

MICHIGAN STATE UNIVERSITY Extension

Honey Processing

Regulations and Procedures



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Agenda

- ✓ Products from the hive
- ✓ How honey is processed
- ✓ Equipment
- ✓ Types of honey
- ✓ Regulations & requirements
 - ✓ Federal
 - ✓ State
 - ✓ Licensed vs non licensed





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How is honey made?


- Bees collect honey as a food source
- Use their stomachs to ingest and regurgitate the nectar a number of times until it is partially digested
- It is then stored in **honeycomb cells**
- After the final regurgitation the honeycomb is left unsealed

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- Fan their wings to create a strong draft across the honeycomb
- This enhances evaporation which raises the sugar concentration and prevents fermentation
- What % moisture should honey be?
 - 17-18%
 - Above 22% fermentation
 - Fermenting honey looks wet and foamy at the top and smells like alcohol.
- What is the pH of honey?
 - 3.9



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Removing honey from the hive



What is a **Honey Super**?



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BRUSHING

Removing Bees






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Food Safe Practices for Removing honey from honey supers



Clean Space, Clean Equipment!!!



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Space – Clean, tarp recommended




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Removing honey from honey supers

- The process of removing honey from supers is called **"extracting"** if liquid honey is being obtained.
- The process begins with removing the **cappings** from the honeycomb.
- Clean equipment before starting!
- Clean uncapping equipment between hives

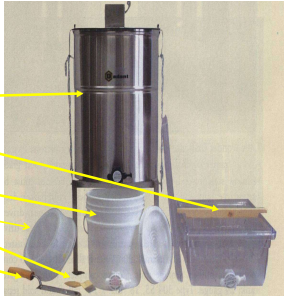





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HONEY EXTRACTION



- The extractor
- A plastic uncapping tub
- Bottling bucket
- Strainer
- Capping scratcher
- A uncapping knife




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PROCESSING HONEY

- Clean, food safe workspace
- Uncap Combs
- Place in centrifuge extractor & spin
- Drain, Strain/Filter, Settling
 - Use a gated food safe bucket or a settling tank
- Bottling
 - Gated bucket, bottling tank, bottling machine
- Labeling
- Clean Equipment



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Bottling

- Food Grade Bucket
- Bottling Tank
- Bottling Machine
- Bottle options
 - Plastic
 - Glass
 - Specialty
- Labeling
 - Regardless of size bottles need to meet MDARD label requirements





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Classifying Honey-Source

- Not required
- Classified by the **floral source** of the nectar from which it was made
- Honeys can be from specific types of flower nectars, from indeterminate origins or blended after collection




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BLENDED HONEY

- Most commercially available honey
- Mix of 2 or more honeys differing in
 - floral source
 - color
 - flavor
 - density
 - geographic origin





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POLYFLORAL HONEY

- AKA - Wildflower honey
- Derived from the nectar of many types of flowers
- Taste may vary year to year
- Aroma and flavor can be more, or less intense, depending on which flower sources are prevalent

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PASTEURIZED HONEY

- Reduces moisture levels, destroys yeast cells, liquefies crystals
- Sterilizes the honey and improves shelf life
- Heated to 71° C (160 F) and quickly cooled
- Or
- Heated to 63° C (145 F) for 30 min






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MONOFLORAL HONEY

- Made primarily from the nectar of **one type** of flower
- Typical North America Monofloral honeys are
 - Clover
 - Orange blossom
 - Eucalyptus
 - Manuka
 - Buckwheat
 - Sourwood





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COMB HONEY

- **Cut Comb** - Meant to be consumed still in the wax comb
- Collected by using standard wooden frames in honey supers
- The frames are collected, and the comb is cut out in chunks before packaging






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CHUNK HONEY

- Chunk honey is honey packed in widemouth containers consisting of one or more pieces of comb honey immersed in extracted liquid





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How is preparing and labeling cut comb honey different?

- Can't use plastic foundation
- Nine frames in a ten-frame box
- A queen excluder
- All comb honey should be **frozen after harvest – 24 hours minimum**
- Sharp knife, cutting tool, dental floss.
- Drain, transfer to trays or containers.
- Label requirement same as for liquid honey






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CRYSTALLIZED HONEY

- Also called granulated honey
- Return to liquid when heated.

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CREAMED HONEY

- AKA—Whipped honey, spun honey, churned honey, candied honey, honey fondant
- Processed to control crystallization
- Produces a honey with a smooth **spreadable consistency**





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STRAINED HONEY

- Honey that has been passed through a strainer to remove particulate material without removing **pollen, minerals or valuable enzymes**






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RAW HONEY

- Honey as it exists in the beehive or as obtained by extraction, settling or straining without adding heat above **120 degrees F**

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- Some supermarkets prefer honey processed by very fine filtration under high pressure
- Removes all extraneous solids and pollen grains
- Very clean
- Has a longer shelf life




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- Processed by **ultrasonication**
- Non-thermal alternative for processing
- Destroys most of the yeast cells and those that are not destroyed generally lose their ability to grow
- Reduces the rate of fermentation

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MICHIGAN STATE UNIVERSITY Extension **Rules and regulations for selling honey - FDA**

- What is Honey?
 - "a thick, sweet, syrupy substance that bees make as food from the nectar of plants or secretions of living parts of plants and store in honeycombs."
- What can I name my honey?
 - Honey; Source and State can be listed, not required
 - e.g. clover honey, Michigan spun honey, comb honey
- Do you have to declare floral source?
 - No, If you do declare, need to have supporting info



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MICHIGAN STATE UNIVERSITY Extension **Rules and regulations for selling honey - FDA**

- If a food consists of honey and a sweetener, such as sugar or corn syrup, can I label the food as "honey"?
 - No, required to include all in the name – Blend of . . . **and** list on ingredients in descending order.



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MICHIGAN STATE UNIVERSITY Extension **Rules and regulations for selling honey - FDA**

- If a food consists of honey and a flavor ingredient, such as natural raspberry flavor, what are the labeling requirements?
 - "Your labeling makes any direct or indirect representations with respect to the primary recognizable flavor (e.g., by word or vignette), other than through the statement of ingredients, the product is considered to have a **characterizing flavor** and must be labeled in accordance with 21 CFR 101.22(i). In such a case, you should choose a **name that accurately describes the food** with its characterizing flavor, such as "raspberry-flavored honey"



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MICHIGAN STATE UNIVERSITY Extension **Rules and regulations for selling honey - FDA**

- Can honey be infused with CBD oil?
 - No, Under federal law, it is currently illegal to market CBD added to food or be used as a "dietary supplement"



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FDA



Public Notification: X Rated Honey For Men contains hidden drug ingredient




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Rules and regulations for selling honey - Michigan

- What are the honey processing rules?
- Can I sell honey directly to people?
- Can I sell honey in stores?
- How do I label my honey products?
- Can I use the word 'organic' on my label?




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Rules and regulations for selling honey - Michigan

- What are the honey processing rules?
- Under \$15,000- Generally, those under \$15K in gross sales are exempt from licensing
- \$15,001 and above will need
 - license for processing
 - license for facility
 - license for warehousing



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Rules and regulations for selling honey - Michigan

- Under \$15,000- Generally, those under \$15K in gross sales are exempt from licensing
- Does this fall under the cottage food law?
 - Honey is exempt under the cottage food law. Honey can be sold direct or wholesale - grocery stores, restaurants and other retailers. Food manufacture under the cottage food law can only be sold direct to consumer.
- Local zoning ordinances apply




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Nutritional Facts Label Required?

- Nutrition Facts label not required if the only product is honey

Nutrition Facts	
Per 125 mL (87 g)	
Amount	% Daily Value
Calories 80	
Fat 0.5 g	1 %
Saturated 0 g	0 %
+ Trans 0 g	
Cholesterol 0 mg	0 %
Sodium 0 mg	0 %
Carbohydrate 16 g	6 %
Fibre 2 g	8 %
Sugars 2 g	
Protein 3 g	
Vitamin A	2 %
Vitamin C	10 %
Calcium	6 %
Iron	2 %




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Label Requirements

- Name of business or owner name;
- Address of production;
- Standard identity of product, such as honey if only one ingredient;
- Net weight; Include Metric
- Disclaimer "Processed in a facility not inspected by the Michigan Department of Agriculture & Rural Development".
- Somewhere on the bottom 1/3 of label, an **11pt font** or larger




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Label Requirements

- **Name and Physical Address:** You must use the name of the business or the owners name if no corporate structure has been created. **Use the physical address where the honey is processed and packaged.** Post office box addresses are not adequate.
- **Standard of Identify (Name of Product):** If the product is purely honey, use the standard of identify "Honey" as the name of the product. Special rules apply for labeling if the product contains more than just honey which are addressed later. Using all capital letters or upper/lower case are both acceptable.




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Label Requirements

- **Net Weight:** The net weight or net volume of the honey product must also include the metric equivalent - conversion charts are available online. It is recommended to place this in the bottom 1/3 of the label.
- **Disclaimer Statement:** The following statement must be on the label:
 - "Processed in a facility not inspected by the Michigan Department of Agriculture & Rural Development"
- At least the equivalent of **11-point font** (about 1/8" tall) and in a color that provides a clear contrast to the background. All capital letters or upper/lower case are both acceptable.





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Example of a honey label what is missing?

- Flower Creek Apiaries
- Honey
- 123 Foodstuff Lane
- Casserole City, MI 82682
- "Processed in a facility not inspected by the Michigan Department of Agriculture & Rural Development"
- Artie Pinkster
- Net Wt. 3 oz





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Can I Obtain Organic Certification?

- There are no federal organic honey guidelines. The Agricultural Marketing Service of the USDA has issued a written statement affirming that your beekeeping operation may be certified as organic.
- Need to be certified by an accredited certifying agent.
- The USDA [National Organic Program](#) (NOP) [outlines the certification process](#)
- and maintains [lists of USDA-Authorized Organic Certifying Agents](#).




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MSU Extension

- Provide relevant education and information
 - Provide context on the bee keeping industry
 - Importance of beekeeping in Michigan
 - Opportunities and challenges for beekeepers in Michigan
 - Relevant research and data
- Provide tips and resources for civic engagement
- Explain Proposed legislation to the public




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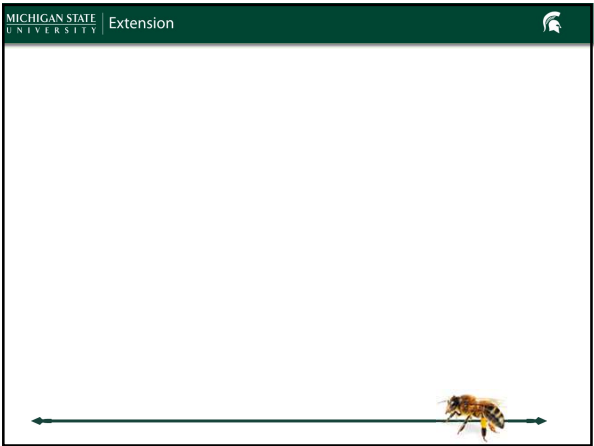
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