

Making Stuff from the Stuff Your Bees Make

Support your Beekeeping Addiction and
Have Some Fun Doing It!

Landi Simone, EAS Master Beekeeper

Your Bees Make Some Really Great Stuff!



- Honey
- Beeswax
- Propolis
- Pollen
- Royal Jelly

As Their Keeper, You Get to Share in this Bounty

- Just like the products of your garden, you can enjoy or sell the things made by your bees “straight up” or you can combine them, add other ingredients, and create something new.








Products of the Hive

- HONEY
 - Delicious, healthful, never spoils, and has medicinal properties. Comes in many flavors.
- BEESWAX
 - Used in cosmetics since the Egyptians. Mild anti-inflammatory and antimicrobial. Lipids can absorb pesticides.
- PROPOLIS
 - Powerful antimicrobial. Kills bacteria, viruses and fungi. Allergen.
- POLLEN
 - Protein source for the bees. Lipids can absorb pesticides.
- ROYAL JELLY
 - Great for queen bees. No evidence it has any benefit to humans.

Products of the Hive

Will We Use Them?

- HONEY  **Yes!!**
 - Delicious, healthful, never spoils, and has medicinal properties. Comes in many flavors.
- BEESWAX  **Yes!! But must be clean.**
 - Used in cosmetics since the Egyptians. Mild anti-inflammatory and antimicrobial. Lipids can absorb pesticides.
- PROPOLIS  **Yes!! With caution.**
 - Powerful antimicrobial. Kills bacteria, viruses and fungi. Allergen.
- POLLEN  **No. Too risky.**
 - Protein source for the bees. Lipids can absorb pesticides.
- ROYAL JELLY  **No. No real benefit.**
 - Great for queen bees. No evidence it has any benefit to humans.

Extracted Honey



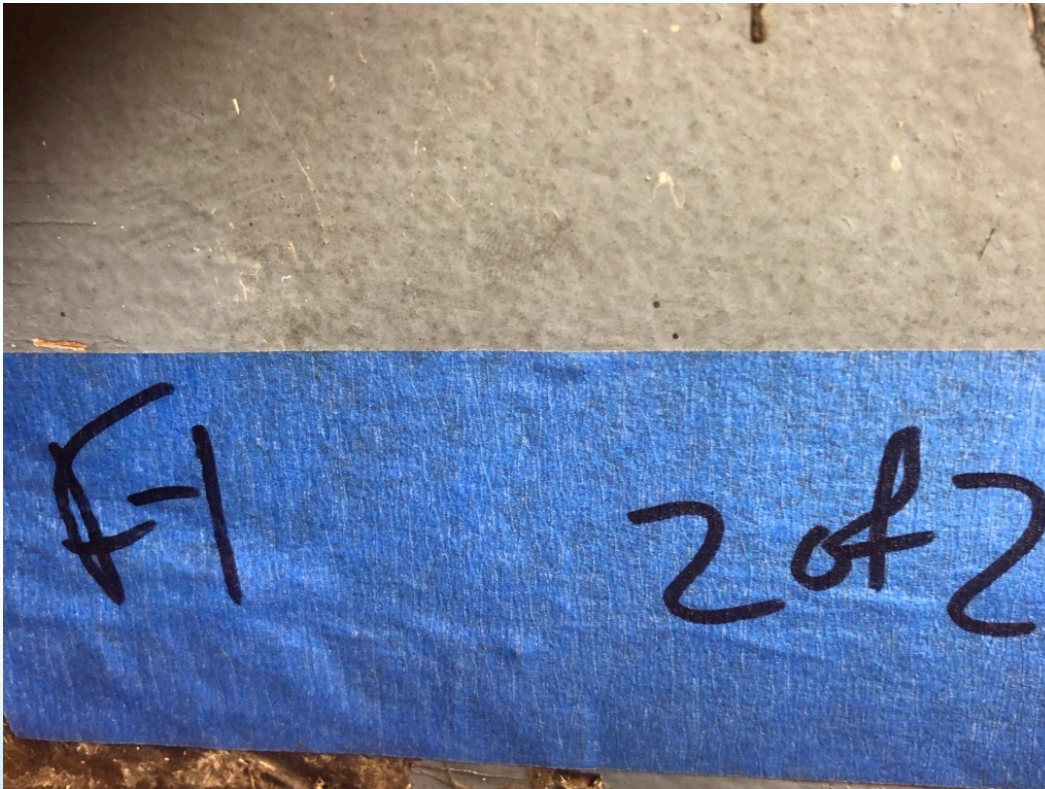
- Extracted honey is the beekeeper's "stock in trade."
- Consider producing varieties and charging a premium for them.
- Customers are very intrigued by different colors and flavors of honey.
- It can be as simple as "spring wildflower" and "fall wildflower."

How To Produce Varietal Honeys



- *Learn* the predominant nectar flows in your area. This takes several years and a lot of observation.
- *Number* your honey supers as you take them to extract.
- *Label* each bucket.

Labeling Honey Supers

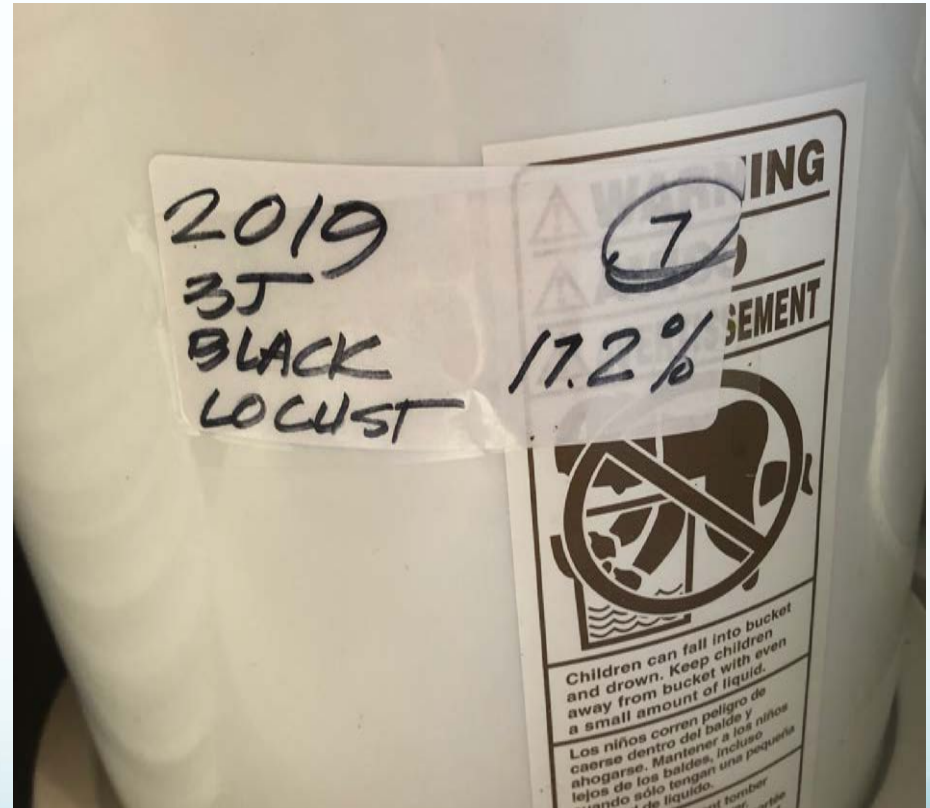


- Label has:
- Apiary name and number (F-1)
- The super number, starting with #1 at the bottom, which is the earliest nectar flow.
- Typically, all the “#1’s” are honey from the same nectar source.

You can leave supers on if you have a lot, or remove and extract them as individual nectar flows end.

Labeling Buckets

- Each bucket is labeled with:
 - The year
 - The apiary
 - The bucket # of those extracted so far
 - The variety of honey
 - The moisture content



How Does this Help?

- Typically all the “#1’s” from an apiary will be from the same nectar source. The “#2’s” from the stronger colonies are also likely to be the same source as the “#1’s.”
- If you don’t extract after a flow, the upper boxes are more likely to be a different variety. Extracting all the “#1’s” together, then the “#2’s”, then the “#3’s” and sampling before you add the honey from one super to that of another will insure you keep your varieties separate. *Figuring out what they are is the fun part!*

Honey Spreads



Important Points for Making Creamed or Whipped Honey

- For pure creamed honey with no additives, use your lightest most delicately flavored honey.
- Water content is very important for a spreadable texture. 17.5-18% is good for plain. If adding powdered freeze dried fruit or a spice such as cinnamon, you will need more moisture. 18.5-19% is a good range. Too dry and you'll need hammer and chisel to get it out of the jar. Add water as needed to get the moisture content you want.
- Dyce is the simplest method. Whipping produces a nicer product.

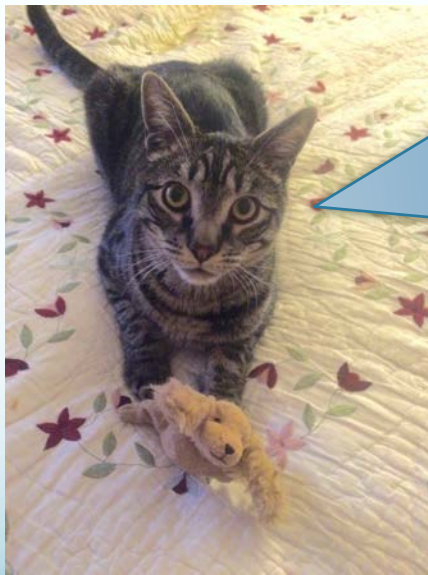
A Crash Course in Making Whipped Honey

1. Warm at 100-105° for two days to remove any existing crystals.
2. Add 5-10% very fine quality “seed” honey.
3. Adjust water content. Add fruit powder or spice if desired.
4. Whip 30 minutes, let rest an hour. Repeat until the texture becomes like a creamy shampoo.
5. Bottle.
6. Freeze overnight.
7. Refrigerate at 55° until fully set (about 5 days.)





Hey, Tucker! Why does she have to turn the beater off and on like that? Can't you just leave it on the whole time?



If she did that, little Buzz, the kinetic energy from the constant beating would make the honey so hot the seed crystals would melt! Letting it rest allows the honey to cool down and begin to set. It helps to do it in cool weather, too.



Okay. That makes sense. But why does she put it in the freezer after she pours it in jars?



It's to freeze the bubbles in place before they can rise to the surface and make a layer of foam. There's always some air that gets in the honey when you beat it.

Handy Tools for Quality Control in Whipped Honey

Thermostat Control
for Cooler



Refractometer

Simple Timer
For Turning Beater
On and Off



The Final Product

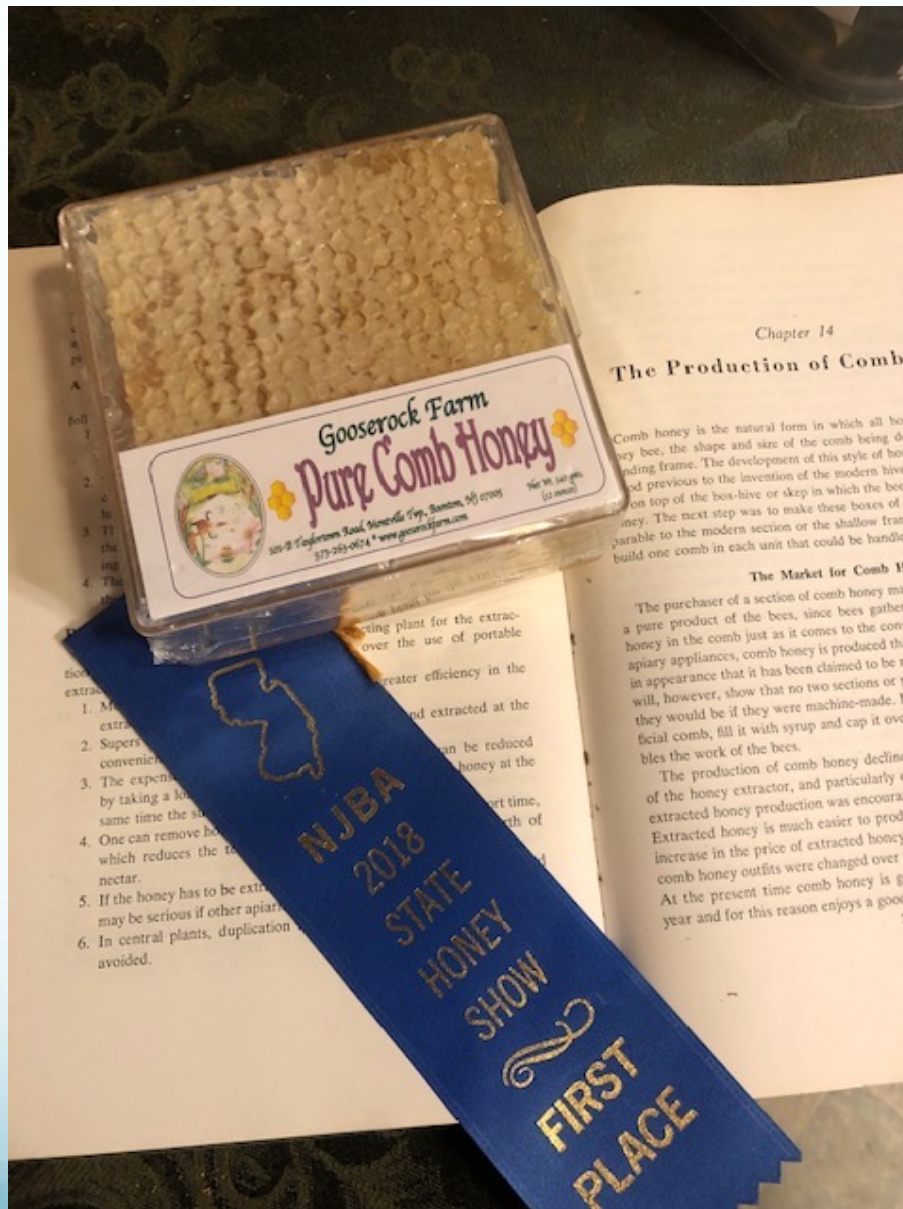


Comb and Chunk Honey



Comb Honey Products

- The market for comb honey is growing. More and more people ask for it.
- Mike Palmer has an excellent video on YouTube on making comb honey.
- If you use medium rather than shallow supers, you can use the “trimmings” for chunk honey so nothing goes to waste.
- You get a beautiful product with a very high profit margin.



- You need a strong colony to make comb honey.
- Remove as soon as it's capped.
- When the honey is capped, freeze the frames. This kills any wax moth eggs, SHB, or bee lice.
- Thaw thoroughly before cutting. A sharp utility knife works well.

Value-Added Beeswax Products



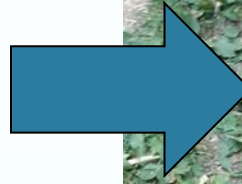
First, a Word about Your Wax



- Most pesticides are lipophilic, i.e., attracted to and prone to bind chemically with fats (lipids.)
- Beeswax is a lipid. Extensive studies (Penn State) show MOST beeswax has some degree of pesticide contamination, including miticides.
- Use ONLY cappings wax, no brood comb in cosmetics.
- Consider having your wax tested.

Cleaning Your Wax, Step-by Step

Add water to your cappings and melt.



Pour into a container & let cool



Scrape off the "slum gum" from the bottom.

Cleaning Your Wax, cont'd.



Melt partially cleaned wax in a double boiler with disposable inner container



Pour through cloth filter into a disposable container for final cleaning



Candle-Making



Cover *everything* when pouring wax!



Making candles is fun and easy. The hardest part is picking the correct wick. Always test a single candle first!

Beeswax Candles and Ornaments are Great, But....



Your wax will go further and you'll make far more money
If you make soaps and cosmetics!



56 bars of soap made using
0.4# of beeswax

Retail value: \$336
(Value of other ingredients <\$20)

Two Candles Containing 0.4# of beeswax

Retail value: \$14.00

$\$336 - \$20 = \$316$ profit

$\$316 - \$14 = \$312$ more in your
pocket for the soap than for the
Candles.



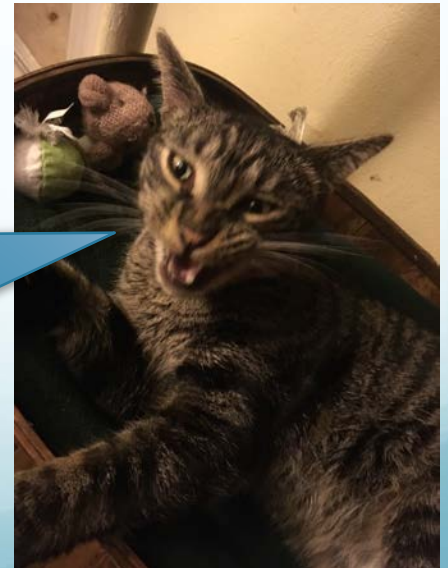
Listen up, folks!
You make over 22
times more money
if you use that wax
to make soap
rather than
making candles
with it!





I think I'd be too scared to make soap. Doesn't it use lye? Isn't that dangerous?

Mac, with normal safety precautions like goggles and gloves, even a mutt like you can make soap!



Handmade Soap is Fun and the Quality is Amazing

- ½ oz. to 1 oz. of wax per pound of soap adds great conditioning properties.
- There are many resources for learning to make soap.
- It's a great item to add to your product line, even if you just make a very simple beeswax and honey soap.
- Once you try it, you will NEVER use anything else on your skin!



And You Can Make It Beautiful!



It smells amazing! Can we make honey from this stuff?





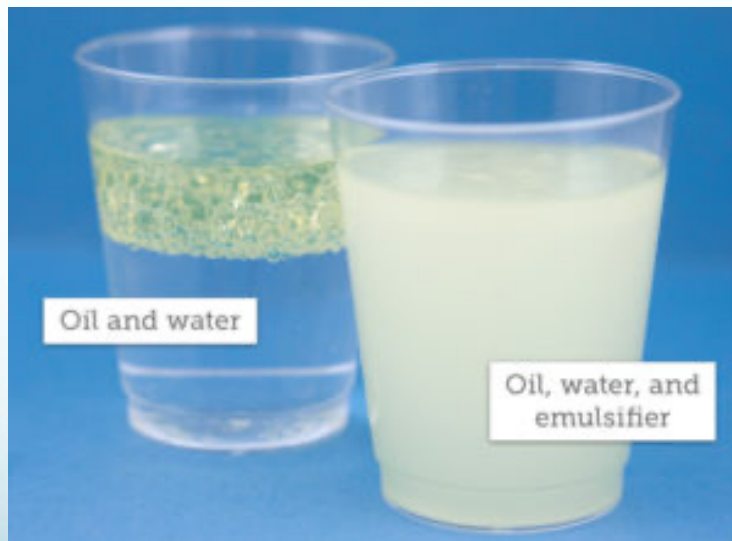
Now Let's Talk about Creams, Lotions, and Lip Balms

These are another very profitable avenue for your creativity.

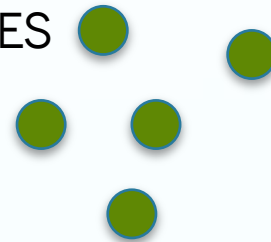
What are Creams and Lotions?

- Emulsion: mixtures of oil and water (which actually *do* mix with the addition of an emulsifier).
- Two types:
 - Oil in water: lotion-like, penetrates skin
 - Water in oil: cream-like, barrier on skin
- Basic beeswax hand cream is a water-in-oil emulsion using borax as an emulsifier.
- Most recipes use emulsifying wax, aka “e-wax,” which is a chemically altered vegetable or petroleum-based wax treated with a detergent. Each manufacturer has a recommended use ratio, which should be **STRICTLY** followed for success, e.g., “Use 10-15% by weight.” It is better to use a bit more and back it off later than to not use enough and risk separation.

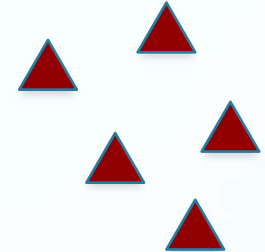
What is an Emulsifier?



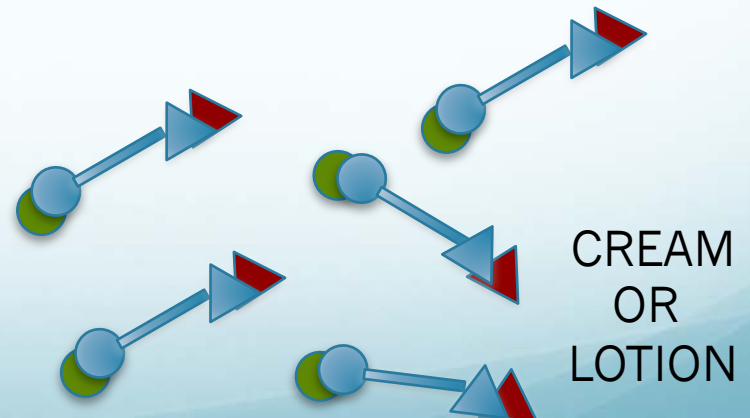
FAT
MOLECULES



WATER
MOLECULES



EMULSIFIER



Designing your Own Creams and Lotions



- Four phases:
 - Liquid phase
 - Oil phase
 - Emulsifier
 - Preservatives
- Proportions vary between creams and lotions
- Honey, if used, is part of the liquid phase.
- Beeswax, if used, is part of the oil phase,

Design Guidelines

- Proportion guidelines:
 - Water 40-70%
 - Oil 10-30%
 - Emulsifying wax 20% of oil weight
 - Stearic acid 0-5% (optional thickener)
 - Preservative: 0.1%-1.5%, depending on type chosen. Follow manufacturer's guidelines.
 - Fragrance: 1/2 – 1 Tbsp. per pound of product.

Higher amounts of water give you a lotion.
Higher amounts of oil give you a cream.

Some Oils and Fats You May Want to Try

- Sweet almond oil ★
- Grapeseed oil
- Olive oil ★
- Safflower oil
- Sunflower oil ★
- Flaxseed oil
- Jojoba oil ★
- Mineral oil
- Avocado oil
- Shea butter ★
- Cocoa butter ★
- Coconut oil
- Lanolin
- Palm kernel oil
- Palm oil
- Mango butter
- Aloe butter ★

Each lends a different character to the finished product. You can get an idea of the characteristics of each by researching them but ultimately experimentation is your best tool.

And in the Liquid Phase, You Might Try:

- Herbal infusions such as chamomile tea
- Honey, honey, honey!
- Glycerin
- Aloe water
- Coconut water
- Rose water or orange blossom water

Experiment in Small Batches

- Nothing is more disappointing than to have your cream separate or go moldy after you spent so much time, effort, and money making it!
- Double and triple check the amounts of both preservatives and emulsifying wax in your recipes.
- Keep your work area scrupulously clean and sterilize your tools.
- Let a recipe sit for six months before bottling commercially to be sure it is stable.



About Preservatives

- If the recipe contains water and a non-mineral oil, it needs a preservative. If you do not use one, you must keep the cream in the refrigerator and use it within two weeks.
- My favorite is Optiphen Plus.
 - Higher temperature range for adding product
 - Does NOT contain formaldehyde
 - Does NOT contain propylene glycol
 - Very effective in preventing spoilage

Gooserock Farm Beeswax Hand Cream (Makes about 20 2-ounce jars.)

20 fluid ounces pure water (by volume)

16 ounces (by volume) light 70-weight mineral oil (available as 70 FG Crystal Plus Oil from STE Oil Co., Inc., www.steoil.com: 800-967-1931.)

7 ounces by weight clean beeswax

1 Tablespoon borax (as in 20 Mule Team, carried by most supermarkets in the laundry detergent section)

1 Tablespoon fragrance or essential oil of your choice (optional)

Combine the water and borax and bring to a simmer. Do NOT boil. It should just be steaming. In a separate container, melt together the beeswax and the mineral oil over low heat. (You may, for safety's sake, choose to do this over a double boiler, but I have found direct heat works fine provided you do not leave the area, you are melting the wax with oil, AND you use very low heat.) When the wax is melted, add the water-borax mixture. Stir in the essential or fragrance oil, and whisk or beat the mixture for a minute until well combined. Immediately pour into jars. The cream will solidify as it cools. You can combine the ingredients in an old crock pot on the low setting, which gives a bit more bottling time if making a larger batch. Be careful not to overheat the ingredients or the cream will not be as soft when cool. Both the oil-wax and the water-borax should be just above the melting point of beeswax (150°F).

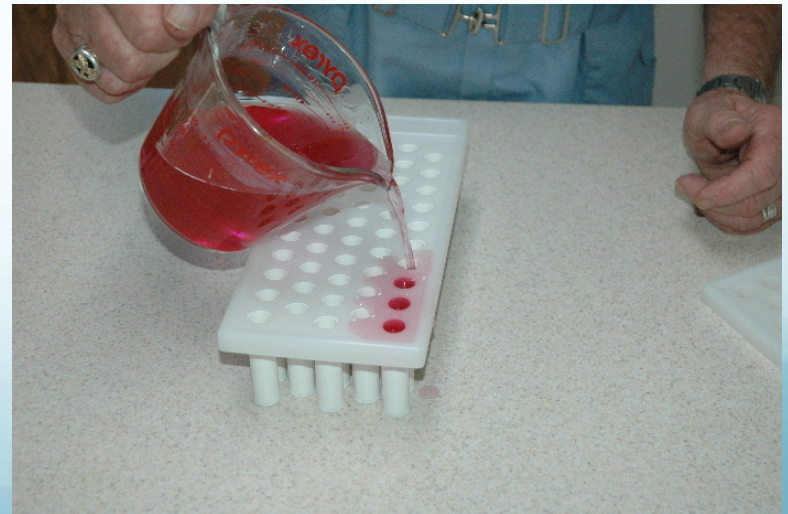
Lip Balms



Lip Balms are Easy!

- Lip balms have no water, hence they do not need a preservative.
- Many recipes add Vitamin E oil as an antioxidant. (This is NOT a preservative.)
- Lip balms are a combination of solid and liquid oils, and wax: beeswax. There are many good recipes on-line. Look for a good balance between the oils and the wax.
- Because the product is used on the mouth, be sure to use only your cleanest, best cappings wax. Do not risk having pesticides in your beeswax by using melted brood comb or mixed wax from a solar wax melter!

Very Helpful Tool for Making Lip Balm: Filling Tray



Using Propolis in Your Products

- Propolis can be a great addition to your products because of its antimicrobial properties but you must be VERY cautious how you label it to avoid violating FDA labeling laws.
- You can either use it as a powder or stir it in while heating to release the volatile organic compounds.
- You can also make propolis extract, or tincture.



Cleaning Propolis

- Fill a 1 pound clean metal coffee can about 1/3 full of collected propolis and add about the same amount of hot water.
- Set in a 200° oven for about 2 hours. Stir occasionally. You can also heat very gently over direct heat until gummy, stirring continuously.
- Remove, let cool, and pour off the dirty water.
- Freeze the can with the propolis in it.
- Scrape off any bits of wood or gunk that might be adhering to the surface of the propolis blob at the bottom of the can.
- Chip out the clean propolis with hammer and chisel.

To Make Propolis Extract

- First clean the propolis if it needs it. Propolis from a trap generally does not and scrapings may be clean enough if you are very careful how you take them.
- Fill a large container about half full of propolis chunks. Add Everclear (grain alcohol) to the brim. Set aside in a cool, dark place for six weeks.
- Filter the extract and bottle it.



Be VERY careful how you label and market propolis products!

Gooserock Farm Propolis Extract \$15.00/1 oz.

Propolis is made by bees from tree resins. It has antibacterial, antiviral, and antifungal properties.

Historically, propolis has been used to treat many conditions such as sore throats, cold sores, nail fungus, acne, in wound dressings, and many others.

Contains grain alcohol and pure local propolis from our own bees.

This product is not intended to diagnose, treat, or prevent any illness. Some people have experienced allergic reactions to propolis. Consult a physician prior to use.

Gooserock Farm Propolis Extract

1 fl. oz. (29 ml)

Ingredients: Grain alcohol, propolis. **Historical dosage:** 10-20 drops 3 times daily. May be mixed with a small (1/2 tsp.) amount of honey, if desired. **Disclaimer:** This statement has not been evaluated by the FDA. This product is not intended to diagnose, treat, or prevent any illness. Some people have experienced allergic reactions to propolis. Consult a physician prior to use.

101-B Taylortown Road, Montville, NJ www.gooserockfarm.com

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Thank you!

And thanks to my bees for giving me such wonderful hive products
to play with!