

2022

The logo for 'Field to Fork' is centered within the zero of the year '2022'. It features the words 'field' and 'to' in a light blue, lowercase, sans-serif font, stacked vertically. Below 'field' is a stylized red strawberry with a green stem and two leaves. To the right of the strawberry is a light blue fork, angled diagonally upwards. The word 'FORK' is written in a bold, black, uppercase, sans-serif font, positioned to the right of the fork's handle.

NDSU

EXTENSION

EXTENDING KNOWLEDGE » CHANGING LIVES

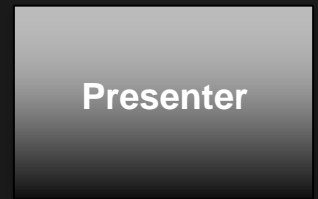
Upcoming Webinars

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, syrupe substance that bees make as food from the nectar of plants or secretions of living parts of plants and store in honeycombs.”

FDA. 2018. GUIDANCE FOR INDUSTRY: PROPER LABELING OF HONEY AND HONEY PRODUCTS. LINK:

<https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-proper-labeling-honey-and-honey-products>

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*

GUIDANCE FOR INDUSTRY: PROPER LABELING OF HONEY AND HONEY PRODUCTS. FDA. LINK:

<https://www.fda.gov/regulatory-information/search-fda-guidance-documents/guidance-industry-proper-labeling-honey-and-honey-products>

Regulations of sales

Regulations of sales

Where can you sell?

Farmers Market



Photo credit Pixbay.com - Pexels

Retail/Wholesale



Photo credit Pixbay.com - stevepb

Direct to consumers sales

Pure Honey (no license)

States	Yes	No
Illinois	X [¥]	
Iowa	X	
Kansas	X	
Minnesota	X	
Missouri	X [¥]	
Wisconsin	X [£]	

[¥]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.



NORTH CENTRAL FOOD SAFETY EXTENSION NETWORK

ILLINOIS

(410 ILCS 620/) Illinois Food, Drug and Cosmetic Act

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MINNESOTA

Honey Label Requirements

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IOWA

Marketing Local Foods in Iowa -
Honey and Maple Syrup

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MISSOURI

Regulations for Selling Safe Canned Foods in
Missouri Fact Sheet

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KANSAS

Foods Sold Direct to Consumers in Kansas

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WISCONSIN

Selling Honey in Wisconsin

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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



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LESSON 1B - HOW DOES FOOD BECOME HAZARDOUS?. ISU EO. Link: <https://www.extension.iastate.edu/foodsafety/L1.3>

Hazards for Honey

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

HACCP Generic Model: Pasturized Honey. API Services. Link: https://www.apiservices.biz/documents/articles-en/haccp_generic_model_pasteurized_honey.pdf

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



Photo credit CDC

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

University of Florida IFAS Extension. 2005. SANITARY DESIGN AND CONSTRUCTION OF FOOD PROCESSING AND HANDLING FACILITIES. Link: <https://foodsafetyclearinghouse.org/resources/sanitary-design-and-construction-food-processing-and-handling-facilities>

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

University of Florida IFAS Extension. 2005. SANITARY DESIGN AND CONSTRUCTION OF FOOD PROCESSING AND HANDLING FACILITIES. Link: <https://foodsafetyclearinghouse.org/resources/sanitary-design-and-construction-food-processing-and-handling-facilities>

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

University of Florida IFAS Extension. 2005. SANITARY DESIGN AND CONSTRUCTION OF FOOD PROCESSING AND HANDLING FACILITIES. Link: <https://foodsafetyclearinghouse.org/resources/sanitary-design-and-construction-food-processing-and-handling-facilities>

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>

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

FOOD MANUFACTURING REGULATIONS FOR HONEY PROCESSING, PACKAGING AND STORAGE IN TENNESSEE – Link:

<https://extension.tennessee.edu/publications/Documents/D26.pdf>

Food Safety Best Management Practices for Producing Honey in New York State- <https://certified.ny.gov/sites/default/files/Honey-Food-Safety-BMPs.pdf>

Thank you

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