



Preparing Hives for Winter

What happens to your bees during the cooler months

Bees do not hibernate during the cooler months. Instead, they form a cluster in the hive to keep warm.

Depending on the temperature and climate, the queen may not lay any eggs, and there may be reduced brood numbers or no brood at all.

All drones are kicked out of the hive early in May or June.

The availability of local flowers determines whether the bees have to rely solely on their stores of honey and pollen.

Bees stop flying when the temperature drops below nine degrees celsius. In the hive, they need a temperature of 34 degrees celsius, which they achieve by clustering.

Sunshine Coast climate

Summer temperatures from December to February range from 17 to 28 degrees celsius.

Autumn temperatures from March to May range from 13 to 25 degrees celsius with some warmer days.

Winter temperatures from June to August range between 7 to 22 degrees celsius.

Spring is similarly mild with temperatures reaching between 13 to 25 degrees celsius.

The Blackall Range can experience temperatures several degrees cooler than other parts of the Sunshine Coast, but there is always the trademark sunny weather to keep the climate mild.

The Sunshine Coast's main rainfall occurs in the first few months of the year in mid-Summer, with an average of 300 mm falling. This then drops off to an average of just 40 mm throughout the winter months.

Trees flowering during Winter

The flowering of many trees will depend on rainfall. With good rainfall, some trees will extend their flowering.

Wattles, Banksia, Tea Trees, Bloodwoods, Hairy Pea, and Spotted Gums flower during Winter on the Sunshine Coast.

Preparing your hive

1. Inspect the super/s

- For honey stores – ideally a hive needs six full frames per hive.
- Remove any supers not covered in bees to reduce the size of the hive which needs to be kept warm.
- Position two capped frames on either side of the super to provide insulation.
- If there are inadequate stores you may need to consider and plan to feed your bees. It is always better to feed them before they run out of honey and pollen stores, because if they do run out it may be too late to save them.

2. Check the brood box

- Check the brood for solid even patterns and number of brood.
- Check for disease – AFB, EFB, sacbrood and chalk brood.
- Ensure that beetles are being managed and controlled.

3. Check the queen – is she healthy, or does she need to be replaced?

4. Check the location of the hive

- Make sure the hive is in a sunny position protected from winds by windbreaks.
- Ensure that the hive is tipped forward to

- allow any condensation to flow out the front.

1. Additional strategies to retain heat

- Consider removing the queen excluder to allow the bees to move freely around the hive
- Consider a hive mat to assist with retaining heat. Place the hive mat under the excluder to maintain heat in the brood box and remove it towards the end of August. Be aware that a hive mat can provide hiding places for beetles. Hives mats are not generally required in our mild climate.
- Consider reducing the size of hive entrances to a width of 50mm or even less to reduce loss of heat and reduce entry of cold winds.

2. What to monitor during winter

- Keep an eye on the hive entrance.
- If required check food stocks but quickly and on a sunny still day
- Don't over monitor by opening the hive.

3. Feeding your bees

- Only use white sugar to feed your bees. Do not feed raw, brown or dark brown sugar or molasses, as these may cause dysentery.
- Equally as important, do not feed honey to your bees, unless it is from your own disease free hives. If you feed your bees your own honey never place the honey in the open outside the hive as this is illegal under the *Livestock Disease Control Act 1994*.
- Place the sugar syrup (see recipe below) or dry sugar in the hives in the late afternoon or early evening. This minimises other bees robbing your hives, as feeding sugar syrup in the open can attract feral colonies and may cause robber bee activity. This is why it is illegal to do so.

4. Making and feeding sugar syrup

- Mix thoroughly one cup of white sugar with one cup of boiling water and allow to cool. Never boil the mixture as the sugars may caramelise and may be partially indigestible and toxic to bees. Place sugar syrup in a plastic bottle upside down in a feeder at the entrance of the hive. The feeder is available from the club.
- Alternatively, you can sprinkle white sugar on the tops of the frames in the the super and, if practicable, the brood box.

References and further reading

1. R Goodman, *Australian Beekeeping Guide; Rural Industries Research and Development Corporation*.
2. D Kilmkiet, *Amazing Bees*.
3. *Preparing Your Honey Bee Hive for over-wintering in Australia*.
4. Bee2Bee Beekeeping Supplies.
5. Ipswich and West Moreton Beekeepers Association Inc, *Overwintering bees in Queensland*.
6. Nuplas June 19, 2019, *Better Beekeeping: Preparing your Beehives for the Cold Winter Months*.
7. Bee2Bee BeeKeeping Supplies, *Preparing your Honey Bee Hive for Over-Wintering in Australia*.
8. D Sommerville, "Wintering Bees", *Prime Facts for Profitable adaptive and sustainable Primary Industries*.
9. BeeAware Newsletter.
10. A Craig & S Craig, *Natures Gifts*.
11. Sunshine Coast Weather and Climate - travelonline.