



2015
American Beekeeping Federation
Conference

The background of the slide is a close-up photograph of a honeycomb, showing the characteristic hexagonal cells in shades of yellow and orange. The text is overlaid on this background.

2015

American Beekeeping Federation Conference

- 600 Beekeepers from Across North America and the World
- General state of Beekeeping
 - Commercial
 - Side Liner
 - Small Scale
- Research
- Practical Application
- Equipment
- Networking
- <http://nabeekeepingconference.com/session-recordings-handouts>



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American Beekeeping Federation Conference

Communication

What are the Bees Telling Us?

What are the Bees Telling Us About the Environment?

- Jim Frazier, Keynote Speaker
 - Pesticide residual effects are largely unknown
 - Pesticides in soil and water
 - The bees are telling us pesticide mixtures are pervasive in pollen and thus in all plant types
 - Every time we buy food we vote for change, **or no change.**
- RNAi based Insecticidal Crops (Genetic) –
 - **Risks**
 - **Unknown/Unknowns**
 - <http://vimeo.com/97012992>

What are the Bees Telling Us About Nutrition?

- Each Caste has different nutritional requirements and each stage of development within each caste has different nutritional requirements
 - Foragers need mostly carbohydrates
 - Need 3 times the ATP of Hummingbirds
 - Nurse bees need more amino acids (Protein)
- Bees prefer fresh pollen
 - Beebread does not have much bio-mass !!!!
 - About 50% honey
- Need to feed protein substitute during Pollen dearth (Quality Matters!)

What are the Bees Telling Us About Protein Substitutes?

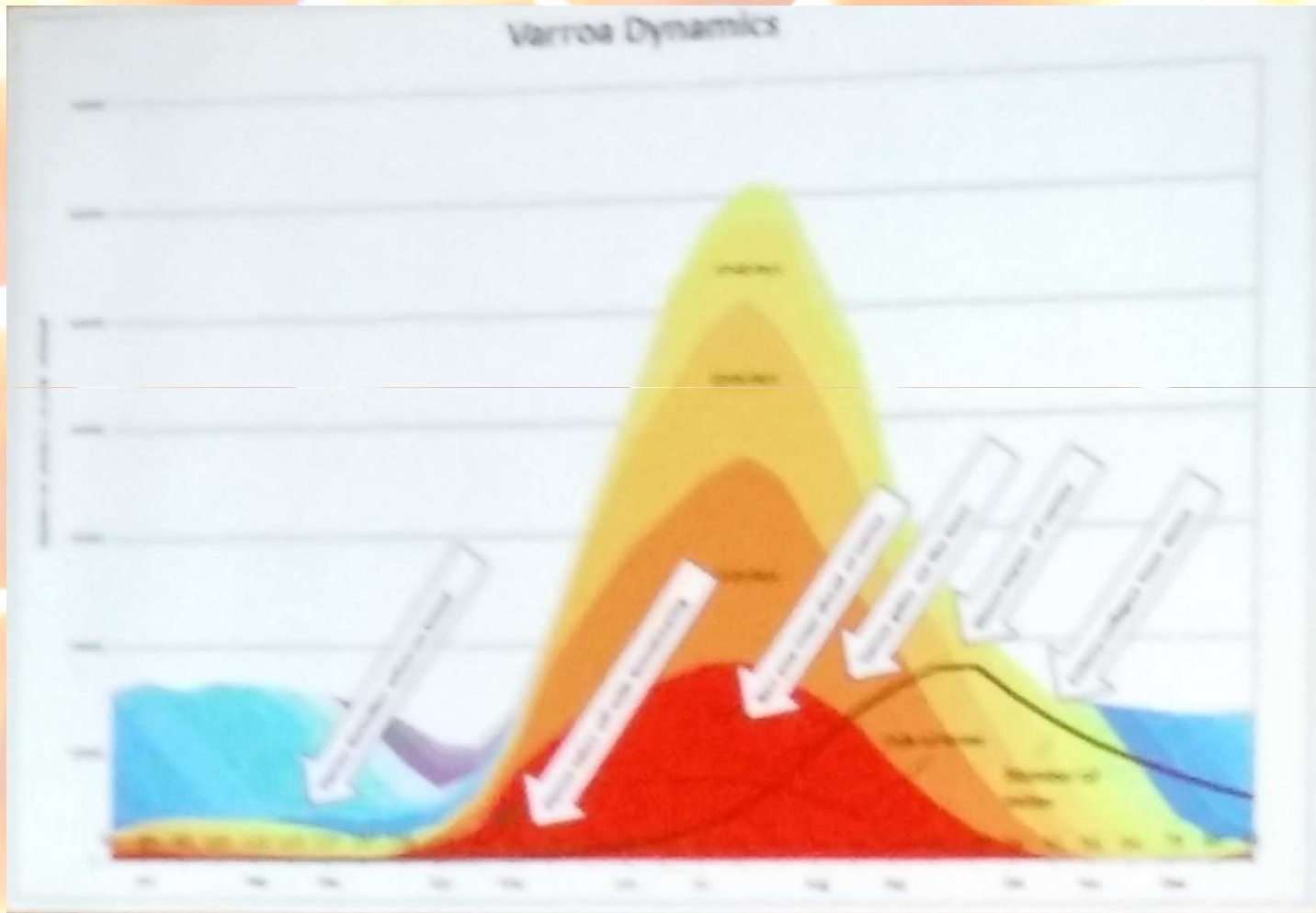
- Colony buildup (Brood Rearing) is driven by Pollen Resources
- Nurse bees treat protein patties the same as beebread. Protein Patties are not stored
- Bees do store dry protein substitute if foraged
- If Protein Levels are TOO LOW:
 - Accelerate aging of the bees
 - Depresses the bees immune system
 - Nosema
 - Viruses
 - More susceptible to pesticide stress
 - Slow to build colony strength

What are the Bees Telling Us About Varroa Mites?

- Beekeepers are also Varroa Mite Keepers
- Mite samples from honey super frames are about 80% of the rate from brood frames
- Need to keep mite levels low.
- Thresholds: “3 mites / 100 bees is too high”, DvE
- Effective treatments, must rotate!
 - Apivar
 - Formic Acid
 - ApiGuard
 - Break in Brood Cycle
 - Oxalic Acid (in solution, not vaporized!)
- 4 Treatments per year is a Best Practice (D. vE)
- Peak Varroa Mite Infestation occur in September and October as the bee population is decreasing and the mites are still reproducing
 - Results in a virus epidemic in late fall and through the winter

Varroa Dynamics

Randy Oliver



<http://scientificbeekeeping.com/>

Colony Losses are Preventable

Best Beekeeping Practices

- Common Causes of Colony Loss
 - Starvation
 - Queens
 - Chilled Brood
 - Varroa Mites and other Parasites (Tracheal Mite, Bee Louse)
 - Viruses (Deformed Wing, Sac Brood, Chronic Paralysis, IAP)
 - Weak in the Fall
 - Nosema
 - Management (Lack of Best Practices)
 - Pesticides
 - Predators (Bears)
 - Pests (Wax Moth, Small Hive Beetle, Mice, Ants)
 - Bacterial Diseases (American Foul Brood and European Foul Brood)
 - Fungal Diseases (Caulk Brood and Stone Brood)
 - Robbing
- Which ones are not preventable or can not be mitigated?
- Are there other causes of Colony Losses that are not preventable?

The Bees are asking us to be Good Beekeepers

- The colony is happier if we are PROACTIVE.
 - Beekeeping is much easier and takes less time too!
 - Reacting to Varroa, Viruses, Nosema, Poor Nutrition, Toxins, Chilled Brood takes a lot of work, and money!!
 - Proactive Beekeepers are happier too!!!
- The bees need good beekeepers,
 - Not good Varroa Mite Keepers
- The bees are excellent Communicators
 - We need to be good observers
- Colony losses are preventable