



BROODMINDER

Every Hive Counts

No more guessing

by Dwight Wells

Modern agriculture of all types uses data obtained from sophisticated technology year round to augment traditional practices and increase their success. Now, beekeepers finally have technology available to assist in their beekeeping practices as they work to sustain the bee population. The BroodMinder weight, temperature, and humidity sensors enable beekeepers to make decisions to help them act to keep their honey bee colonies healthy, productive and alive.

BroodMinder-CELL updates:



BroodMinder-CELL is shipping! You can order them at BroodMinder.com.

Upcoming Bee Shows:
Are you in the California

Beginning in October of 2016, several members of West Central Ohio Beekeepers Association installed Broodminder weight, temperature, and humidity sensors in approximately 90 colonies in Western Ohio.

Below is a summary of some of our observations and the "Takeaway" lessons learned that we feel will improve the success of our hives.

Observation:

Healthy colonies maintain brood area humidity between 50% to 80% regardless of the outside ambient humidity and temperature. Temperature must be maintained at 94 degrees F to protect the brood. We noticed smaller populated Nucs and colonies had issues with controlling humidity during wide swings of ambient humidity. An increase of the worker bee population allowed the colony to maintain better constant humidity.

Takeaway:

Create Nucs that will grow quickly to be self-sustainable colonies before cold weather.

Observation:

Winter top insulation over the inner cover with a vent hole below the inner cover will assist the cluster to maintain proper humidity in the hive. The vent hole must be located on the same end as the entrance. With a BroodMinder TH sensor located a few inches above cluster brood area, beekeepers are able

Area? We'd love to meet you!

May 4 - San Mateo, CA

May 7 - UC Davis Bee

Symposium

May 8 - Sonoma County, CA

Out and About:

Dr. Doug Sponsler at Penn State (formerly OSU) has just initiated a study of foraging throughout Philadelphia. They have installed 36

BroodMinder-W scales, 3 each at 13 apiaries. We can't wait to see what he finds out!

Editors Note:

Do you have a BroodMinder set up you like particularly well? Are you having trouble? Don't understand your data? Let us know! The more feedback we get, the more we know what works and what doesn't, so don't be shy.

spring is in the air
filled with newness and
pollen
happy time for bees

to monitor the moisture level to insure the hive has adequate air flow to vent the warm moist air.

We also discovered that non white hives or wrapped hives with #30 roofing belt will give the cluster the ability to move within the cavity to bring honey back to the Heater Bees who provide the heat for the cluster. On a cold February sunny day after the sun has been shining on the hive for about 2 hours the temperature within the cavity will start to climb. The temperature will keep climbing until about 11PM with a increase of about 15 degrees. Typical temperatures in the hive above the cluster will be 60 plus degrees. The 1/2 " dead air space temperature between the wrap and the hive wood will be about 90 plus for a few hours with bright sun light.

Takeaway:

Keep bee hives in full sun light, paint hives an earth tone color such as an olive green or dark tan. During the summer the bees do not have a problem keeping the hive cool. Wrap your bee hives, cost per hive is less than 3 dollars.

Observation:

Polyurethane Hives during winter must be vented to keep the humidity at a maximum of 75%.

Takeaway:

With a BroodMinder Temperature and Humidity sensor the beekeeper can control the proper level of humidity with a spacer



with vent holes.

Observation:

During the spring when the hives stop losing weight indicates the Field bees are bringing in nectar keeping up with the nurse bees use of honey in the hive feeding the larvae. At that time more room must be put on to accommodate the population increase and also provide room for nectar, keeping the brood area open for the queen to lay eggs.

Takeaway:

Monitoring weight will give the Beekeeper advanced notice when the nectar flow has begun.

QUEEN REARING

Observation:

Creating Queen cell starters and cell finishers that enable the nurse bees to provide adequate humidity and temperature is extremely important for producing large healthy queens. During the larval growth stage the nurse bees require large amounts of Protein and Carbohydrates along with consistent temperature and humidity.

Takeaway:

Monitoring temperature and humidity in the Queen cell area, from top to bottom and side to side will enable Beekeepers who rear queens to better understand how to create equipment that will assist the bees to produce healthy Queen cells with proper temperature and humidity.

MATING NUCS

Observation:

While a virgin queen is aging to about 7 days to mate, fly to mate with drones, return After mating, then while the sperm are migrating into the Queens spermatheca. The temperature within the mating Nuc must held at a constant temp at 94 degrees.

Takeaway:

Make sure the queens are kept warm in proper size mating Nucs that allow the Nuc bees to keep the temperature at 94 degrees F, or have short lived queens.

In conclusion, modern sustainable beekeeping requires making informed decisions with proper data monitoring systems. Over the next several years beekeepers will be finding new management uses from the data. Both advanced and beginning beekeepers will have data available that will allow quicker positive results to keep their bees healthy and alive.

The Bee Informed Group has recently integrated the BroodMinder Weight Scale System into their Sentinel Apiary Program. You can get info from the BroodMinder folks, or contact Bee Informed. The Penn State University Land4Bees project, (Land Scape Analysis) has a network of beekeepers sending info the PSU Pollinator Lab.

This summer will be a time of understanding the data collected during swarming, honey flows, dearths, creating Nucs of different configurations, hot humid weather and differences between Bee yards.

No more guessing.

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