Fall Management for Winter Survival

Presentation: Kevin Reichert

* Photos: Jeanne Reichert, Susanne Weil
10 Things To Do Now To Help Your Bees Survive Winter...

Treating Varroa Mites with Oxalic Acid
#1: Deal With Varroa Mites

- If you tested your bees & know they have mites, NOW is the time to treat them (unless you have a non-treatment philosophy).
- Queens are winding down laying as the colonies prepares to over-winter, so a hive with a mite load can get overwhelmed by mites.

Varroa on the head of a bee nymph, by Gilles San Martin. License CC BY-SA 2.0
#2: Deal with Nosema

- Look for Nosema & if you see it, treat using Fumagillen.
- Dysentery from Nosema debilitates bees & makes it hard for them to use food supplies effectively.
- You can pre-treat: infuse a dose of Fumagillen into last couple of gallons of sugar-syrup you put on your bees.

[Nosema Streaking](https://brushymountain.com): Brushymountain.com

You can do this again in spring if you see signs of Nosema.
#3: Evaluate Food Stores

- Evaluate honey and pollen stores for winter.
- You can look in the hives and strategically position food frames above the brood chamber (as the bees will move up through winter).
- For brood boxes, the best order, from the outside to the center, is frames of honey, then pollen, then brood in the center.
#4: Feed if Bees Light on Stores

- 1 gallon per hive per week to hives that need it.
- But only the ones that need it – natural food is best
- As temperature drops, shift from 1:1 sugar:water mix to 2:1.
#5: Make Candy Boards Now

- Make candy boards now to get ready for the fall transition to dry feed.

- Moisture in hives during cold wet weather can chill bees and kill them, so prepare for dry winter feed.

- For candy board recipes, visit LCBA’s website, click on Mentors/Workshops/Classes link, then Overwintering Bees.

Let’s Make A Candy Board
Beverlybees.com
#6: Protect Hives From Wind & Rain

- Some move bees under shelter;
- Others use covers (like political signs) that overhang the top by a foot or more all around.
- Both ways help keep moisture out of the hives.
- Both also provide bees with space for cleansing flights in rainy weather.
#7: Put Moisture Control Boxes Above Hive Boxes

- Moisture control boxes act like sponges - draw moisture off colony
- Details later in this slideshow
- Kevin’s moisture control box method is on LCBA’s website: see
- Mentors/Workshops/Classes – click on the Overwintering Bees page
#8: Give Good Ventilation

Bee sure there’s space for moisture to rise & exit the colony
#9: Add Entrance Reducer To Protect From Mice

- Mice sometimes seek shelter in a nice warm hive for winter
- They can do a lot of damage to comb
- They also urinate inside the colony 😞

Mouse in the House
BeeInformed.org
#10: Get Hives Up Off the Ground

- This helps combat moisture problems.
- You can put hives up on pallettes, cinder blocks, etc., if you do not already use a hive stand.
MOISTURE CONTROL BOX

GOALS:

- Insulate
- Ventilate
- Control Moisture
- Feed

Create Wind & Moisture Break

Kevin & Jeanne Reichert & Grant Inmon have used the method shown in this slideshow for several years & have experienced about a 15% reduction in over-winter bee losses: no guarantees, but it has helped them.

N.b.: on the cover slide, the leftmost hive is tall – 2 deeps & a super plus a moisture control box. Kevin doesn’t like to kick bees out: true, they need more feed, but then, survivability can be enhanced by having more bees.
### What Materials Do You Need?

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
<th>Cost</th>
</tr>
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<tbody>
<tr>
<td>1 X 4 X 10</td>
<td>FIR OR PINE</td>
<td>$2. - $4.</td>
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<tr>
<td>1 X 6 X 10</td>
<td>OR SHALLOW SUPER</td>
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<tr>
<td>1/8</td>
<td>HARDWARE CLOTH</td>
<td>$2.19 / FT.</td>
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<tr>
<td></td>
<td>BURLAP MATERIAL</td>
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<tr>
<td>1 1/2 in</td>
<td>ALL PURPOSE WOOD SCREWS</td>
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<td></td>
<td>TIN SNIPS OR HEAVY SCISSORS</td>
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<tr>
<td></td>
<td>HARDWARE STAPLER W/ 5/16 STAPLES</td>
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<tr>
<td></td>
<td>CEDAR SHAVINGS</td>
<td>$7.00 TO $10.00</td>
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<tr>
<td></td>
<td>3/8 in DRILL, 3/8 in &amp; 5/32 in DRILL BIT</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 LB. ROOFING PAPER</td>
<td>$20. / 100 FT.</td>
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<tr>
<td></td>
<td>GLOVES / PAINT OF YOUR CHOICE</td>
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How Do You Make a Candy Board?

• For a video, visit: https://www.youtube.com/watch?v=jmS8zWdnzPs&feature=youtu.be

* For a homemade Honey B Healthy Recipe, see next slide.....

• Kevin’s method:
  MIX:
  • 1 & 1/8 cups water
  • 5 lbs dry cane sugar
  • 2 Tb. Honey B Healthy
  • 1 tsp “Durvet” vitamins & electrolytes (Farm Store)
  • Boil to 250 degrees in deep pan
  • Let it cool
Homemade Honey-B-Healthy Recipe

*From Kevin & Jeanne Reichert*

*We have used this for some time: it works great and costs pennies to make.*

**Ingredients:**

- 5 cups water
- 2.5 lbs. sugar
- 1/8 teaspoon lecithin granules [this is a emulsifier]
- 15 drops spearmint oil
- 15 drops lemongrass oil

**How to Prepare It:**

- Pre-soak the lecithin granules overnight in a small amount of water.
- Dissolve sugar and water as you would for syrup
- Remove from heat and add ingredients; stir and let cool
- Place in blender and whip for 3 to 4 mins.
- We place and keep this in the refrigerator. I'm a splash and dash kind of guy, but the recipe calls for 2 teaspoons per quart added to your syrup.

*The Bees love it, we love it, it is easy on the pocket book, and we hope you like it also. --Kevin and Jeanne*
A No-Boil Candyboard Method
For the Butterfingers Among Us...

• **Ingredients:**
• 25 lbs cane sugar
• 1 Qt Cider Vinegar
• Sprinkle of electrolytes (Durvet works – see above)
• ½ Tb Citric Acid (canning department)
• Splash of Honey B Healthy

*Lauri Miller's recipe from Miller Compound
No-boil Candyboard: The Method

- Mix 1/3 of sugar + 1/3 vinegar at a time in 5 gallon bucket with paint paddle mixer.
- Mix should feel soft, not wet or sticky. If you try to mix it all at once, moisture will be unevenly distributed.
- Use a shallow aluminum baking sheet or pan – be sure bricks aren’t taller than frame extension under inner cover – fill
- Roll out & lightly compress in pan.
- Be sure to cut sugar into block sizes BEFORE it hardens!
- Takes about 2 weeks of sitting in unheated greenhouse to harden....OR
- Will set up & harden in 1 – 2 days in food dehydrator at about 130 degrees..... OR
- You can let it sit several hours in your oven on low temperature.
Pollen Patties
Bulk Up Your Bees’ Protein Supply

Photo: Beejournal at Blogspot.com
Pollen Patty Recipe

By Lauri Miller: see URL on slide 26, above

Ingredients:
- 25 lbs cane sugar
- 2 quarts cold water
- 2 quarts apple cider vinegar
- 1 to 2 cups olive oil (depends how much fat content you want)
- 1 tsp electrolytes
- 1 Tb citric acid
- Splash of Honey B Healthy

Method:
Mix ingredients well in 5 gallon bucket
Add 15 cups’ Brewer’s Yeast & mix
Add 15 cups Mann Lake Bee Pro a few cups at a time
Mix should be thick like peanut butter cookie dough – if not thick enough, add more dry ingredients
Too thick – will dry out in hive; too thin – will drip through frames
Let stand an hour or more to thicken
Scoop onto top of frames.