



Managing Heat



Keeping beehives in a desert where temperatures can spike to more than 115F degrees can be tricky. Frequently, what we think might be good for a beehive in terms of placement or management can actually work against them when it comes to keeping them cool. The following suggestions pertain to those working with bees in very hot climates. We find that once temperatures start to surpass 110F a hive can become more vulnerable if these strategies are not kept in check:

- Make sure it's completely shaded, but allow for as much air movement around it in all directions. A large piece of plywood sitting over the top cover does well, and keeping the top cover of top bar hives fully elevated above the top bars is also necessary.
- If the hive is full - meaning all the frames in each box are completely covered by bees (all combs are covered in a top bar hive) - cracking the top cover on the front side no more than an 1/8" helps them to manage heat from the inside while preventing robber bees from gaining access there.
- If there is a lot of empty space in the hive (empty frames of foundation or empty top bars count as empty space) you need to consider removing that empty space and making the hive more compact. Leave one empty bar between the follower board and last comb of honey in a top bar hive.
- Make sure the main entrance is fully open unless the hive is weaker and has a lower population that is vulnerable to robber attacks.
- Placing hives near masonry walls, or walls in general (especially south or west-facing), is not the best place for them since walls tend to reduce air-flow around the hive and they are heat-sinks. Meaning they collect and give off heat in late-afternoon/early-evening which then radiates into the space during a time when bees are working hard to cool down the hive.
- Thick vegetation surrounding a hive can also be detrimental as it can greatly reduce air-flow around the hive.
- Harvesting surplus honey (especially in top bar hives) at least a day or two in advance of soaring temperatures is also a good precaution. In top bar hives we recommend removing all sealed surplus honey with the exception of one which would preferably be open nectar. Surplus honey (even unripe combs) can be frozen and returned later during more favorable weather.
- Keeping an open water source nearby and feeding a thin syrup (internally) can also help keep hives cooler since moisture is made available which they use to cool the hive interior by evaporating it similar to the way evaporative swamp coolers or cooling towers work.