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Colony Inspections

Bristol Beekeepers

Inspections. During the early stages of beekeeping, colony inspections can seem somewhat of a mystery: what am I looking for? how do I know if there is something wrong? how often, and when should I be inspecting? In fact all of these are relatively straightforward to answer.

Prep. Before you even go near the hive, you need to ensure your bee suit is clean¹, your hive tool is clean^{2,3} and your smoker is well lit. All suited up, take a look at the entrance, and make sure there are some flying bees.

When? The weather conditions are the key here. Avoid inspecting if poor weather is forecast; sudden pressure changes can change the colony's temperament. The NBU advise⁴: not to inspect below 10°C; quickly between 10 - 14°C and above 14°C there will be no problem.

Frequency. During the active season (Apr - Sep) this is all driven by the ability to detect swarm queen cells before they are sealed. Once an egg is laid in a queen cup (it is then called a queen cell) it takes 3 days before the egg emerges as a larvae. After a further 5 days (i.e. 8 days' after the egg was laid) the queen cell is sealed. At this point a colony with an unclipped queen is most likely to swarm. Clipping a queen can delay this emergence of a swarm, but the queen will leave, though won't get very far and the swarm will return. Consequently, it is recommended that we should inspect our colonies every 7 days.

What to Look For? This is split up 5 main areas⁴:

(i) Food. There should be enough food (both honey and pollen) to last until the next inspection. 2-3 brood combs' worth is recommended.

¹ You should clean your bee suit after each visit to the apiary. This is nothing more than washing it (following the manufacturer's instructions) with the detergent of your choice, **plus** the addition of 1/2 capful of Washing Soda crystals.

² Use a solution of 1:5 Washing Soda to clean water, plus a tiny splash of washing up liquid. See the hive tool bucket at the apiary.

³ Best Practice Guideline No 3, Apiary and Hive Hygiene, National Bee Unit, Sep 11.

⁴ Best Practice Guideline No 6, Spring Checks, National Bee Unit, Feb 14.

- (ii) **Room.** Is there sufficient room for the colony to expand, both in terms of space in the brood box(es) and super(s)? Do I need to add another super⁵
- (iii) **Queen-right.** If the queen is seen, then great. However, it must be stressed that it is only necessary to see eggs, suggesting that a queen has been laying in the past 3 days, and Brood in All Stages (BAS), i.e. larvae and capped brood.
- (iv) **Queen cells.** Are there any? If so, what type (emergency, supercedure or swarm).
- (v) **Disease.** The most simple way of addressing this is understanding what healthy brood looks like. Then any deviation from this will suggest that something is not right.

How? This all comes down to good handling, most of which is common-sense⁶. Make sure you stand behind the hive entrance, then carefully remove the roof. There is no need to look inside the supers beforehand, just a quick peek afterwards is required to see if a new super needs adding. Using minimal smoke, remove the queen excluder as carefully as possible - crack a corner and twist it off to break the propolis/brace comb seal. Make sure you inspect the underside for the queen before standing it up against the hive stand.

Inside the brood box all sudden, jerky movements and “rolling bees”⁷ must be avoided. Start by removing the dummy board, then the outer most frame, checking for the presence of the queen. Put these to one side of the hive, ideally not in direct sunlight. This will allow for more space within the brood box for manipulating the remaining frames. As you work your way through the colony, try not to dither, instead use slow precise movements to check for the 5 key points (above). Ensure you replace frames in order **and** orientation that they were removed.

When the inspection is complete and the frames re-inserted, use the hive tool to remove any brace comb on the top bars (putting it to one side rather than discarding on the ground!) before replacing the queen excluder (the correct way up for the bee-space used). Carefully place the supers back on the hive, checking the newest for available space (2/3 full of bees, not stores = new super is required). And then it's time to complete the hive records - which will be covered next time.

Hygiene. Before moving onto inspect the next colony you **must** wash your hive tool and gloves in the washing soda bucket. This takes seconds and is imperative since it will prevent you (the beekeeper) spreading any disease between colonies.

⁵ A new super should be added, preferably under the existing one(s) when the newest is 2/3 full of bees.

⁶ Best Practice Guideline No 2, Handling and Examining a Colony of Bees, National Bee Unit, Aug 11.

⁷ “Rolling bees” is the phenomenon given to removing a frame of bees in a tight space and, in doing so, knocking off many of the attendant bees. Not only can this damage the bees - it certainly will agitate them, but it may also damage the queen.