

MEL DISSELKOEN FIELD DAYS: COLONY REARING FOR SURVIVAL

In 1985, while working in his apiary, Mel accidentally discovered that if he turned down the bottom third of the cell wall to the midrib underneath 36-hour-or-younger larvae in full-strength, queenless hives that the bees would respond immediately by converting that into a queen cell. Long a student of Dr. C. C. Miller and G. M. Doolittle, and having a lifetime of experience with rearing queens in the traditional manner, Mel became interested in this behavioral response and began to experiment with it. He soon realized that the bees could make almost a limitless supply of quality queen cells when the properly-aged larvae were missing the bottom cell wall

Since Mel had always reared starter colonies to sell as stock, he soon began to queen these colonies with queen cells reared this way in cell builders (queenless, full-strength hives). He tried to present his findings to the beekeeping community, traveling, speaking, and teaching at his own expense, but they weren't ready for this information as at that time they were performing well with rearing and selling queens in the traditional manner

As time passed, and as imported bees soon brought varroa into our apiaries, the traditional manner of keeping bees became unsustainable. Mel began to notice that his colonies did not have problems with mites and he never lost a colony to mite infestation. He began to take a closer look and discovered that whenever he killed a queen and then inserted one of his self-reared queen cells, which automatically paused the honeybee brood cycle, the mites would be greatly reduced. Upon even closer examination, he realized that the varroa mites, which depend upon honeybee brood for their reproduction, would desperately enter the first available larvae laid by the new queen. The mites enter each available cell all at the same time thereby overloading the cell and within which they perish from starvation after the bees cap it because one larvae cannot provide enough food for so many mites. In time, Mel observed that the bees would respond hygienically to these first new brood cells and remove the carnage and clean the cells in preparation for fresh eggs

Now these July starts are in great condition to overwinter with a candy/pollen board

MEL DISSELKOEN FIELD DAYS (I)

Results From The Kalamazoo Bee Club's Summer Program

Twenty-five beekeepers of all levels of experience and varying backgrounds gathered at a member's apiary in Richland, Michigan, to learn Mel Disselkoen's colony rearing methods and management including

- Rearing starts via OTS (on-the-spot) queen rearing
 - quality queens as needed and free-of-charge
 - breaks the varroa mites breeding cycle thereby eliminating the need for miticides
- Targeting those starts towards desired objectives
 - selling bee stock
 - honey production
 - pollination
- Overwintering July starts into full-strength colonies by spring

Note: Starts are similar to nucs in that they begin with queen-right, two-brood-frame splits but they differ in that they are queened using OTS and then jump start them into full-strength colonies at different times of the year to target for honey production or pollination (i.e. almond starts, blueberry starts, apple starts, etc.)

MEL DISSELKOEN FIELD DAYS (II)

Results From The Kalamazoo Bee Club's Summer Program

The Field Days series began in May with two full-strength hives that had overwintered from last year's July starts

ACTION TAKEN

RESULTS

MAY	Made 9 two-brood-frame starts with OTS (by notching 36-hour-or-younger larvae in cell builder)	⇒	100% successful queen matings (average mating success with OTS is 85%). 4 starts were sold for \$100/each
JULY	Killed May queens and united the remaining 5 May starts with newspaper and OTS'd the bottom chambers which made these into honey hives as well as July starts	⇒	Three honey hives that are full-strength July starts
AUGUST	Checked results of July mating and/or monitored honey production	⇒	Again had 100% successful queen matings Honey hives produced 400 lbs by the first of August All but three frames of honey were removed and are now treated as July starts instead of honey hives
SEPTEMBER	Overwintering procedures explained ; seasonal overview and discussion of all procedures	⇒	Three high-quality starts remain to overwinter into full-strength hives by spring (one more than we had last year even with selling off May starts)

Note: Spring starts should be made one week before natural swarming in your area. This would occur the first week of May in Michigan on the 43rd parallel

MEL DISSELKOEN FIELD DAYS (III)

Results From The Kalamazoo Bee Club's Summer Program

CONCLUSIONS

Overall, our management of the two original hives (the previous year's July starts) in May produced \$400 in immediate capital (from selling four May starts), 400 lbs of honey by the first of August from the three united July honey starts, and enough increase to overwinter these three July honey starts into full-strength colonies by next spring. The bees were able to perform well because they weren't burdened with side effects from miticides or other chemicals

This management model is flexible and can be tailored towards any objective. For example, instead of uniting and producing honey, we could have chosen to make four starts in July from each of the nine May starts which would have given us thirty-six July starts which could be used as almond starts (since they would mature in time for the February almond pollination) or sold for \$3,600

NEXT STEPS

I am scheduled to present my entire management system in detail on November 7, 2009 at the Indiana Beekeeping Association (IBA) meeting at Turkey Run Inn, Marshall, IN. See <http://indianabeekeeper.goshen.edu> for more details