

When will a newly-emerged queen begin to lay?

<http://honeybeesuite.com/when-will-newly-hatched-queen-begin-lay/>

A first-year beekeeper e-mailed to say he was excited to see a new virgin queen in the act of emerging from her cell. But that was three whole days ago and still no eggs! He wanted to know if he should replace her.

My answer? Holy guacamole, give the woman a chance! These things take time. Newborn babes do not start mating and carrying on for at least a few days.

As a matter of fact, according to M.E.A. McNeil in *The Hive and the Honey Bee* (2015), a new virgin queen does not become sexually mature for five to six days after emergence. A number of things need to happen before she is ready to fly. Like all insects, the outer layer of chitin covering her body must become hardened and thickened, a process that may take several days. In addition, her pheromones must develop so she will become attractive to flying drones.

Multiple mating flights are common

Once she is sexually mature, the workers escort her out the door on the first sunny afternoon in the 60s or above. She flies to one or more drone congregation areas where she will be pursued by hoards of drones. If all goes well, she will mate with a dozen or more, and then return to the hive, guided by workers waiting for her return.

Sometimes, however, the number of matings from one flight is not sufficient and she must repeat the mating flight once, or even several times, until she has collected enough sperm to fill her oviducts.

Once the oviducts are full, the sperm migrates from the oviducts into the spermatheca, the long-term storage place for sperm. This is accomplished by a series of abdominal contractions and may take up to 40 hours. Any extra sperm is expelled from her body through the sting chamber and now the queen is ready to begin laying.

Count the days before she lays

Looking at the math, we can see that if everything went as fast as possible, the queen could begin to lay as early as 8 days after emergence:

5 days maturing + 1 day mating + 2 days sperm storage = 8 days

But that almost never happens. More typical would be:

6 days maturing + 4 days mating + 2 days sperm storage = 12 days

But toss in a week of rain and it might look like this:

6 days maturing + 4 days mating + 7 days rain + 2 days sperm storage = 19 days

In fact, many people believe 2 to 3 weeks (14 to 21 days) is a good rough estimate of the hatch-to-lay timetable.

Many risks and lots of days

All of these numbers assume that everything turns out right in the end: the queen didn't get eaten by a bird, get caught in a rain storm, or remain hive-bound so long that she became a drone layer. Any number of things can easily go wrong.

And that's only part of the waiting game; once the first egg is laid, it will take three weeks for it to hatch. So be patient with your bees and think before you replace that new brand new queen.

Rusty
Honey Bee Suite