed in the lab. Confirmed samples will be

forwarded to Beltsville for resistance testing. Mail preliminary diagnosis (inspection report) and quarantine to beekeeper via registered mail return receipt requested.

Upon confirmation, contact beekeeper to determine abatement time and place. Options include burning or deep burial. The beekeeper has 5 days to contest finding. If he/she does contest finding schedule a reinspection with the beekeeper or representative present to obtain a joint sample. The Sample must be taken to the post office and mailed to Beltsville in presence of both beekeeper and inspector. Colonies will remain under quarantine pending the results obtained from USDA-ARS laboratory.

Role of Inspector in Abatement

The Inspector is not required to perform the abatement procedure. This is the responsibility of the beekeeper or his/her representative. The Inspector's role is to verify the abatement procedure has been properly carried out upon which the quarantine can be released. You should provide advice and guidance to insure the process is properly conducted. You should notify your supervisor of the abatement and call upon him or her for assistance if needed.

Penalty Cases

Upon confirmation of AFB the beekeeper has 14 days to carry out the abatement process. This must be done in the presence of the Inspector. It is not necessary for you to witness the entire procedure. You are responsible for confirmation that the process has occurred and was properly completed.

If abatement has not been scheduled within the 14 day period following confirmation contact the beekeeper and notify him or her that you are required to notify the Albany Office and that a legal case will be initiated with a penalty (fine) of \$300 per colony and that the abatement procedure will still be required. If the Department conducts the abatement process the total cost and fine will be charged to the beekeeper. Determine if the abatement can be scheduled or there are extenuating circumstances that need to be addressed. It is preferred to avoid undue fines and penalties against beekeepers. Be sure to keep your senior apprised of potential problems.

Landfill Option

Deep burial of diseased equipment and bees is acceptable. This can be done on the beekeepers property, the landowners property with written permission, or at a landfill. The diseased material should be covered by 2-3 feet of soil. A hole is to be dug by the beekeeper big enough to accommodate the diseased equipment. If material is to be taken to landfill arrangements are to be made ahead of time to receive the materials and bury them immediately. All tipping fees are to be paid by the beekeeper.

The material is to be properly transported to the disposal site so that healthy bees are not exposed or placed at risk. Bees are to be killed by the beekeeper. They may use an approved insecticide or other means to kill the adult bees. If there is a delay in the abatement procedure the colonies should be wrapped or otherwise isolated to prevent robbing.

The entire procedure should be discussed in advance with the beekeeper. If you are encountering difficulty contact your supervisor for assistance.

Burning

Beekeeper is to kill bees and prepare site in advance of abatement procedure. Review procedure with beekeeper to insure that it is correct and safe. Remind beekeeper to check with local fire department with respect to burning and remind beekeeper to use caution with respect to underground gas, telephone, cable lines, etc. that could be damaged in the process. Also caution against the use of explosive flammables. If it appears that the beekeeper is proceeding in a way that could endanger himself, you or surroundings advise a delay and contact a supervisor.

Club/Association Workshops

We discussed the possibility of calling upon clubs and associations to entertain the concept of disease control workshops where diseased colonies and equipment could be brought from the surrounding area to a centralized location for proper disposal and abatement. Disease identification and abatement could be presented as training for all. The Clubs and Associations can assist by securing a location and necessary approvals (i.e. fire marshal). Inspectors could oversee process and provide training and guidance in abatement procedures and alternatives to burning. It may also provide an opportunity for some club members to perform abatements for hire.

We are looking into "barrel" burning which could be performed in a number of locations. This process may be ideal for an individual who will abate colonies for hire. The infected materials can be transported to the approved site and properly disposed.

Africanized Honeybee

If you encounter aggressive bees take a small sample of bees or indicate that a varroa sample should also be examined for africanization. Make note of aggressiveness on your apiary inspection report.

Imported Red Fireants

If you come across fire ants, please obtain a sample and immediately report it to my attention. It is possible that migratory operations from the south could inadvertently transport these pests. The sample should be submitted to the bee lab.

AFB Resistance to Terramycin

All AFB samples will be forwarded for resistance testing.

Resistance 15 or less
Moderate Resistance 16-49
Susceptible 50 and above

Beekeepers and inspectors will be notified of results.