Requeening a Drone Laying Colony by Joe Lewis

Why does a hive become a drone laying colony? Here are the possible situations that could result in a drone laying colony: the queen runs out of sperm, the queen dies, the queen is unsuccessfully superseded, or the queen is accidently killed by the beekeeper with no viable brood present. When the hive has been queenless for a period of 20 or more days with no possibility of making a viable queen, laying workers will usually appear. But there are some cases where laying workers will never appear, and the colony will just slowly dwindle until wax moths or small hive beetles take over and finish the destruction.

There are two main subcategories of drone laying hives: 1) a drone laying queen, and 2) laying workers.

If you have a drone laying queen, then she has run out of sperm. The presence of ***both*** worker brood and drone brood does ***not*** mean the queen is a drone layer (yet). But if the queen ***has*** run out of sperm and now lays only unfertilized eggs (the ones that become drones), and you look in the hive still finding worker brood, it can take another 21 days before all those workers hatch! Meanwhile, the drone brood increases steadily. So you really have to pay attention and take a look in the hive more than once every 3 or 4 weeks, or you can be surprised (in a bad way). (Note: Don't just "take a look", but know **what** you are looking at and **what** it means. This takes time, practice, and more than one hive for good comparisons. Data, Data, & more Data…. The three things you need.)

If you have laying workers, some of the workers have developed their ovaries and egg laying capacity, and will be secreting small amounts of queen pheromones, enough to make the hive THINK they are still queenright! These workers may be slightly larger and longer than normal workers, but you probably will not be able to tell the difference and may never know which bees are the drone layers. The tipoff is when you see multiple eggs in the cells, scattered eggs, eggs attached to the sides of cells and/or see a lot of scattered worker cells that are being converted to drone cells. Good queens usually lay eggs in regular patterns and only a very young queen will make the temporary and infrequent mistake of laying more than one egg in a cell.

Photo of spotty drone brood

Photo of multiple eggs in cells

Some alternatives for a drone laying colony - **1)** Combine the hive with a queenright hive or nuc using the "newspaper" method. (So now you are down one hive, but you can likely make a split later. This is a good reason for always raising a nuc and keeping it in standby.) **2)** Introduce a capped queen cell from

another colony --- this works about 80% of the time, but it works better the earlier you catch the situation. **3)** Give the queenless colony a frame or two with eggs and brood from another colony. I would give this a 30% success rate, providing there is still plenty of bee strength left in the hive.

4) Gently move the brood and bees from the drone laying colony into another hive a short distance away. Then add frames with brood and eggs back into the original hive or after a day or so introduce a new queen or queen cell. The theory is that the drone laying workers will remain on the brood comb while most of the other bees will go out, and return to the original hive. Later the drone laying frames can be combined and absorbed into other strong hives. This might work 20% of the time.

What the internet and some books say to do (they may be WRONG!) – Conventional wisdom, the internet, beekeeper old wives' tales and some books say the way to requeen a drone laying colony is to take all the frames out 15 yards or so in front of the hive and shake the bees on the ground. Then return the frames and introduce a new queen, hoping the drone-laying workers don't fly back to the hive. However, this almost always fails. Another alternative, re-queening the hive with a new queen, has a less than 3% chance of success, no matter how the queen is introduced. Don't waste your money.

Requeening a drone laying colony with a queen cell – While prevention (re-queening regularly and making splits) is better than the cure, about the only method of requeening a drone laying colony that actually works is to use a capped queen cell. And, you ask, where can I quickly get a queen cell? One way is to select on from your ***Russian hive*** (or other colony) that often keeps a queen cell (or five) in reserve! The Russians are notorious for keeping "just in case" queen cells on hand, sometimes tearing them down and rebuilding them through the season or holding 10 virgin captives during swarming season. If you have enough hives and want to have this option, always keep at least one hive of Russians from which to harvest queen cells. Then if you really want predominantly Carniolans, Buckfast, Caucasians or Italians, you can requeen those hives at a later time of your choosing.

Queen Cells

Russian Queen

More Insurance: If you are trying to raise a few of your own queens, be sure to add a frame of eggs and young larva just before you think the virgin queen is ready to go out on her mating flight. This will ensure that if she gets lost or eaten by a predator and fails to return, your bees, if there are enough of them, can still raise an emergency queen to replace her if needed. Otherwise you may periodically wind up with some laying workers because about 33% of virgin queens can fail to return to the mating hive!