

STAHLMAN BEEKEEPING

NOTES FOR 2023

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Hive inspections are important for a number of reasons.

- Knowing what to check for is always a learning experience and new issues arrive every year.
- Knowledge is achieved and is based on experience.
- Actual examination of equipment and honeybees is acquired by opening hives, examining bees and equipment, and then making decisions with regard to what is seen.

This is not a simple topic! Often there is a need to call in state bee inspectors or an experienced beekeeper to confirm what a beekeeper is seeing. If problems do exist it is important to address them as soon as possible.

If one is to continue to keep bees, inspections are important:

- Inspections help determine the status of a hive.
- Inspections help beekeepers to understand bee behavior.
- Inspections help one to base what they see with what they have learned about:
 - Bee Biology
 - Diseases of the honeybee
 - Pests and related things introduced into a colony.
 - Honeybee survival.
 - What is seen or heard from other beekeepers and information from web sources.

Bee inspections vary with the season. More inspections are required at this time of the year. This is the build-up period when it is essential for a hive to get a good start on this bee season. So many things can and do go wrong. Swarming will be the major concern for those with established

IMPORTANT POINTS

Under Suitable hive conditions honeybees are remarkably tolerant of manipulations by the beekeeper!

The colony conditions that make tending to bees difficult:

- Large bee populations
- Unsuitable weather
- Disturbances of any kind
- Robbing
- Rough handling of hives!
- Failure to dress appropriately and work bees when the foraging bees are present in the hive.

Spring has arrived officially! Some Hive management ideas for working bees in spring:

- Work hives quickly and methodically, so the bees don't get chilled.
- Bees are going to be more gentle in the spring season. Not so many of them in a hive.
- Check brood patterns and if a queen is failing replace her as soon as possible.
- New colonies will need food as they draw comb and build bee populations.

hives and those just beginning will face issues such as getting a hive off to a good start.

A person with 30 hives of bees will manage them differently than the person with only two or three. It takes time to inspect hives. Often, a beekeeper is required to do a frame by frame inspection --that takes time. A person with 30 hives can not spend much time with each hive and in those cases may only examine a frame or two from each hive and spend more time on a hive requiring attention.

For new beekeepers the challenge is to know what one is seeing. Experience is a big help when it comes to doing hive inspections.

Chief concerns for every beekeeper should be:

- Does the hive have a queen? (Evaluation of brood and the bee population)
- Does the hive have a disease or pest issues? (Signs of disease or pests like mites)
- Does the hive have a comb or frame issue? (Comb management)
- Does the hive face a seasonal issue? (Swarming, robbing, feeding, requeening etc.)

There are reasons why some are successful beekeepers and others are not!

Let me begin by saying one can disturb a hive too much! There is no need to find a queen in a hive if one can determine the hive has a good brood pattern and brood in all stages of development. When frames are removed from a hive, there is always the possibility that the queen could be killed by careless handling.

The greatest harm to a hive of bees is caused by a beekeeper keeping the hive open until the queen is found. Keeping a hive open for an extended length of time can be justified when checking for swarm cells, finding the queen so she can be replaced, or dealing with a serious disease issue.



Once a frame has been removed from a hive, it is important to examine the frame. I like to hold the frame with the sun to my back so I can look down into the cells. I hold the frame by the top bar ears so I can flip the frame to see both sides.

What am I doing? I am looking for signs that this hive has a queen. This is the first thing I do. I remove a frame next to the side wall of a hive and then remove one frame at a time until I find brood. I do check for the queen – I mark queens so they are easier to spot.

Every hive needs a good laying queen!

- **Does the hive have a queen? (Evaluation of brood and the bee population)**



The only way a hive can be kept successfully is to have good stock.

A very productive queen is not determined by the looks of the queen. It doesn't make any difference of her color. She is the mother of all the bees in the hive.

She lays eggs! If she is producing 1500 to 2000 eggs a day, the hive will thrive as long as the bee population in the hive can support all food requirements, the hive is managed properly – [mite control and food provided if needed], and

the hive remains healthy.

Every hive can face problems.

- Queens get old
- Queens can produce very angry bees.
- Queens may be poorly mated.
- Queens may not be accepted by the bees – generally when the beekeeper tries to replace a queen.
- Queens may exhaust sperm as she grows older. Thus eggs are not fertilized and she becomes a drone laying queen.
- A queen's pheromone is very important to the bees in the hive. If it is low, the bees may replace the queen.

The egg laying rate of a queen depends on the strength of the colony, temperature in the brood nest, the amount of available space and the food fed to the queen by nurse bees.

It is necessary for the beekeeper to be aware of issues that reduce bee population especially in the spring season.

- It is normal to see all stages of brood development. If eggs are present, we may assume the hive has a queen!
- One egg is located centered at the bottom of a cell. As eggs develop they will eventually lay on their side at the bottom of the cell. Look again at the picture of the queen laying eggs.

Reading a frame:

This is a frame of capped brood. You may also see the queen on this frame.

All cells are capped. This is a solid brood pattern.



This is also a frame of capped brood. The hive has a queen but note that the brood is not solid. Many cells are missed and some cells don't look right.

They are dome shaped. These are drone cells.



A frame like this is an indication of a failing queen. Unfertilized eggs laid by the queen in worker cells will result in drones. The bees build a dome over the cell to provide the drone larvae room to grow and develop. This not only disfigures the comb in the frame, it means a reduction in the hive's bee population. Healthy hives of bees will build drone comb usually at the edge of comb on a frame or in comb built between frames. This is often a process of decline in bee population with the beekeeper not recognizing what is going on. Possibly this hive will be subject to robbing or dying before winter arrives if the queen problem continues.

Problems for new beekeepers :

Inspections generally cause confusion because many things are not discussed in bee school.

First, it is normal to fail to recognize problems.

Starting with a package of bees is like bringing a new baby home. Mothering skills are essential for the baby's health and safety.

A beekeeper installing a new queen into a hive with bees unrelated to the queen may wait too long to determine if the queen is a good queen or not. Problems are:

- **The queen may not be accepted by the bees.**
It is acceptable for a person to wait several days to see if the queen has been released by the bees. If she has been released, remove the queen cage but don't go looking for her. Wait a few days for the bees to begin drawing wax comb. Queens will not start laying eggs until they have cells to put eggs in. Even seeing eggs is not a sure bet that everything is okay.
- **Check the ground in front of the hive. If the bees do not accept the queen, she is usually dropped by the bees on the ground directly below the entrance to the hive. Get a replacement queen immediately.**
- **The queen in the queen cage may not be well mated or not mated at all – likely in about 5 to 10% of packages sold.**

If one sees something like this [a problem exists]. Get help from a bee buddy or your local bee organization.



This is the sign of a laying worker bee. It means the hive does not have a queen. This is not normal! One egg per cell is normal.

If this is discovered in an established hive, the solution is not to requeen the hive. Often the bees with laying workers will kill any new queen put into the hive.

Standard practice is to place a laying worker hive above a strong hive. Older bee books may suggest taking the bees in the hive and shake them off frames some 100 yards or so from the hive. They think the laying workers can not fly back to the hive location. They can! The bees in a strong hive will kill the laying worker bees. Several weeks later the hive can be removed from the strong hive and a new queen introduced to it without trouble.

Next week some thoughts on –“Does a hive have disease or pest issues?”