DO YOU HAVE AN OCTOBER PLAN?

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Sign of the times #METOO

You wouldn't throw a guy down on his luck out into the cold would you?

[HUM 10/13/15]
September 8-15, extended

- 2\textsuperscript{nd} Annual Mite-a-Thon
- Sample for mites, use either PS or Alc

- Enter numbers in national database
  
  ‘Take the survey’
  
  https://bip2.beeinformed.org/mitecheck/
September counts
Blog alert

The signs of mite damage - How to identify progressed varroosis?

• BIP September 26, 2018 • Blog Garett Slater
  BIP Tech Transfer Team  University of Minnesota


• BEE PMS renamed VMS

• My graphic used:

• 5 stages
<table>
<thead>
<tr>
<th>Stage</th>
<th>Visual Signs</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stage 1</td>
<td>Zero signs of mites, brood diseases or viruses</td>
<td></td>
</tr>
<tr>
<td>Stage 2</td>
<td>Visual signs of phoretic mites on either workers or drones.</td>
<td>This does not necessarily mean a mite issue exists, but if mites are seen, monitor to determine extent of varroosis.</td>
</tr>
<tr>
<td>Stage 3</td>
<td>Chewed Down Brood and/or phoretic mites</td>
<td></td>
</tr>
<tr>
<td>Stage 4</td>
<td>Deformed Wing Virus (DWV) and/or Chewed Down Brood and/or signs of phoretic mites.</td>
<td>Visual signs of Deformed Wing Virus (DWV) can mean larger varroa issues. Obviously, this depends upon the number of bees with DWV and the number of phoretic mites seen, but mite monitoring is recommended to determine extent of varroosis. These signs signal a more progressed form of varroosis.</td>
</tr>
<tr>
<td>Stage 5</td>
<td>Varroa Mite Syndrome (VMS) and/or Deformed Wing Virus (DWV) and/or Chewed Down Brood and/or Phoretic mites</td>
<td>Visual signs of Varroa Mite Syndrome usually signal extreme issues with varroasis. If Varroa Mite Syndrome is seen, then mite levels are often a significant issue and has advanced to the most progressed stage of varroosis.</td>
</tr>
</tbody>
</table>
VMS - Chewed brood cells EFB
Fall = “FAT” Bees

• “Fat” bees
• “Fat” colonies
Winter Bees vs. Summer Bees

- **Summer bees** work themselves to death in about five weeks
- **Winter bees** must survive four or five months
- **Beekeeper** can increase chances of colony survival by nurturing healthy fall bees that raise long-lived winter bees
- This is done by providing
  - Good nutrition (fall feeding of protein and carbohydrates)
  - Intervention against pests and diseases
  - Low varroa mite numbers
  - Plentiful honey stores above compact brood
Old fashioned (best) way)
Feeding Colonies

• Sugar Syrup - Fall
  o Types of feeders
    • Boardman entrance feeders
    • Frame feeders
    • Containers above brood chamber
    • Miller feeders
  o Fall sugar syrup: two parts sugar to one part water by volume (heat water to dissolve sugar)
  o Feeding syrup is always a pain in the neck
Fall Management

• The beekeeping year begins in the fall
  • A successful 2019 season (honey, pollination income, splits, etc.) is built upon colonies that survive the winter **HOW do you Measure Success?**
  • Winter survival depends on fall management
  • Fall management begins when honey is pulled from the hive

• The goal of fall management is to prepare the hive so as to maximize its chances to survive the winter
  • AND have a decent survivor colony next spring
The window is CLOSING
Fall

OPTIMUM COLONY CONFIGURATION

Brood position early Fall

We Learn to read stories about patterns
Good frame views
Poor frame views
Why colonies die overwinter!

- Run out of food reserves – starve
- Too few bees to provide protection – freeze
- Lack of ability to void wastes
- Bee PMS or cumulative effects of mites and/or diseases
- Sometimes they just die!

Or

Just disappear!
Honey Bee Colony Losses 2017-2018: Preliminary Results

Total US managed honey bee colonies loss estimates

- Acceptable Winter Loss
- Total Winter Loss
- Total Annual Loss


- 3% 1 yr ave
- Ss 46.3%
- C 26.4%

Losses: 20.6% > 69%

30.7%
Lewis Co

2017-18 Winter Honeybee Loss % by Hive Type

<table>
<thead>
<tr>
<th>Hive Type</th>
<th>Lewis County</th>
<th>Washington</th>
</tr>
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<tbody>
<tr>
<td>Lang 8</td>
<td>71%</td>
<td>53%</td>
</tr>
<tr>
<td>Lang 10</td>
<td>46%</td>
<td>43%</td>
</tr>
<tr>
<td>Nuc</td>
<td>50%</td>
<td>40%</td>
</tr>
<tr>
<td>Top Bar</td>
<td>33%</td>
<td>40%</td>
</tr>
<tr>
<td>Warre</td>
<td>0%</td>
<td>20%</td>
</tr>
<tr>
<td>Other</td>
<td>50%</td>
<td>40%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Season</th>
<th>Fall</th>
<th>Spring</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>183</td>
<td>98</td>
</tr>
<tr>
<td></td>
<td>6</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>9</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td>4</td>
<td>2</td>
</tr>
</tbody>
</table>
Characterization of Respondents

• Lewis Co respondents were mostly new beekeepers, similar to those statewide.
• Sixteen individuals (39.5%) had 1 to 3 year experience, 13 (34%) had 4-6 years experience, 6 (16%) had 7-10 years experience and the remaining 6 had 14-55 years experience.
• Sixteen individuals (42%) had 1, 2 or 3 colonies, 11 individuals (29%) had 4-6 colonies, 4 had 7-9 colonies, two individuals had 10 colonies and 2 owned 12 colonies. The remaining 2 had 14 and 35 colonies.
• Eighty-six percent (86%) had an experienced mentor available in first years of bees.
Figure 4. 2018 Hive losses

- No loss #: 9
- 100% loss: 7
- Lost 1: 3
- Lost 2: 10
- Lost 3: 7
- Lost 4: 4
- Lost 5-7: 3
- Lost 15: 1

2018 Lewis Co
Comparison backyard/commercial

Figure 5. Comparison of WA Commercial losses with backyard beekeeper losses, 4 years 2015-18

- comm-semi commercials
- backyarders
Figure 7. Feeding bees (number); % loss rate, WA 2018

- Frames of pollen (5) 40%
- Pollen patties (42) 47%
- Pollen-dry (6) 45%
- Hard candy (32) 46%
- Dry sugar (11) 45%
- Drivert (2) 83%
- Fondant (13) 22%
- Overall loss rate 44%
- Liquid honey (8) 42%
- Frames honey (36) 45%
- Sugar syrpy (71) 47%
Winterizing

Figure 8. Winter managements, Washington 2018

- wrapped (15) 63%
- rain shelter (46) 50%
- WA average 44%
- top insulation (28) 42%
- wind/weather protection (22) 40%
- equalized hive strength (9) 35%
- upper entrance (38) 27%
- ventilation/quilt box (45) 22%
Mite controls

Figure 17. WA Alternative mite controls

<table>
<thead>
<tr>
<th>Method</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>brood cycle interruption (9)</td>
<td>28%</td>
</tr>
<tr>
<td>Screen bottom boards (66)</td>
<td>28%</td>
</tr>
<tr>
<td>Requeen w hygienic queen (4)</td>
<td>29%</td>
</tr>
<tr>
<td>Painted Hives/ID measures (22)</td>
<td>40%</td>
</tr>
<tr>
<td>no control (15)</td>
<td>40%</td>
</tr>
<tr>
<td>Washington average</td>
<td>44%</td>
</tr>
<tr>
<td>Minimum hive intervention (45)</td>
<td>46%</td>
</tr>
<tr>
<td>Drone brood removal (10)</td>
<td>47%</td>
</tr>
<tr>
<td>small cell/natural comb (15)</td>
<td>50%</td>
</tr>
<tr>
<td>Powder sugared (10)</td>
<td>53%</td>
</tr>
</tbody>
</table>
Mite controls - chemical

Figure 18. WA Chemical mite controls

- ApiLifeVar (2): 18%
- MAQS (formic acid) (17): 30%
- Apiguard (7): 35%
- Apivar (6): 35.5%
- Oxalic acid vaporization (29): 37%
- WA average loss: 44%
- Oxalic acid drizzle (3): 50%
- Other herbal (3): 63%
- Powder sugar (4): 69%
- hopGuard (5): 87%
- Mite-A-Thol (2): 106%
- Mineral oil fogging (2): 100%
Late fall

FEED ONLY DRY SUGAR or FONDANT CANDY

Need wind break?

Need moisture venting?

Colonies leaning forward

Need rocks on top?
Spring ... will they survive?