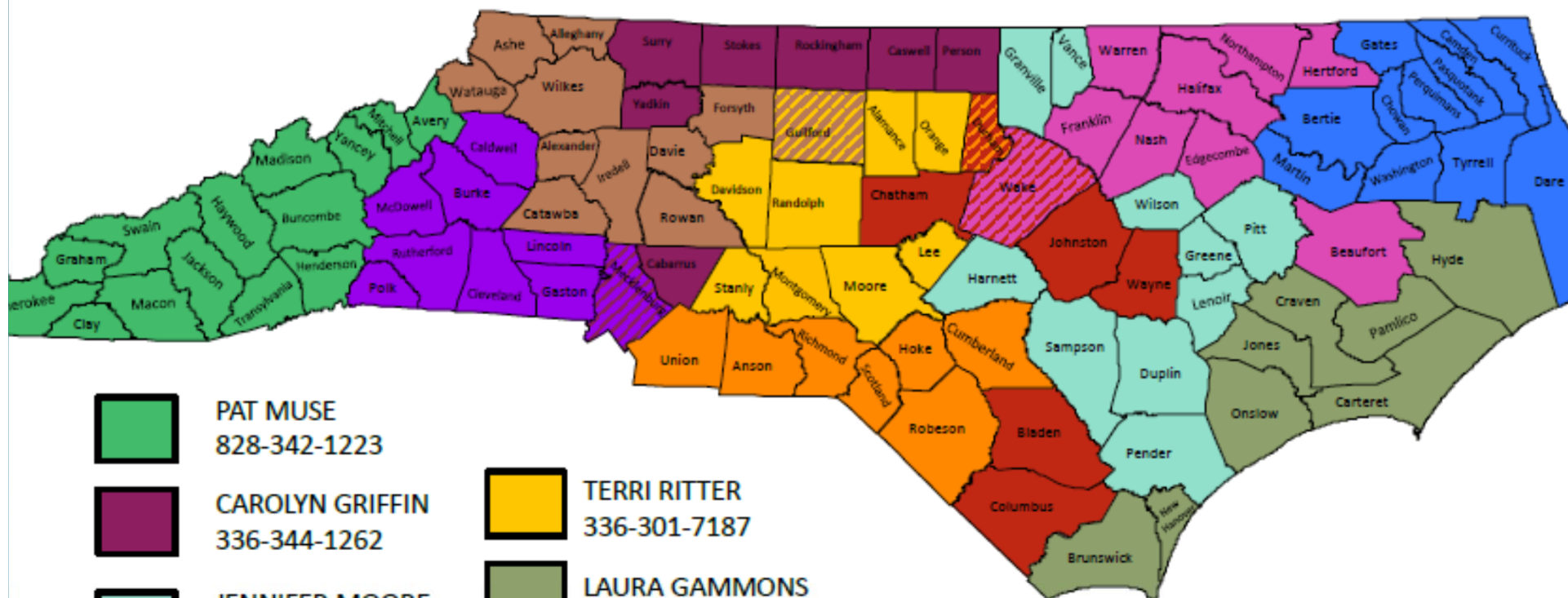


North Carolina Mushroom Committee

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North Carolina Department of Health and Human Services
 Division of Public Health
 Environmental Health Regional Specialists
 Food Protection Program
 July 15, 2016



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2009 Food Code

3-201.16 ...mushrooms species picked in the wild shall be obtained from sources where each mushroom is individually inspected and found to be safe by an **APPROVED** mushroom expert.

2013 Food Code

3-201.16 ...mushroom species picked in the wild shall not be offered for sale or service by a FOOD ESTABLISHMENT unless the FOOD ESTABLISHMENT has been APPROVED to do so.

Since adoption of the 2013 Food Code last year, SCDHEC moved very rapidly (driven by Charleston chefs) to create a pathway in which wild gathered mushrooms could be APPROVED.

The South Carolina Model

- The pathway they have created is through a course developed by a professional mycologist, Tradd Cotter, who owns his own mushroom company (see the link).
- Our FDA Regional Retail Food Specialist attended the mushroom certification course (as an observer) to see what the course looks like and was impressed with the model.

<http://mushroommountain.com/>

The South Carolina Model

- The course is a certifying mechanism by which people will become licensed wild mushroom picker/sellers that will sell directly to retail food establishments.
- Each student who passes the course receives a **license number** that can be tracked on-line (somewhat like the approved shellfish list)

What Were Other States Doing?

South Carolina
Georgia

Minnesota
Maine

Michigan

Washington

Michigan

Wild-foraged Mushroom Identification Certification Program

Working in partnership with the Michigan Farmers Market Association and the Institute for Sustainable Living, Art & Natural Design, and in cooperation with the Michigan Department of Agriculture and Rural Development (MDARD), MAMI (Midwest American Mycological Association) has designed a workshop program that, if successfully completed, will qualify you as an **expert mushroom identifier**.

Maine

§2175. Maine Wild Mushroom Harvesting Certification Program

The program is administered by the Department of Health and Human Services for the purpose of establishing training and certification requirements for persons who commercially harvest, broker or sell wild mushrooms in this State.

The Commissioner of Health and Human Services shall approve training programs provided by persons or entities outside the department.

Washington State

“Cultivated mushrooms are considered a vegetable and there are **no** regulations for growing them conventionally.”

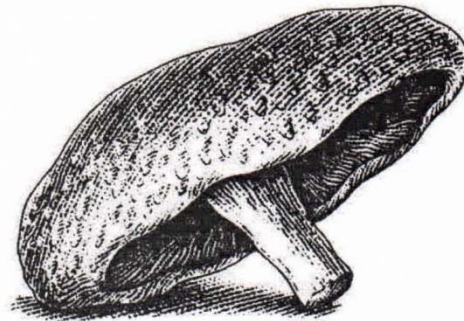
Washington State

“Wild mushrooms are classified as forest products by DNR and the USFS. The DNR and USFS have different requirements and permits for harvesting wild mushrooms.”



2012

Minnesota Food Code Rule
Revision Wild Mushroom
Advisory Workgroup



Minnesota Department of Health
Minnesota Department of Agriculture

Text of Minnesota Rules

WILD MUSHROOMS.*

“A. Mushroom species picked in the wild shall be obtained from sources where each mushroom is **individually inspected and found to be safe** by a mushroom identification **EXPERT** whose expertise has been verified and approved by the regulatory authority.”

Text of Minnesota Rules

An individual who wants to be approved as a wild mushroom identification expert shall have on file with the regulatory authority a letter certifying successful completion of a wild mushroom identification course from an accredited college or university.

Committee Makeup

DHHS Representative

DHHS Representative

DHHS Representative- Food Defense Coordinator

Industry Representative

Industry Representative

Academia, forager, NC Coop Exten.

Academia, NC Cooperative Extension

LHD Western Region

LHD Piedmont Region

LHD Eastern Region

NCDA

NCDA

NC Restaurant Association

Chef/Owner/Forager

Media Hot Topic

- January 2015 An article appears in the Charlotte Observer with a chef that admits that he gathers and serves wild mushrooms in his restaurant.
- 4-5-16 Article appears in the Asheville Citizens-Times asking if it is necessary to regulate the sale of wild mushrooms. Title, “Are Asheville Restaurants Serving Illegal Mushrooms?”
- This article was picked up by USA today and re-titled, “Wild Mushroom Certification Efforts Leave Bitter Taste.”

Conference For Food Protection

Guidance Document for a Model Wild-- Harvested Mushroom Program

Jeopardy

100	500	1000
Definitions	Consumer Notification	Harvesting
Selection Criteria and Resources	Identifier Course Learning Objectives	Best Handling Practices
Record Keeping and Traceability	Illness information	Mushroom Approval Language
Written Buyer Specification	Identification	Additional Recommendations

NC Definitions

“Wild-harvested Mushroom means a fresh mushroom that has been picked in the wild and has not been processed.”

“A Wild-harvested Mushroom does not include mushrooms that have been packaged in an approved food processing plant or cultivated mushrooms.”

Jeopardy

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NC: Selection Criteria and Resources

- 1) Establish a list of wild-harvested mushroom species that may be considered an **approved source**.
- 2) That are **easily identified** with field characteristics.
- 3) That are **common**, within the jurisdiction (NC).
- 4) Are generally considered a **low allergic reaction risk** .

NC: Only the following wild mushroom species may be offered for sale or service in a Retail Food Establishment

Red Chanterelles (*Cantharellus cinnabarinus*)
Chanterelles (*Cantharellus cibarius*, *C.lateritius*, *C. appalachiensis*)
Yellow Morel (*Morchella esculenta*, *Morchella deliciosa*, *Morchella elata*)
Black Trumpet (*Craterellus fallax*)
Lobster (*Hypomyces lactifluorum*)
Chicken of the Woods (*Laetiporus sulphureus*, *L.cinnatus*, *L.perscinus*)
Beefsteak (*Fistulina hepatica*)
Hedgehog (*Hydnum repandum*)
Lions Mane (*Hericium erinaceus*)
Comb Tooth (*Hericium ramosum*)
Oyster Mushroom (*Pleurotus ostreatus*)
Cauliflower (*Sparassis crispa*, *S.herbstii*, *S.spathulata*)
Maitake (*Grifola frondosa*)
Honey (*Armillaria ostoyae*, *A.mellea*)
Indigo Milk Cap (*Lactarius indigo*)
Leatherback (*Lactarius corrugis*, *L.volemus*)
Puffballs (*Lycoperdon*, *Calvatia*)

Jeopardy

100	500	1000
Definitions	Consumer Notification	Harvesting
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NC: Record Keeping and Traceability

To facilitate traceback and foodborne illness investigation:

- Foragers name;
- Address;
- Latin binomial name and locally used common name of the mushroom;
- Harvest date;
- Harvest location (e.g., town, county, township, etc.);
- Harvest weight by species

Front

N. C.
Wild Mushroom
Verification/Sale Tag

Name and Address of Forager: _____

Forage Location: _____

Date Foraged: _____

Date Delivered: _____

North Carolina Food Code Manual, 3-201.16, states in part, "Mushroom species picked in the wild shall be obtained from sources where each mushroom is individually inspected and found to be safe by an APPROVED mushroom identification expert."

This tag is required to be attached until the container is empty and thereafter kept on file for 90 days. Date Empty _____

(SEE REVERSE)

Back

N.C.
Wild Mushroom
Verification/Sale Tag

Note: Only the following species of mushrooms shall be approved for sale to retail food establishment. List quantity in space provided.

Beefsteak	Indigo Milk Cap
<i>Fistulina hepatica</i>	<i>Lactarius indigo</i>
Black Trumpet	Leatherback
<i>Craterellus fallax</i>	<i>Lactarius corrugis, volemus</i>
Boletes	Lions Mane
All Non blue staining	<i>Heridium erinaceus</i>
Cauliflower	Lobster
<i>Sparassis crispa, herbstii, spathulata</i>	<i>Hypomyces lactifluorum</i>
Chanterelles	Chck of the Wood
<i>Cantharellus cibarius, lateritius, cinnabarinus, appalachiensis</i>	<i>Laetiporus sulphureus, Cincinnatus, perscinus</i>
Comb Tooth	Oyster
<i>Heridium repandum</i>	<i>Pleurotus ostreatus</i>
Hedgehog	Puffballs
<i>Hydnum repandum</i>	Lycoperdon, Calvatia
Hedgehog	Maitake
<i>Hydnum repandum</i>	<i>Grifolia frondosa</i>
Honey	Morel
<i>Armillaria ostoyae, mellea</i>	<i>Morchella esculenta, deliciosa, elata</i>

Jeopardy

100	500	1000
Definitions	Consumer Notification	Harvesting
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NC: Written Buyer Verification

- Identification by the scientific name and the common name of the mushroom species;
- A statement that the mushroom was identified while in the **fresh state**;
- The name and contact information of the person who identified the mushroom and the mushroom seller; and
- A statement as to the qualifications and training of the identifier, specifically related to mushroom identification.

Wild Mushroom Verification

Date: _____ Establishment ID#: _____
Name of Establishment: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Person in Charge (PIC): _____

Name of Forager: _____
Address: _____
City: _____ State: _____ Zip Code: _____
Email Address: _____ Phone: _____

List of the common and scientific name of each wild mushroom species sold this date:

Example: Chanterelle (*Cantharellus cibarius*, *lateritius*, *appalachiensis*, etc)

NOTE: Mushrooms must be identified in the wild, fresh state (not processed, dried, or cultivated).

Provide a statement as to the qualifications and training of the wild mushroom identifier, specifically related to mushroom identification:

North Carolina Food Code Manual, 3-201.16 Wild Mushrooms

- (A) Except as specified in ¶ (B) of this section, mushroom species picked in the wild shall be obtained from sources where each mushroom is individually inspected and found to be safe by an APPROVED mushroom identification expert.
- (B) This section does not apply to:
- (1) Cultivated wild mushrooms species that are grown, harvested, and processed in an operation that is regulated by the food regulatory agency that has jurisdiction over the operation; or
 - (2) Wild mushrooms species if they are in packaged form and are the product of a food processing plant that is regulated by the food regulatory agency that has jurisdiction over the plant.

The food establishment that prepares, sells, and serves mushrooms picked in the wild shall ensure the mushrooms are identified by a label, placard, or menu notation that states the common name of the wild mushroom.

This document must remain on file in the food establishment for a minimum of 90 days from the date of sale of the wild mushrooms.

I attest to the accuracy of the information provided in this Wild Mushroom Buyer Verification.

Signature of Seller: _____ Date: _____

Signature of PIC: _____ Date: _____



North Carolina Department of Health & Human Services / Division of Public Health /
Environmental Health Section / Food Protection Program
5605 Six Forks Rd. / 1632 Mail Service Center / Raleigh, NC 27699-1632
919 707 5854

August 2016

Jeopardy

100	500	1000
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Consumer Notification

The statement:

"Wild-harvested mushrooms: not an inspected product and is harvested from a non-inspected site."

Jeopardy

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NC: Identifier Course Learning Objectives

1. Illness information;
2. Identification;
3. Harvesting;
4. Best handling practices;
5. Regulatory requirements

Jeopardy

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Illness Information: (Symptoms Cause, and Prognosis)

- Identify foodborne illnesses associated with the consumption of wild harvested.
- Describe the symptoms and the consequences of consuming poisonous mushroom species.

Jeopardy

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Identification

- Describe the anatomy of a mushroom as it relates to identification.
- Demonstrate the use of keys in the identification of edible mushrooms.
- Demonstrate accurate identification of edible species of mushrooms from physical specimens.
- Demonstrate ability to differentiate between edible and their poisonous look-a-likes from physical specimens.

Jeopardy

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Harvesting

- Describe specific information in regards to the habitat and seasonality in which mushrooms can be harvested, including areas that are considered inappropriate for harvest (treated areas, contaminated sites, etc.)
- Describe proper collection and harvesting techniques.
- Demonstrate the seasonality and locality differences, if any, between edible mushrooms and their look-a-likes.

Jeopardy

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Best Handling Practices

- Recognize and describe the conditions and practices that could contribute to post harvest contamination.
- Describe storage and transportation methods that would prevent the contamination of mushrooms.

Best Handling Practices, cont.

- Describe the relationship between personal hygiene and the potential for contamination that could contribute to foodborne illness.
- Be able to describe picking area/conditions where mushrooms should not be harvested due to soil or other conditions that may lead to foodborne illness (ex. Feedlots, mushrooms that appear to be contaminated by birds or other animal species).

Jeopardy

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Approved Language

The provisions at 3-201.16(A) of the North Carolina Food Code are clear that wild harvested mushrooms may only be considered an approved source if the regulatory authority has approved them under its regulations. **The 2013 Annex clarifies that a regulatory authority may establish its approval process by applying its own laws and policies and states that regulatory authorities have flexibility in establishing its approval process.**

Approved Language, cont.

Wild mushroom species shall be obtained from sources where each mushroom is individually inspected and found to be safe by a mushroom harvester whose ability to correctly identify edible wild mushrooms has been verified and approved by the regulatory authority. **A letter issued by the accrediting person or organization certifying the harvester's successful completion of an accepted wild mushroom training and specifying the species of wild mushroom(s) the harvester is qualified to identify.**

Accepted courses **shall** cover the elements defined in the Conference for Food Protection Guidance Document for a Model Wild---harvested Mushroom Program dated 5/5/2014.

Jeopardy

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Additional Recommendations

- In addition to the training required for wild-harvested mushroom identification, food worker training should be required.
- Although not a public health issue, a jurisdiction is encouraged to include the topic of harvest methods for species conservation in the training or certification program.

Chicken of the Woods

Laetiporus



Morels/False Morel

Morchella



Chanterelle/Jack-O- Lantern

Cantharellus



Meadow Mushroom



Poisonous Meadow Mushroom







NO
MUSHROOMS
ALLOWED

FINAL CAUTIONARY NOTE

NEVER EAT A WILD MUSHROOM
UNLESS YOU ARE CERTAIN THAT
IT IS SAFE!

