

The background features a repeating pattern of hexagons in various shades of yellow, orange, and grey. A smooth, flowing, translucent ribbon-like shape curves across the center of the image, adding a sense of movement and depth.

Swarm Prevention

It's nature

- A swarm of honey bees is a familiar sight in the spring and early summer.
- Honey bees instinctively manage the colony's growth and survival by swarming.

Site Attributes

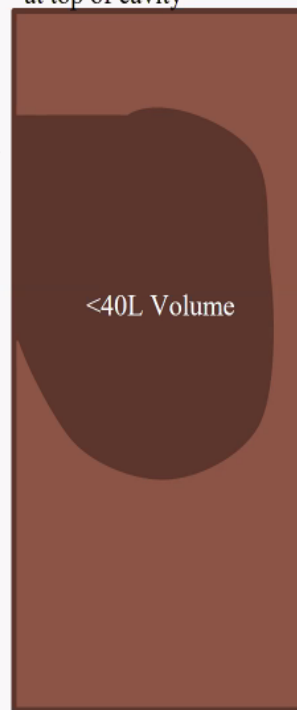
There are at least six attributes bees display a preference for when selecting a potential nest site:

- Cavities that are ~40 L (10 gallons) in volume
- Entrances that are ~3 square inches (~19 square cm)
- South-facing entrances
- Entrances at the bottom of the cavity
- Cavities ~15 feet (~4.6 m) from the ground
- Cavities with comb from previous colonies

If a swarm can meet some or all of these criteria in their new nesting site, they stand a much better chance of surviving their first season.

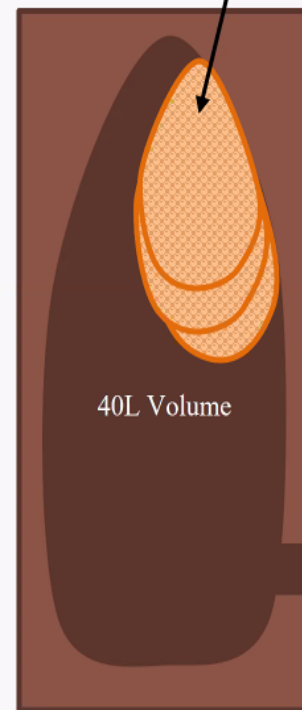
Less Preferable

Large entrance
at top of cavity



Preferable

Leftover comb



Small entrance near
bottom of cavity

Moving into the New Nest

The scout bees signal to the swarm to warm their flight muscles and, shortly after, to take flight.

The scouts that have previously visited this site lead the swarm by using a flight pattern wherein they rise to the top of the swarm and ‘streak’ quickly in the direction of the site.

The other bees take note and repeat the flight pattern, enabling the swarm cloud to fly in unison.

Once the scouts and the queen arrive, pheromone signals from both the queen and workers aid in the final step of attracting the rest of the swarm into their new nest.



Thomas D. Seely (2010), *Honeybee Democracy*

Swarm Stimulants



Stimuli that lead to swarming include:

1. colony congestion,
2. lack of cells in which to lay eggs,
3. dilution of the queen's pheromones,
4. drone production,
5. increasing nectar availability,
6. presence of queen cells,
7. lengthening daylight,
8. warming weather, and
9. an aging queen.

Swarm Management

There are six basic practices that a beekeeper can use to limit the stimuli that lead to swarming. They vary in efficacy.

1. remove queen cells from hives every 7 – 10 days during swarm season
2. requeen the colony
3. clip the queen
4. super the hive
5. equalize colonies
6. make splits



Swarm Management through Queen Management

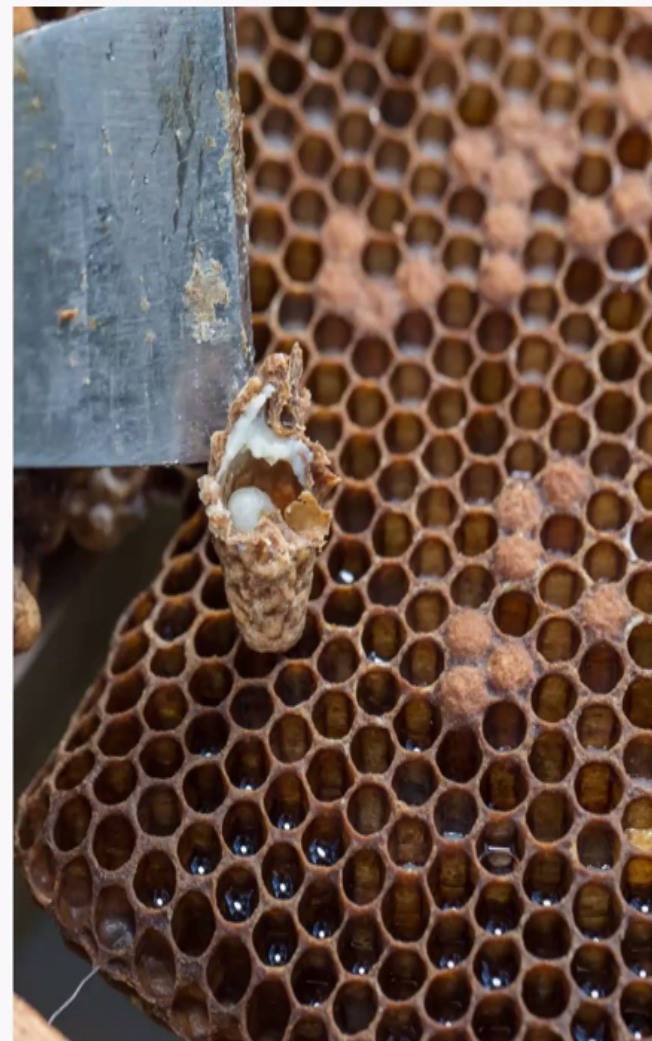
The presence of capped swarm cells (queen cells) in a hive is the final stimulus that leads a colony to swarm.

A swarm cell is a queen cell that is created for the purpose of requeening a colony after a swarm, given that the original queen leaves with the swarm.

Removing (i.e. “cutting”) swarm cells from the hive every 7 – 10 days can reduce swarming tendencies by making the colony unprepared to swarm.

To cut swarm cells, shake the bees off each brood frame in the hive. This makes it easier to find and destroy all swarm cells present in the hive.

Confirm queen presence in hive prior to cell removal.



Swarm Management through Queen Management

Requeen colonies annually. This eliminates one swarm stimulus (an aging queen).

Clip the queen's wing. This prevents her from flying, thus decreasing a colony's ability to swarm.

Queen management practices have limited effectiveness at managing swarming. Most likely, these practices will delay swarming, but will not eliminate it entirely.



Creating More Space



Hive congestion is a major stimulus that leads to swarms. This is especially true if a queen does not have anywhere to lay eggs.

Congestion leads to the dilution of the queen's pheromones.

Consequently, one way to reduce a colony's tendency to swarm is by increasing the size of the hive.

This can be done through supering and equalizing colonies.

Supering Colonies

To super a colony means to add a honey super to a hive, creating more space for food storage.

If a queen excluder is being used, supers are added above the excluder.

Any boxes placed below the queen excluder will become brood chambers, which will provide more space for the queen to lay eggs.

In warm climates, honey supers should only be added to the top of a hive when the hive box below it is at least 75% full.

Providing bees with too much space, too quickly, leaves parts of the hive unguarded and vulnerable to hive pests.

In cooler climates, however, heavy nectar flows occur over shorter periods of time, causing the bees to fill honey supers more quickly. In these areas, you may need to add multiple supers at a time.



Equalizing Colonies



Equalizing colonies is a way for beekeepers to share resources between colonies, so that all colonies in a given apiary have roughly the same amount of brood frames, food frames, and bees.

By taking full frames from a large, strong colony and replacing them with empty frames from weaker ones, you are giving the queen in the strong colony more cells in which to lay eggs.

Conversely, moving full frames from a strong colony into a relatively weak colony can provide that colony with the extra food and brood resources that it might need to be productive.

When equalizing your colonies, make sure that the queen stays in her original hive and is not accidentally moved to another hive.

Making Splits

One of the most effective ways to manage swarming is to split strong colonies.

Splits, essentially, are controlled swarms, where bees, brood, and honey/pollen are removed from the strong colony and used to make a new one (the “split”).

A split should be given a new queen or allowed to requeen itself.

Splits made for swarm control purposes are usually created 4 – 6 weeks before the major nectar flow to allow the full size colony to regain its strength prior to production season.



Reference:

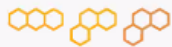


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