



# *STAHLMAN BEEKEEPING*

## *NOTES FOR 2025*

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### **Summer Issues - Bearding on front of hives**

Hot weather is hard on bees and they react to hot weather in numerous ways. There has been a trend to recommend placing colonies in direct sun to combat small hive beetles and mites. Primary issue with honeybees during hot weather is body temperature control. Hot weather creates a unique condition within in a hive – wax get very soft at higher temperatures and foundation will sag if not supported by wires. Bees ventilate the hive by moving air thru the hive body and gather water to help control moisture within the hive. Heat can kill honeybees quickly if they get over heated. Thus, there is a balancing act by bees to survive high temperatures especially if exposed to the full heat from the sun.

Honeybees seal up every crack or crevice with propolis. This is something I have noticed over the years when I had to scrape propolis off hive bodies sealed so tight that separating boxes is difficult.

Honeybees are unique in that they ventilate their hive with fresh air so they can survive. Here in the south, beekeepers try to help bees by using screened inner covers and screen bottom boards. I have seen sun screens used to cool bees in very hot areas of the U.S. Yet, even devices like slatted racks have been used to provide more cluster space under the brood chamber in an effort to provide the bees with more space to cluster within the hive body.

50 to 80 thousand bees within a strong hive create a lot of body heat. Thus, circulation of the air in the nest cavity is maintained by fanning behavior of some bees. One can observe fanning bees at the entrance to a hive on hot days. Another thing we can observe is how bees spread out as temperature within the hive increase. Even in very hot conditions bees have no problem cooling their hive if they have access to a water supply.

Thus, when we see bees cluster outside a hive during the summer season, it is not a colony about to swarm but a group of bees cooperating to lower temperatures within in their colony. Air passage ways between frames are created that otherwise would be clogged with bees.

There are several other issues that I might point out about water moisture with in a hive. Moisture is added when freshly gathered nectar is brought into the hive during the ripening process of nectar to honey, but when honey flows end, the reverse happens when bees must supplement moisture to cool the interior of the hive. Thus, honeybees must have access to a good water supply! Even with bees clustered at the hive entrance, there will be bee activity. It is very normal to see orientation flights of young bees – it may look like robbing – but it lasts only

for a short time and activity at the hive entrance returns to normal. Water gathering bees are active supplying the needed moisture to cool the hive.

This has been a survival thing for ages and honeybees don't abandon their hive as long as they can control the temperature with-in the hive.

What can you do to help your bees?



You could use a slatted rack and use that entrance feeder to provide water to the colony.



Or provide a water supply close to the hive. In this case little trickles of water into a pan from a water faucet provide a source.



One can provide an upper entrance to a hive. This prevents crowding at the hive entrance and allows upward movement within the hive.

Along the same idea, a beekeeper can create a space small enough for hot air to move out of the hive but not allow bees to enter by placing several nails between hive boxes. If left for long, the bees will most likely fill the space with propolis. Don't worry too much about that because the bees know more about ventilation within their hives than we do.

Just remember when one provides additional entrances to a hive, it could provide an opportunity for robbing to occur as well as a place for wax moths and small hive beetles to enter the hive.



I chose this photo to share what extreme heat can do to a colony of bees. The only place for the large populations of bees in each of these colonies was to lay outside the hive until temperatures cooled. Providing an extra super above the brood chambers would have helped the bees. Placing them on a hive stand would have provided gathering space. It is also a sign the beekeeper could have done a better job of providing bee space for the bees.



Some beekeepers may try to provide some upper ventilation by placing some blocks as shown to lift the top cover on these hot days. Metal gets very hot with the sun beating down on it. Raising the top cover a bit can relieve heat buildup in the space between the inner cover and top cover.