

Successful Comb Honey Production in Northern Minnesota

By Ray Nicholson

(Written by Jean Johnson)

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Note: There are many successful methods for producing comb honey. Ray has found that the following information is the method that works best for him.

Biography

Ray Nicholson is a master beekeeper with over 65 years of beekeeping experience. He has taught beekeeping classes; written and published articles on comb honey production; is a long-time member of the MHBA; and has recently completed 50 years as a member of the American Beekeeping Federation.

He has received numerous medals and ribbons from the National Honey Show as well as the Minnesota State Fair for his honey entries. He currently runs 100 hives with 14 of those hives dedicated to comb honey production.

Definition

Comb Honey is honey that is not extracted from the comb. It is sold intact: capped and still inside the comb. Dilution or alteration of the honey is very difficult since tampering with the comb is very evident.

Comb honey is sold in the United States in three forms: rounds; sections (squares) and cut comb. Ray primarily produces round and section comb honey. This story addresses round and section comb honey production only.

Keys to Successful Comb Honey Production

- Specialized comb honey production equipment
- Healthy, large, accessible colonies
- Swarm control (#1 problem)
- Frequent, knowledgeable and time sensitive hive monitoring
- Good honey flow/super placement timing

A. Equipment (All may be ordered through catalogs)

- 1 hive body (standard deep) with ten 9 1/4" frames (Bees will also over winter in this hive body.)
- Two inch bottom board
- Slotted rack fitted inside the bottom board
- Standard H type hive stand (fits two colonies on one stand.)
- Flat inner cover (Flatter than standard inner cover/no hole in the top.)
- Standard hive cover
- 1 extracting super with frames
- Comb honey supers (at least 4 to start)
 - Round: 9 frames; 2 follower boards; super springs; foundation
 - Sections: 7 frames; separators for each row; 2 follower boards; super springs; foundation
 - Note: Comb honey foundation is thinner than extracting foundation. (Ray recommends Dadant brand. Best because is most edible for the consumer and has most desirable appearance. Bees could care less about the brand.)
- Honey in the Comb by Eugene Killian (Great reference book and/or video)
- Other usual bee keeping equipment (gloves; veil; smoker; queen excluder, etc.

Equipment Placement (from bottom up)

- Hive body is placed on top of bottom board & slotted rack. Slotted rack is inside bottom board. Bottom board is on top of hive stand.
- Queen excluder is placed between hive body & supers.
- Extracting super (remove when honey flow begins)
- 2 comb honey supers: on top of queen excluder (At start of honey flow.)
Note: Ray keeps the queen excluder between the hive body and the first round comb super at all times. For sections, he removes it when the super is about 3/4 full.
- Thin inner cover next and outer cover on top of the entire hive.

B. Strong, Healthy Hives

- Definition: In a 1 story deep the bees should cover all 10 frames with surplus bees hanging off the top and bottom. The frames should be full of brood and pollen. Perhaps some honey should be present in the two outside frames. 1 young queen.
- To inhibit swarming: 1 young queen, raised by the colony, not introduced by the beekeeper.
- Races: Not all colonies will work comb honey. In Ray's experience, Buckfast and Carniolans make the best comb honey. Caucasians will bring in propolis (which makes the wax look more brown) and will tend to cap the cells right down on the honey rather than leaving an air space. He is now experimenting with SMR queens from Weaver's. Please stay tuned for the results.
- Hives must be placed where they are easily monitored. Ray keeps all 14 comb honey production hives in his back yard.
- To over winter healthy hives, feed as much sugar syrup as the hives will take. Also feed in spring if needed.
- If needed, medicate for varroa. Be sure to follow label directions..

C. Swarm Control (Swarm Control is an art and a judgment call. The steps below are only intended as a guide. Experience will be the ultimate teacher.)

- Clip one wing of the queen early in the spring.
- After removing the extracting honey super & replacing it with comb honey supers, check carefully for swarm cells. Remove them.
- If after 3-5 days the hive has again produced swarm cells, select 3 for new queen production. These 3 cannot be sealed. Remove all queen cells EXCEPT these 3. Mark the frame with a tack.
- Kill the current queen at the time these cells are marked.
- Hive will remain queenless for 8-10 days.
- After 7 days, select 1 cell as the new queen. Destroy others.
- Hive will not swarm with this young queen.

D. Timing/Honey flow

- Supering for comb honey must coincide with the start of the honey flow
- Swarm control must also begin at the start of the honey flow, but will stop once the new queen emerges.
- Remove super once it is capped. Do not leave on the hive until all supers are full.
- Care of comb honey once removed from the hive. Wax moth prevention is key. Place the combs in a plastic bag or box and put in the freezer for at least 48 hours. This will kill any wax moth eggs. When removing leave them in the bag or box until they reach room temperature to prevent condensation.
- Over wintering the hive: feed, feed, feed.

Ideal Comb Honey

- Comb: Flat, without dips or ridges; Evenly filled from side-to-side; Almost white
- Honey: ideal is not more than 18.5% moisture level. Taste should be without off-flavors.
- Cap should have a small space between the honey and the cap. Cap should not be directly on top of the honey.

Why produce comb honey?

- Comb honey is very profitable. Consumers are willing to pay much more per pound for comb than extracted honey.
- Demand always exceeds supply. Ray has more requests for comb honey than he can supply.
- The satisfaction and art of successfully producing comb honey.

Before attempting to produce comb honey, you many want to consider the following:

- There is a reason why Ray has only 14 out of 100 hives in comb honey production. Comb honey production is labor and time intensive. The hives must be checked every seven days without fail and timing is critical. One or two days may make the difference between success and failure.
- Comb honey production is probably best attempted by the experienced beekeeper because many of the techniques require an in-depth understanding of bee behavior and honey flow timing.