

OTS QUEEN REARING RESEARCH FINDINGS SINCE 2016

by Mel Disselkoen

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Since publishing my book in 2016, *OTS Queen Rearing: A Survival Guide for Beekeepers Worldwide*, many beekeepers who bought the book and learned my method have experienced great success in their apiaries. Frequently, I am asked to write another book about any discoveries I've made since 2016. For this reason, along with the increased expense of everything, I decided to compile my notes into a free PDF that can be downloaded from my website. This way, those beekeepers who already bought my book can download this free PDF instead of having to buy another book. New beekeepers can also download this new information and either purchase a new book or borrow a copy from a friend or a bee club. Similarly, anyone truly interested in my OTS method may intuit much of it by reading through the many free presentations on my website.

As most of you know, my discovery in 1985 of producing queen cells on the face of a vertical comb was published in 1988 in my booklet called, *The IMN System of Queen Rearing*. Later, I renamed my discovery, *OTS Queen Rearing*, which enabled novice beekeepers to rear perfect queens, **On-The-Spot**, in their apiary without grafting. The link to my original research is located on the lower left side of my homepage, which will take you right to where it can be downloaded.

All through the 1990s and up until 2008, beekeepers were experiencing 50-70% colony losses. Using my OTS method, I was able to keep my bees alive and even made significant increase. In 2008 I decided to make my method available on my website, free to the world, because I couldn't stand to see what was happening to our honeybees. It was literally a take it or leave it proposition, but once beekeepers accessed my discoveries online and started using my method in their own apiaries, OTS really took off and became very successful. Many beekeepers including the Amish community asked me to write a book because they didn't have access to computers or simply because they wanted a printed version of my method. My first book,

basically a modified collection of presentations I had given to bee clubs and conferences about my method, was completed in 2014. That book created a storm of questions and even though there was enough information in that first book to be a successful OTS beekeeper, I felt that further information was needed, such as how to deal with laying workers or my concept about the alpha bees, for beekeepers to realize the full potential of OTS. That book was completed in 2016 and was called, *OTS Queen Rearing: A Survival Guide for Beekeepers Worldwide, Expanded Edition*. Since 2016, the latest additions to my OTS research findings include:

- November 5th + when there is no brood in the hive, do a vapor OA treatment to eliminate any mites that these strong July starts may have picked up by robbing out weak hives within their flight range
- Making July 1 swarms from May starts (page 31, 2016 expanded edition).
- Transferring the bee-less brood from these starts to enforce the May artificial swarm to create a massive hive for the honey flow (page 31, 2016 expanded edition)
- Feeding July starts in September for comb building to strengthen hives to overwinter on the 43rd parallel
- Deep or shallow bee box with at least one frame of drawn comb placed beneath the brood super and on the bottom board to give the hive expansion room for the swarm development in the spring

November 5th + when there is no brood in the hive, do a vapor OA treatment to eliminate any mites that these strong July starts may have picked up by robbing out weak hives within their flight range

After thirty some years of being chemical free, about three years ago I started using Oxalic Acid (OA) to treat my strong July starts in November when all the brood is gone because starts can become mite infested by robbing out weak failing hives in the area. This reasonable application results in almost 100% clean, overwintered hives in the spring. Just before swarming in the spring, you will have drone brace comb between the boxes which becomes a telltale as to your mite load when you pull the boxes apart. By evaluating the exposed drone larvae in the brace

comb for mites, you don't have to bother with mite counts. Over the last three years since using the Oxalic Acid, I only observed one brace comb cell with a mite inside of it.

Making July 1 swarms from May starts (page 31, 2016 expanded edition)

On page 31 and 32 of the 2016 expanded edition, it gives my operation plan on the 43 parallel according to what I learned by studying GM Doolittle's methods. I establish an artificial swarm to prevent swarming. I will use this artificial swarm later to make July starts to run as honeybee livestock that rear offspring for next year. I sell my May starts for income once they're mated.

Transferring the bee-less brood from these starts to enforce the May artificial swarm to create a massive hive for the honey flow (page 31, 2016 expanded edition)

If you don't sell those May starts you can make the artificial swarm into a powerhouse honey hive by the Doolittle comb honey concept. The first of July you shake all the bees including the new queen into another box on the same location with a honey frame and a full set of frames. These three May starts will have 3-4 frames of brood or around 10 total frames of brood. These frames of bee-less brood are now given to the artificial swarm, increasing it to a double deep with 8 frames of brood plus the 10 frames of bee-less brood making a total of around 18 frames of brood during the honey flow. This is a powerhouse honey hive and is far stronger than most honey producing hives. Remember bees can take care of twice the amount of brood that they have and it is also warm in July. You don't have to use the newspaper uniting method. This artificial swarm didn't break the mites breeding cycle but because they came out of winter clean and the brood they are given is clean, you don't have to worry about it but you must honey super them immediately to prevent swarming.

Back to the May starts from which you made swarms, they should be around 4 pounds strong with a laying queen that broke the mites' breeding cycle. I like to leave a frame of eggs or young larvae to help hold the swarm but no sealed brood in case some mites have entered those starts. Even though the mites' breeding cycle was broken in May it will break again in July.

Another advantage is that the queens are already laying the first of July, giving them a month head start over allowing the artificial swarm to make its own starts. This will give you stronger hives going into winter. *PLEASE NOTE*, this requires further explanation. Remember how I said in the past that if a queen is mated before the summer solstice, the alpha bees will shut her down in late July or August? Well that no longer applies because even though the queen was mated before the solstice the new set of alpha bees will treat her as a queen mated after the solstice and not shut her down.

Feeding July starts in September for comb building to strengthen hives to overwinter on the 43rd parallel

For the last three years I have given my bees probiotics for gut health which I sprinkle onto the top bars when I make the July starts. Remember they are small starter colonies at that time so I do not give the full dose. In September, I give my July starts another sprinkle of probiotics and then feed them every week with 1 ½ gallons of sugar syrup as an artificial nectar flow to build comb, store feed, fortify the colony, and stimulate the queen.

To make sugar syrup, I mix 2 ½ gallons of water with 10lbs of sugar. This works out to 6 pounds of sugar for a 1 ½ gallon in-frame feeder every week in September which amounts to 24 pounds of sugar or around \$12-15 which is a lot cheaper than mite and other hive chemicals.

As winter approaches, I place a metal excluder just above the bees, and then on top of that, an empty super to hold the sugar bricks that I give them as a nutritional safety valve in case it becomes too cold when they have brood and can't move sideways to access their honey stores. I have saved many hives this way. I also drill a hole in the top empty super which serves as an upper entrance for cleansing flights during winter thaws as well as extra ventilation.

I used to spend a lot of time every year making or buying sugar bricks but now I save time by making quick sugar bricks out of 10 pound bags of sugar. To do this I simply mix 2 ½ gallons of water with 1 pint of vinegar. I then pour 1 pint of this solution into the top of a 10 pound bag of sugar and let it set for a couple of weeks or until it is hard. Once it is hardened, I cut out a 1

inch strip from the top to the bottom of the bag and then place this strip face down on the excluder just above the top bars of the bees. I then cover this feeding box with the felt insulation inner cover and then the hive cover. Always remember that to successfully overwinter honeybees on the 43rd parallel, you'll need healthy honeybees, plenty of stores within reach of the winter cluster, and a good windbreak.





Deep or shallow bee box with at least one frame of drawn comb placed beneath the brood super and on the bottom board to give the hive expansion room for the swarm development in the spring

Now at the end of October, or even before, depending on how strong they are, I place another box with at least one drawn comb and the rest foundation on the bottom board with the box of bees above it. This allows the queen to move down in the spring to build up for swarming. It also gives the colony work to do drawing comb to delay swarming.

In the spring, one week before swarming, I make the artificial swarm and notch for queen cells according to the chart on page 31 and 32. At this time when I open the hive the queen has moved down into the bottom box. As I mentioned before, there is now brace comb with drone brood between the boxes so that I can plainly see whether a hive has a mite problem or not. This is where novice beekeepers make the mistake of buying nucs from beekeepers who haven't controlled their mite load. Remember, all packages and swarms break the mites' breeding cycle just like the Africanized bees do by frequent swarming. With my OTS method, you don't have to count mites because you keep your mites under control with brood breaks.

I hope these extra notes help OTS beekeepers who already have my book as well as novice beekeepers who are just discovering OTS.

God Bless,

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