QUEEN YARD 2016 ANNUAL REPORT

The first grafting session of the year was June 2, 2016. Due to the fact that these colonies were started from packages installed the second week of April, this was a later start than we had hoped for. With successful overwintering we should be able to start grafting as soon as drone production is under way in the spring of 2017. Our final grafting session was August 18. Mating flights from this session took place the first week of September. We decided to make this the last session of the year due to the possibility of an unpredictable cold snap and resulting loss of drones for mating purposes.

Overall, over 200 individual grafts were made during 5 separate sessions. Some experimentation in methodology reduced our overall success rate of accepted grafts, but of capped cells we had approximately a 65% rate of successful matings. Besides the 2015 crew (namely Emily Langlais and myself), several new RIBA members were trained in grafting and various other maintenance techniques. Cindy Holt was chosen to become a permanent member of the queen rearing team and has been trained and shown proficiency in all aspects of queen rearing, as well as in the day to day operations of the program.

Queens were sold for a discounted rate to RIBA members, and RIBA members were given priority when queens were ready for sale. In actuality, ALL available queens were sold to RIBA members in 2016 due to the limited numbers available. Equipment limited the number of attempted matings we could attempt at any one given session, so any leftover capped queen cells were given away to local RIBA members who could use one. If queen cells were unclaimed we would sometimes place two capped queen cells per mating nuc to increase the chances that a queen would successfully hatch. After further research we abandoned this practice when it was determined this could lead to an inferior queen emerging before a “better” one and killing her.

Hives were inspected for mite loads on four separate occasions between June and early September, using a sample of 300 bees in an alcohol wash. Our threshold for treatment was 6 or more mites in a 300-count sample. All hives were treated with MAQS at some point between late July and August. Four of the six hives required an additional dose of MAQS in early September. All hives and nucs were treated with OAV on two occasions in early November.

Besides relatively high mite loads, the other major challenge this season was robbing. Having so many individual colonies in close proximity, often being fed syrup, creates a perfect breeding ground for robbing behavior. To combat this we installed makeshift robbing screens on all entrances, reduced entrances down to a minimum during dearth periods, and stopped adding Honey-B-Healthy to syrup while feeding nucs. Generally yard hygiene (not spilling syrup or leaving empty buckets etc) was also emphasized. Small hive beetles were present in higher number than we liked in the nucs, but did not prove to be a major problem. We conjecture the relatively small amount of bees in the mating nucs as well as the extra hiding spaces created by having in-hive frame feeders contributed to the SHB gaining a

foothold. Mice are always a problem in the winter so mouse guards went on all entrances in early September.

In practical terms, the queen yard currently consists of six full hives (two 10-frame deeps each) and six nucs (two five frame nuc bodies). During the breeding season we ran the nucs as single 5-frame units to increase the total number of mating units available. A full inventory of all dedicated queen yard equipment is attached to this report.

Our budget for 2016 was $4000. This number was chosen arbitrarily to give an ample buffer while rebuilding the yard after last year's losses. As of December, total expenditures are $1539.53. Of that total, $675 was for package bees. We do not anticipate buying any further packages in 2017.

GOALS FOR 2017 AND AREAS FOR IMPROVEMENT

*Increase number of full colonies to 8 and number of individual 5-frame nucs to 20 in order to increase capacity

*Install a hive scale and enroll in University of Maryland/Bee Informed's "Sentinel Apiary Program" (see below)

*Better record keeping

*Train more members and continue education of membership in general at meetings, field day, etc.

*Focus on quality, not numbers. Establish clear and measurable parameters for what constitutes "quality."

SENTINEL APIARY PROGRAM

The Sentinel Apiary Program is an initiative of the Bee Informed Partnership, a collaborative effort sponsored by the USDA, EAS, and other groups. It is intended as an early warning system for beekeepers, as well as a real-time trend of what is happening at a specific yard at a specific time. There are two essential components: disease monitoring, and weight monitoring. We send monthly samples of bees from our colonies and get back reports on varroa and nosema analysis. This can be used to demonstrate the efficacy (or lack thereof) of various mite treatments, as well as showing when a possible reinfestation is occurring.

Data from the hive scale is automatically transferred to the Sentinel Apiary servers to map patterns of nectar flow and dearth. Weight is also useful in showing when a hive may have swarmed, when it needs to be fed, or when it may be becoming honey-bound. Depending on the manufacturer the scale can also provide information on hive activity, humidity within the hive, temperature etc.

All of this data is displayed on an interactive online map which is available for anyone to view. The information is graphed over time and can be viewed as a broad trend or as focused as a specific time of a specific day. As more yards are added to the program it can be used to observe and predict trends in particular geographic regions. Currently there are NO sites in all of New England enrolled in the program. I would love to see RIBA at the vanguard of this effort locally.

The cost of the program is $399 for six months of monitoring. There is also the cost of a hive scale, and enough woodenware to bring our total number of hives up to 8. The total cost of the program including scale and monitoring would be $1058 if we purchase the Arnia scale (my recommendation). In future years we would only have to pay the $399 monitoring fee since we'd already have the scale.

Further information can be found online:

https://beeinformed.org/programs/sentinel-hive-scale-program/

Submitted by Scott Langlais, 12/7/16