

HoneybeeLives

Late Winter Bee Candy

Feeding your honeybees can be critical at this time of year, as more fuel is needed to raise the brood chamber to 95 degrees for optimal brood rearing. Proper colony management should ensure adequate honey reserves are left on the hives for winter, however if there is a shortage, feed and then keep feeding until the spring nectar flow kicks in. The recipe below is for late winter emergency feeding. Bee Tea should not be fed at this time of year, as the bees cannot metabolize moisture during cold weather. Once brood rearing has been fully established by the bees' own rhythm within the hive, change the candy to one containing the pollen/protein that they will need to help feed the brood. Do not spur on brood rearing early as it threatens the sustainability of the hive. (Please be beware of commercial pollen patties.)

Honey provides the bees the carbohydrates to generate warmth, and principally consists of glucose and fructose. When we use white cane sugar to feed our bees, we must transform the **sucrose** of sugar, which is a complex sugar, into the simple sugars **glucose** and **fructose** that can be more easily digested by bees. This is called **invert sugar** which can be accomplished by heating water and sugar to a point where it breaks down naturally.

You need a **Candy Thermometer** or one that can tolerate over 234 degrees (digital would be best). Have everything ready, and realize that this takes longer than you may think to make these, especially the first few times. Each batch has taken me 1 hour - start to finish. It's helpful if doing a large batch to have someone else around to share the time. It also helps to have someone to laugh with when you feel like you are in an episode of "I Love Lucy."

Mix together in a heavy-bottomed, wide-mouth pot over medium heat:

One part water (including seeped tea) to Four parts White Cane Sugar

4 cups water plus 1 cup tea (5 cups total liquid) to 10 pounds of sugar (20 cups). (I make a separate quart jar of dandelion/chamomile/dried thyme tea to keep in frig for use –strain before adding to recipe)

Dash of sea salt

Dissolve sugar in water, then bring to boil in uncovered pot. (Please note that mixture swells quite a bit during the boiling period so best to have a large enough pot.) Continue to boil without stirring until it the temp reaches 234 degrees with a candy thermometer.

Remove from heat and let cool to 200 degrees, add 1/2 tsp of Honey B Healthy* and 1/4 tsp of white vinegar or lemon juice per pound of sugar to shift the pH to be better for the bees. If feeding in early to mid-March I will consider adding **Amino-B**, a liquid honeybee supplement, to the sugar as it cools. (Once cooled enough pour into a processor with pastry paddles and beat until it turns a bit cloudy. (I tried using a whisk but I don't recommend this.) When temp reaches approx. 190 pour immediately into containers to form sugar cakes (use pie tins – jelly pans, etc) lined with wax paper to help removal and handling once cooled. When cool the consistency should be firm but not completely hard, kind of like fudge. They can be used as soon as cool, or stored in plastic bags. The sugar cakes will be harder and more brittle when cold, in the warmth of the hive they will become less hard. Best not to put frozen cakes into a hive.

On hive, place a shim between top Hive Body and the Inner Cover. Lay two small wooden pieces above frames within hive, and gently place the sugar cakes onto these so it can be accessed all the way around.

* There is a concern about Honey B Healthy because of the sodium lauryl sulfate and other additives used. The following recipe, using food grade essential oils, is a similar concoction to be used as a feeding stimulant, and to help protect the bees' mid-gut. Ingredients: 5 cups water, 2 1/2 pounds of sugar, 1/8 teaspoon lecithin granules (used as an emulsifier), 15 drops spearmint oil, 15 drops lemongrass oil. Bring the water to a boil and integrate the sugar until dissolved. Once the sugar is dissolved remove the mixture from the heat and quickly add the lecithin and the essential oils. Stir until everything is evenly distributed. This solution should have a strong scent and not be left open around bees. Cool before using. We have recently heard of something called **Apiforme**, essential oils without bad additives, yet have no experience with it yet.