Upcoming Webinars

March 16
Let’s Not Waste Food: From Storing to Composting
Julie Garden-Robinson, professor and Extension food and nutrition specialist, NDSU

March 23
Share the Bounty: Gardening to Fight Hunger in Our Communities
Esther McGinnis, associate professor and Extension horticulturist, NDSU
• Please complete the short online survey that will be emailed to you after today’s webinar. It will take just a couple minutes!

• Be sure to sign up for an opportunity to win a prize in the drawing. After submitting the survey, a form to fill out with your name/address will appear.

• Acknowledgement: This project was supported by the U.S. Department of Agriculture’s (USDA) Agricultural Marketing Service through AM190100XXXG028. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.
March 9

Honey: Safety and Use

Shannon Coleman, Assistant professor and Extension food safety specialist, Iowa State University
Overview

• What is honey?
• Regulation of Sales
• Food Safety Considerations
• Food Hazards
• Food Safety Best Management Practices
What is honey?
What is honey?

Definition

“…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.”

Name of honey products

• Product only contains honey
  • Label as common name “honey” (see section 403(i) of the FD&C Act and 21 CFR 101.3(b))

• “Clover Honey, Orange Blossom Honey, or Wild Flower Honey” are other common and acceptable

• Single-ingredient food
  • No ingredient statement on the label

Regulations of sales
Regulations of sales

Where can you sell?

Farmers Market

Photo credit: Pixabay.com - Pexels

Retail/Wholesale

Photo credit: Pixabay.com - stevepb
### Direct to consumers sales

*Pure Honey (no license)*

<table>
<thead>
<tr>
<th>States</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td>Illinois</td>
<td>¥</td>
<td>X</td>
</tr>
<tr>
<td>Iowa</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Kansas</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Minnesota</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Missouri</td>
<td>¥</td>
<td>X</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>X£</td>
<td></td>
</tr>
</tbody>
</table>

- ¥Limit on amount and sales (*Illinois* - producer packs or sells less than 500 gallons per year; *Missouri* - less than $50,000/year)
- £Wisconsin require that you **don’t process the honey** or honey is processed only by heating and straining. Processing would require a license.
<table>
<thead>
<tr>
<th>ILLINOIS</th>
<th>MINNESOTA</th>
</tr>
</thead>
<tbody>
<tr>
<td>(410 ILCS 620/) Illinois Food, Drug and Cosmetic Act</td>
<td>Honey Label Requirements</td>
</tr>
<tr>
<td>Jenna Smith</td>
<td>Morrine A Omolo</td>
</tr>
<tr>
<td><a href="mailto:jesmith6@illinois.edu">jesmith6@illinois.edu</a></td>
<td><a href="mailto:omolo004@umn.edu">omolo004@umn.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IOWA</th>
<th>MISSOURI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marketing Local Foods in Iowa - Honey and Maple Syrup</td>
<td>Regulations for Selling Safe Canned Foods in Missouri Fact Sheet</td>
</tr>
<tr>
<td>Shannon Coleman</td>
<td>Londa Nwadike</td>
</tr>
<tr>
<td><a href="mailto:scoleman@iastate.edu">scoleman@iastate.edu</a></td>
<td><a href="mailto:lnwadike@ksu.edu">lnwadike@ksu.edu</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>KANSAS</th>
<th>WISCONSIN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Foods Sold Direct to Consumers in Kansas</td>
<td>Selling Honey in Wisconsin</td>
</tr>
<tr>
<td>Karen Blakeslee</td>
<td>Barb Ingham</td>
</tr>
<tr>
<td><a href="mailto:kblakesl@ksu.edu">kblakesl@ksu.edu</a></td>
<td><a href="mailto:bhingham@wisc.edu">bhingham@wisc.edu</a></td>
</tr>
<tr>
<td>Londa Nwadike</td>
<td></td>
</tr>
<tr>
<td><a href="mailto:lnwadike@ksu.edu">lnwadike@ksu.edu</a></td>
<td></td>
</tr>
</tbody>
</table>
Food Safety Considerations
Honey Food Safety Consideration

1. Infant botulism from spores of the *Clostridium* bacteria
   - *Babies under the age of 1 should not eat honey*

2. Store in a clean airtight container
   - *Honey is hygroscopic – draw in moisture, could lead to unfavorable condition for mold and yeast growth*

3. Honey crystallize or granulated as it gets older
   - *Recommend converting crystallized honey to liquid form using hot (not boiling) water – no excess heat, could lead to color and flavor change*
Food Hazard
Food Hazards

- Food become hazardous by contamination
- Contamination is the **unintended presence** of harmful **substances or microorganism** in food
- Food Hazards
  - Chemical
  - Physical
  - Biological

LESSON 1B - HOW DOES FOOD BECOME HAZARDOUS?. ISU EO. Link: [https://www.extension.iastate.edu/foodsafety/L1.3](https://www.extension.iastate.edu/foodsafety/L1.3)
# Hazards for Honey

<table>
<thead>
<tr>
<th>Hazard</th>
<th>Example</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chemical</td>
<td>Antibiotic residue; phenol; chemical residue from barrels; interior coating from metal lids or pail</td>
</tr>
<tr>
<td>Physical</td>
<td>Metal fragments &amp; non-metal particles such as woods, stone, glass, pest excretion, or dirt</td>
</tr>
<tr>
<td>Biological</td>
<td><em>Clostridium botulinum</em> spores</td>
</tr>
</tbody>
</table>

Spores can be lethal

• Toxin
  • Found naturally
  • Attacks the body’s nerves (difficulty breathing), muscle paralysis, & even death

• Spores
  • Protective coatings
  • Survive in the environment
  • Extreme conditions - most lethal toxins known

ABOUT BOTULISM. Center for Disease Control and Prevention. Link: https://www.cdc.gov/botulism/general.html
Food safety best management practices
Sanitation guidelines

Exterior building design and constructions

- Construction is to design and construct a building that is cleanable
- Minimize contamination and adequately seal food processing and handling areas from sources of contamination

Sanitation guidelines

**Interior building design and construction features**

- Minimize **potential harborage** of pest and microorganisms
- Maximize **cleanability**
- Maximize the **protection of the food product** from contamination

Cleanable Sanitary: Equipment, Walls and Ceiling

- Hard, flat, and smooth
- Free of pits, cracks, checks, and crevices
- Impervious and non-absorbent
- Resistant to cleaning and sanitizing chemicals
- Corrosion resistant
- Durable, easily maintained, and wear resistant
- Properly installed, sealed, and covered

Ensuring hygienic food handlers

Ensure that all food handlers follow cleanliness practices to prevent contamination

- Should not handle product if they are **ill**
  - *Diarrhea, fever, vomiting, jaundice, etc.*
- **Wash their hands** when they become contaminated
  - *Use bathroom, after eating lunch, handling money, hands become soiled with honey or debris*
- Wear **clean clothing**, use effective **hair restraints**, do not wear jewelry except non-stoned wedding band.
- **No eating, drinking, or use of tobacco**

Food Safety Best Management Practices for Producing Honey in New York State- [https://certified.ny.gov/sites/default/files/Honey-Food-Safety-BMPs.pdf](https://certified.ny.gov/sites/default/files/Honey-Food-Safety-BMPs.pdf)
Clean practices- Extraction Day

- **Clean** all food contact surfaces thoroughly, sweep and mop the floor at the beginning and the end of extraction day.
- Ensure that all honey drums and other containers remain **tightly sealed** – protect from dust, dirt, rodents, insects and other contamination.
- Check building surfaces (walls, ceiling, floors) are **free from debris** (dust, dirt, cobwebs).
- Remove **all trash** once it is filled.


Thank you

Contact Information
Office: 2545 FSB
Email: scoleman@iastate.edu
Phone: 515-294-9011

This institution is an equal opportunity provider. For the full non-discrimination statement or accommodation inquiries, go to www.extension.iastate.edu/diversity/ext.