

Update on BC Bee Breeders' Queen Testing Project for Varroa Resistance

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The BC Bee Breeders' Kootenay Queen Testing Project, sponsored by BIDI, BCBBA and the BCHPA, is well on its way! We have just finished the initial natural drop counts after infesting the project hives with mites. In July the hives, started from packages in mid May, were dequeenened and requeenened with the selected queens. (June, BeesCene, 2006, BC Bee Breeders Launch Exciting New Project, Beekeepers throughout the province to benefit.)

We were not able to get the SMR stock this year but will try again in 2007. Instead we are using the best of the packages' offshore queens and two other BC stocks to represent the controls. The lines we are testing for varroa resistance are: one from Manitoba, two from Saskatchewan, two from Ontario, and two from British Columbia.

We infested the project hives with varroa mites from 5 highly infested colonies. We used the sugar shake method to get live mites from the hive's brood nests and used small paint brushes to transfer the mites to bees in three hole wooden cages. Then the caged bees with attached mites were introduced to the hives.

Hygienic Beekeepers - The Other Side of the Equation!

Pointers from Dr. Marina Meixner to compliment the success of Hygienic Bee Stock

- **CLEAN EQUIPMENT** - hive tools, gloves, bee suits etcetera
- **HIGH TURNOVER OF COMB** - cull old frames, make a complete rotation of brood chamber frames every 4 to 5 years
- **NO FEEDING OF HONEY TO BEES** - this is law in BC, honey can contain American Foul Brood (AFB) spores. For other parts of the world the guideline is 'No feeding of honey from unknown sources.'
- **PREVENT ROBBING** - communal feeding promotes the spread of disease
- **USE CARE WHEN BUYING USED EQUIPMENT** - have it certified disease-free by your area Bee Inspector prior to purchase
- **MONITOR AFB SPORE CONCENTRATION** - this involves laboratory work where honey collected near the brood nest is cultured and the number of spores per gram of honey is determined.

The hives are in three yards. Two of the yards have hives in two boxes but the third yard has smaller hives. The yard with the smaller hives did not have the stimulation of an early honey flow. Also these hives had more initial queen failures. Our goal was to establish 100 selected and control queens. We had to replace 12 package queens that were dead on arrival and 20 others in May and June. Rebuilding and augmenting small units from brood and bees within the yards to keep the hive numbers up kept the larger units from bursting ahead. The hives were equalized twice before being requeenened with the selected queens.

We held a project field day in Grand Forks on August 20th. This included showcasing our assessment techniques and giving background about the project queens. We also shared some daunting experiences we had sending and receiving queens by mail courier.

Dr. Marina Meixner, Research Associate at the Washington State University Department of Entomology gave two talks at the field day. One on the WSU queen breeding project for stocks with varroa resistance and the second on AFB. She also showed some beautiful slides of her

recent travels to Turkey's remote Caucasian mountain region. She went there to visit a former WSU colleague who has moved back to Turkey, and to gather with other bee researchers to review a local bee breeding project.



SHAKE, SHAKE, SHAKE! Kettle Valley Queens and Terry's Honey Farm helper Krystal carrying out an alcohol shake varroa mite count test.



YOU'RE DOING WHAT? BCBBA project technician Brenda Thorpe demonstrating "The art of Varroa Mite Infestation" with Liz Huxter, daughters Morgan, and Mairéid, and others looking on.