AG News Today

AGRICULTURE & NATURAL RESOURCES



University of Kentucky College of Agriculture, Food and Environment Cooperative Extension Service

Cooperative Extension Service

Livingston County

803 U.S. Hwy 60 East.-P.O. Box 189

Smithland KY 42081

Phone: (270) 928-2168

Fax: (270) 928-4808 www.ca.uky.edu

E-mail:

DL_CES_LIVINGSTON@EMAIL.UKY.EDU

Newsletter April 2023

Happy Spring from the Livingston County Cooperative Extension Office. Just a few things to remember that we offer 25 free soil samples to every property owner in Livingston County.

We also offer forage sampling as well an insect and plant Identifications.

If you are in need of gardening seeds be sure to stop by the office and check out our seed giveaway as well as free gardening publications and cooking recipes.

Livingston County CEA for ANR

adam B



THE COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT IS AN EQUAL OPPORTUNITY ORGANIZATION WITH RESPECT TO EDUCATION AND EMPLOYMENT AND AUTHORIZATION TO PROVIDE RESEARCH, EDUCATION INFORMATION AND OTHER SERVICES ONLY TO INDIVIDUALS AND INSTITUTIONS THAT FUNCTION WITHOUT REGARD TO ECONOMIC OR SOCIAL STATUS AND WILL NOT DISCRIMINATE ON THE BASES OF RACE, COLOR, ETHNIC ORIGIN, CREED. RELIGION, POLITICAL BELIEF, SEX, SEXUAL ORIENTATION. GENDER IDENTITY. GENDER EXPRESSION, PREGNANCY. MARITAL STATUS, GENETIC INFORMATION, AGE, VETERAN STATUS, OR PHYSICAL OR MENTAL DISABILITY. INQUIRIES REGARDING COMPLIANCE WITH TITLE VI AND TITLE VII OF THE CIVIL RIGHTS ACT OF 1964, TITLE IX OF THE EDUCATIONAL AMENDMENTS, SECTION 504 OF THE REHABILITATION ACT AND OTHER RELATED MATTER SHOULD BE DIRECTED TO EQUAL OPPORTUNITY OFFICE, COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT, UNIVERSITY OF KENTUCKY, ROOM S-105, AGRICULTURE SCIENCE BUILDING, NORTH LEXINGTON. KENTUCKY 40546.

Cooperative Extension Service

Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.







COOPERATIVE EXTENSION SERVICE UNIVERSITY OF KENTUCKY COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Plant Pathology & Forestry Fact Sheet

PPFS-GEN-14 FORFS-16-01

Don't Eat Those Wild Mushrooms

...unless you know what you are doing!

Ellen Crocker, Postdoctoral Scholar, Department of Forestry
Nicole Ward Gauthier, Extension Plant Pathologist, Department of Plant Pathology

Mushrooms are strange and wonderful things – some are beautiful, some are ugly, some are delicious, and some are deadly. Mushroom hunting is a fun and rewarding hobby that can turn a hike through local woods into a puzzle-solving adventure. Many people are drawn to mushroom hunting and the potential to forage for food. Unfortunately, there is a dark side to mushroom foraging: poisoning. Each year, wild mushrooms lead to numerous illnesses and even a few deaths.

While the threat of mushroom poisoning is real, most mushroom-caused illnesses can be prevented if collectors are well-informed and cautious. This fact sheet provides introductory information regarding mushroom safety.

WHEN ARE MUSHROOMS DANGEROUS TO CONSUME?

Poisonous mushrooms

Some mushrooms contain toxins that directly cause poisoning. Different mushroom toxins can cause different symptoms—ranging from mild stomach distress to liver failure and death. A few mushrooms, like the appropriately named Destroying Angel or Death Cap (both *Amanita* spp.)(FIGURE 1) contain potentially lethal toxins and kill a few Americans every year.

FIGURE 1. Two poisonous mushrooms that can cause liver failure and death, the Destroying Angel (A) and Death Cap (B).







Several other mushroom toxins can cause an intense upset stomach. One example is the Jack-O'-Lantern mushroom (*Omphalotus illudens*), which is sometimes confused with the edible Chanterelle (*Cantharellus* spp.). Despite its similar appearance and appealing odor, consumption of the Jack-O'-Lantern results in stomach pain, vomiting, and diarrhea. This is why it's important to carefully identify each mushroom, rather than relying upon superficial appearances.

Environmental toxins

Mushrooms can also absorb toxins from the environment, so it is important to know the history of the site from which specimens were collected. If site history is unknown (e.g., lawn that may have been recently treated with pesticides), do not consume mushrooms from the area.

Preparation, interactions, and allergies

Even mushrooms that don't contain toxins can sometimes cause illness. Many mushrooms, like Morels and some that are commonly found in grocery stores, must be properly cooked to avoid illness. For example, popular Shiitake mushrooms (*Lentinula edodes*) can cause a severe rash in people who are allergic to it in a raw or poorly-cooked state.

FIGURE 2. KNOWING THE PARTS OF A MUSHROOM AND THEIR CHARACTERISTICS ARE CRITICAL TO PROPER IDENTIFICATION.

Compounds in some mushrooms may also react with other foods or drugs. For example, some Inky Caps (*Coprinopsis* spp.) are tasty but poisonous when combined with alcohol. When consumed up to 5 days before drinking alcohol, these mushrooms can cause sweating, nausea, vomiting, and even heart problems. Other mushrooms are also known to adversely react with various medications, drugs, and alcohol.

Poorly stored mushrooms

Surprisingly, most illnesses associated with consumption of edible mushrooms are a result of microbial spoilage or decaying mushrooms. Bacteria can contaminate mushrooms during collection, transportation, or storage. See safety tip 6, below, to avoid illness from contaminants in poorly stored mushrooms.

7 TIPS FOR SAFE MUSHROOM COLLECTING

Like driving a car, mushroom foraging can be dangerous without training, patience, and practice. Those who are interested in mushroom foraging should first learn to accurately identify mushrooms

(FIGURE 2). Poisonous mushrooms can look similar

Cap

- The top portion of the mushroom.
- Cap shape, color, and texture are used in identification.
- Cap can vary and change greatly over time.

Ring (or annulus)

- Remnant of a membranous tissue (veil) that completely covered the mushroom in its early stages of development.
- Some mushrooms have them, some don't, and some loose them with age so look at mushrooms closely and at different stages.

Stem (or stalk)

Many, but not all, mushrooms have stems. Stems can vary by:

- Shape and size
- Texture (chalk-like? string cheese texture?)
- Color (some change color, bruising when touched)
- · Presence of remnant ring or volva



Volva

- Present at the base of some, but not all, mushrooms (a remnant on those mushrooms that initially developed from an egg-like sac).
- Carefully dig up mushrooms to determine if volva is present as cutting their stems may cut off volva.

Gills, pores, tubes, veins, teeth, etc...

- Examine the underside of the cap to identify spore-producing structures, a key part of mushroom identification.
- Common ways that mushrooms present spores include:







Spores

Spores enable mushrooms to reproduce and spread to new places. Spore color can be important in identification. To check spore color, make a spore print:

- Remove mushroom stem.
- Place cap gill (or pore) side down on a sheet of paper (white if you expect dark spores, black if you expect light or both if you are unsure).
- Cover with a bowl 12-24 hours.
- Check spore print left on paper.



to edible mushrooms at certain life stages, so careful observation and identification of each mushroom is critical. Train with a plant pathologist or mycologist, and refer to reputable identification guides. Do not hesitate to ask for help or to confirm identification with experts. Be sure to also learn the poisonous species in the area while learning the edible ones. A great way to learn mushrooms is to join a local mushroom club. Note: if an expert identifies a sample as an edible species, it does not necessarily mean that others growing nearby are the same species.

Identify ALL the mushrooms to be

The same mushroom species can look different at different life stages or when growing in different sites. Thus, it is important to identify each mushroom each time any are collected. Once the key characteristics of a favorite mushroom are known, foragers should look for those identifiable features during each collection.

Start small

When experimenting with a new mushroom, eat only a little in case of adverse reaction. Wait a few days before eating more. Research the preparation and safety of each mushroom species, as well as food and drug interactions. In addition, always store a few samples of mushrooms that have been eaten in the refrigerator for professional identification...in case there is a need for medical attention.

Know mushroom look-alikes

While mushroom identification is notoriously difficult, the good news is that it is relatively easy to avoid the most dangerous mushrooms. Collect and consume only those mushrooms that have been positively identified as edible, and know all of the similar but poisonous look-alikes (FIGURE 3). This greatly minimizes risk of poisoning.

Do not trust folklore

Many common hunting anecdotes are dangerously incorrect. Do not trust folklore regarding identification of poisonous mushrooms. For example, not all poisonous mushrooms have pointed caps, and not all all white mushrooms are safe to eat! Unfortunately, there are no shortcuts to determining whether a mushroom is poisonous. Science-based information and experience are critical.

Store mushrooms properly

Whether storing supermarket mushrooms or those collected from the wild, take these steps to reduce contaminants:

- Cut off or clean any dirty portions (once the mushroom is identified as edible). Stalk bases and dirty (soiled) portions may contain bacteria that can grow during transport or storage.
- Store mushrooms in paper (not plastic) bags. Plastic bags create humid conditions where bacteria and other contaminants thrive.
- Keep mushrooms cool; refrigerate immediately after collecting.
- Before preparing mushrooms for consumption, closely inspect and confirm that they are clean and fresh. Discard old mushrooms and any that appear damaged, wilted, or slimy.

When in doubt, throw it out

As the old saying goes: "There are old mushroom hunters and there are bold mushroom hunters. But there are no old, bold mushroom hunters." When in doubt, don't risk it—remember that delicious edibles can be purchased from many grocery stores, and questionable mushrooms are not worth the potential consequences or the worry.

IF A POTENTIALLY DANGEROUS MUSHROOM HAS BEEN EATEN...

SEEK MEDICAL ATTENTION IMMEDIATELY!

If safety tip 3, above, was followed, some small samples have been saved for identification. This can make the difference between life and death. For example, without medical attention, the survival rate after consumption of toxic *Amanita* mushrooms is approximately 50 percent; but with medical treatment, survival rates increase to around 90 percent.

FOLLOW THE LAW WHILE COLLECTING

Remember to only collect mushrooms where permitted to do so. Check with parks and public areas regarding regulations and apply for permits, if needed. Do not hunt on private property without permission.



Traits	Chanterelle	Jack-O'-Lantern (poisonous)
Gills?	Close but not true gills. Instead, has smooth gill- like ridges (look melted and are more difficult to remove from cap than normal gills) under the cap to the stem.	Yes. These mushrooms have sharp and non-forking gills that go down the stem of the mushroom a little from the cap.
Growth pattern?	Typically solitary or in pairs. Typically growing out of soil.	Typically in big clusters. Typically out of woody material (tree base or roots).
Color in stem?	Cut stem is usually white inside.	Cut stem is usually orange inside.



Traits	Puffball	Amanita (some very poisonous)
Form?	A ball shape (may be oblong or miss-shaped, can vary widely in appearance, even having a stem or stalk.	Mature mushroom has a cap and stalk, but at early stage covered in sack and appears egg-like.
Slice it in half? (top to bottom)	Inside you will only find flesh or spores, depending on how old the puffball is. (Only eat them when young, no spores). If it is gooey inside, it might be a slime mold or immature stinkhorn, not for eating.	If the egg-like button stage is cut in half, a mushroom form is evident.



Traits	Shaggy Mane or Shaggy Parasol	Green-Spored Parasol (poisonous)
Spores?	Black (Shaggy Mane) or white (Shaggy Parasol) spores.* *Many other mushrooms have white or black spores. On its own, this information is not diagnostic, just helpful for distinguishing from the	Green (make a spore print since the spores may not be evident by examining the gills of young mushrooms, which are white but color with age).



Traits	Morel	False Morel (poisonous)
Caps?	Typically uniform shape (cap usually longer than stem). Inward pits and ridges. Cap attaches at base to stem.	Can have an irregular shape or bulge outwards. Wavy, lobed, or wrinkled (brain-like). Cap attached at top but not around stem.
Inside? (cut open top to bottom)	Hollow from top (cap) to bottom (stem), looking like a rubber mold.	Stem has cottony fibers inside. Parts may be hollow (air pockets) but typically not symmetrical.

FIGURE 3. BEFORE FORAGING FOR MUSHROOMS, KNOW THE LOOK-ALIKES OF COMMON EDIBLES AND THE KEY TRAITS THAT DISTINGUISH THE TWO.

ADDITIONAL RESOURCES

On the Internet

 Field Guide to Common Macrofungi in Eastern Forests and Their Ecosystem Function, GTR NRS-79 (USDA)

http://www.fs.fed.us/nrs/pubs/gtr/gtr nrs79.pdf

- Mushrooming (Missouri Department of Conservation) http://mdc.mo.gov/discover-nature/outdoorrecreation/mushrooming
- MycoKey The Mycological Identification Site http://www.mycokey.com/newMycoKeySite/ MycoKeyldentQuick.html
- MushroomExpert.com http://mushroomexpert.com/
- North American Mycological Society http://www.namyco.org/

Note: includes a list of regional mushroom clubs

 Various online forums and groups for mushroom identification, for example,

http://mushroomobserver.org/

Note: Be very careful with these sites; as with all social media, there is a risk of unsolicited commentary and misinformation. However, many of these groups are filled with knowledgeable and enthusiastic mushroom hunters. While these groups and forums can be helpful tools, they should not be an exclusive source of identification. information.

In print

- A Field Guide to Southern Mushrooms. Nancy Smith Weber and Alexander H. Smith. 1988. The University of Michigan Press: Ann Arbor, Michigan. 280pp.
- Field Guide to Mushrooms. G. Lincoff. National Audubon Society, 1981, Knopf Publishers, 928 pp.
- Mushrooms Demystified. David Arora. 1986. Ten Speed Press: Berkeley, CA. 958 pp.
- Mushrooms of Northeastern North America. Bessette, Bessette and Fischer. 1997. Syracuse University Press. 582 pp.
- Mushrooms of West Virginia and the Central Appalachians. William C. Roody. 2003. University Press of Kentucky: Lexington, KY. 536 pp.
- North American Mushrooms: A Field Guide to Edible and Inedible Fungi. O. Miller and H. Miller. 2006. Falcon. 592p.

February 2016

Acknowledgements

Thanks to Kathie Hodge (Associate Professor, Plant Pathology and Plant-Microbe Biology, Cornell University) and Chad Niman (Primary Forest Products Specialist, KY Forestry Extension, University of Kentucky) for helpful comments on drafts of this article.

Photos credits--Kathie Hodge, Cornell University (1a); Ellen Crocker, University of Kentucky (2-gills, teeth & spore print); Richard Nadon, mushroomexpert.com (3-young Amanita cross-section); Bugwood.org: Norman D. Davis (1b), Joseph O'Brien, USDA-Forest Service (1a, 2-pores, 3-Amanita), USDA Forest Service, Northeastern Area (2-Amanita, 3-Chanterelle), Robert L. Anderson, USDA Forest Service (3-jack o' lantern), Curtis E. Young, The Ohio State University (3-puffball, 3-greenspored parasol spores), Joseph LaForest, University of Georgia (3-Amanita), George Hudler, Cornell University (3-shaggy mane), Gerald Holmes, California Polytechnic State University at San Luis Obispo (3-green-spored parasol), Chris Evans, University of Illinois (3-morel), Dave Powell, USDA-Forest Service, retired (3-false morel)

Farmers Recipe of the Month April 2023



Smashed Potatoes

6 large baking potatoes
Cooking spray
11/2 cups sliced, fresh mushrooms
4 green onions, thinly sliced

6 ounces fresh spinach 1 tablespoon canola oil 2 teaspoons Dijon mustard

2 teaspoons Dijon mustard ½ teaspoon salt ¼ cup light sour cream ½ teaspoon black pepper

Preheat oven to 400 degrees F. Wash and dry potatoes. Spray the skins with cooking spray and pierce potatoes in several places with a fork. Place on a 13- by-18-inch baking sheet. Bake until tender, about 1 hour. Wash mushrooms, green onions and spinach. Heat oil in a skillet over medium-high heat. Add mushrooms and sauté for 6 minutes. Add the green onions and fresh spinach, sauté for 1 minute. Slice off the top inch of each potato, leaving a ¼ inch border around the edge. Scoop out the flesh into a mixing

bowl and mash. Add mushroom mixture, Dijon mustard, sour cream and ½ cup cheese. Mix well and season with salt and pepper. Scoop mixture into potato shells and sprinkle with the remaining cheese. Return the potatoes to the baking sheet and bake until heated through and golden brown on top, about 20-25 minutes.

1 cup 2% Cheddar cheese,

shredded

Yield: 6 servings

Nutritional Analysis: 410 calories, 9 g fat, 4.5 g saturated fat, 20 mg cholesterol, 400 mg sodium, 70 g carbohydrate, 9 g fiber, 4 g sugars, 15 g protein.



Buying Kentucky Proud is easy. Look for the label at your grocery store, farmers' market, or roadside stand.

facebook

DONT FORGET TO LIKE AND FOLLOW LIVINGSTON COUNTY AGRICULTURE AND NATURAL RESOURCES PAGE ON FACEBOOK!



Livingston County

ANR

University of Kentucky College of Agriculture, Food and Environment



MUSHROOM IDENTIFICATION WORKSHOP

Date: Thursday April 13th 2023

Time: 6:00pm

Location: Livingston County Extension Office 803 US 60 East Smithland, KY 42081

Interested in learning to ID wild mushrooms?

Join us as Jacob Rucker, Mushroom Forager, teaches us how to tell if a wild mushroom is safe for consumption or not. To RSVP please contact the Livingston County Extension Office at 1.270.928.2168 Mon-Fri 8:00am-4:30pm.

Adam Barnes

CEA for ANR Livingston County



PESTICIDE APPLICATOR TRAINING





WHEN: APRIL 11TH 2023

TIME: 12:00PM OR 6:00PM

WHERE: LIVINGSTON COUNTY EXTENSION OFFICE 803 U.S. 60 EAST SMITHLAND, KY



PLEASE CALL THE EXTENSION
OFFICE AT 270-928-2168 TO
RESERVE YOUR SPOT!
PLEASE BRING A CURRENT
DRIVERS LICENSES

Cooperative Extension Service
Agriculture and Natural Rescurces
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Courties, Cooperating.



Disabilities accommodated with prior notification.

Organized and Sponsored by the Kentucky Forage and Grassland Council, UK Cooperative Extension Service, and the Master Grazer Program

This program is designed for producers and agricultural professionals to learn the newest fencing methods and sound fencing construction through a combination of classroom and hands-on learning

WHEN: April 11-Scottsville, KY

April 13-Richmond, KY

Allen County Extension Office WHERE:

200 E Main St

Scottsville, KY 42164

SMK Agricultural Venue 401 Brookstown Rd Richmond, KY 40475



COST: \$35/participant -- includes notebook, refreshments, safety glasses, hearing protection, and catered lunch

Registration DEADLINE: 2 weeks prior to workshop

ONLINE Registration with Credit Card:

Scottsville, KY https://2023 Scottsville KY Fencing School.eventbrite.com

Richmond, KY https://2023 Richmond KY Fencing School.eventbrite.com

Registration by U.S. Mail: Christi Forsythe

U.K. Research & Education Ctr.

P.O. Box 469

Princeton, KY 42445

Name: City:_____ State:____ Zip code: _____

Email: Cell Phone:

Number of participants_____x \$35 per participant =_____Total Cost

Make CHECKS payable to: KFGC



COOPERATIVE EXTENSION





Kentucky Master Grazer Educational Program

LIMITED... Register today!!!





Kentucky Fencing School Agenda

7:30 Registration and Refreshments

8:15 Welcome and Overview of the Day

8:30 Fencing Types and Costs - Morgan Hayes, UK

9:00 Fence Construction Basics - Clay Brewer, Stay-Tuff

- Perimeter fences vs. cross fences
- · Fencing options on rented farms
- Proper brace construction
- Line posts and fence construction

9:45 Break - visit with sponsors and presenters

10:15 Electric Fencing Basics - Jeremy McGill, Gallagher

- · Proper energizer selection and grounding
- Proper high tensile fence construction and wire insulation
- Electric offset wires for non-electric fences
- Underground wires and jumper wires

11:00 Innovations in Fencing Technologies - Josh Jackson, UK

wireless fences, fence monitoring

11:30 Overview of Kentucky Fence Law - Clint Quarles, KDA

12:15 Catered Lunch - visit with sponsors

1:00 Hands-on Fence Building - Clay Brewer, Stay-Tuff; Jeremy McGill, Gallagher; and Jody Watson, ACI

- Safety, fence layout, and post driving demo, Jody Watson, ACI
- H-brace construction, Jeremy McGill, Gallagher and Clay Brewer, Stay-Tuff
- Knot tying, splices, and insulator installation, Jeremy McGill and Clay Brewer, Stay-Tuff
- Installation of Stay-Tuff Fixed Knot Fence, Clay Brewer, Stay-Tuff
- Installation of High Tensile Fencing, Jeremy McGill, Gallagher

4:30 Questions, Survey and Wrap-up













Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.







Join Livingston County Extension Office for a

BEE KEEPERS MEETING

The Livingston County Extension Office is starting fresh with bee keepers meetings! If you have bees or are just interested in getting them, everyone is welcome!

When: Tuesday May 30th 2023

Time: 6:00pm

Where: Livingston County Extension Office 803 US HWY 60 West Smithland, KY 42081



If you have any questions or to RSVP please feel free to contact the Livingston County Cooperative Extension Office at 1.270.928.2168 or email kaitlin.travis@uky.edu Mon-Fri 8:00am-4:30pm

CEA for ANR

Cooperative Extension Service
Agriculture and Natural Resources
Family and Consumer Sciences
4-H Youth Development
Community and Economic Development

Educational programs of Kentucky Cooperative Extension serve all people regardless of economic or social status and will not discriminate on the basis of race, color, ethnic origin, national origin, creed, religion, political belief, sex, sexual orientation, gender identity, gender expression, pregnancy, marital status, genetic information, age, veteran status, or physical or mental disability. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating.

LEXINGTON, KY 40546









University of Kentucky College of Agriculture, Food and Environment Cooperative Extension Service

2023 Kent Williams Bee School

Sponsored by the Lake Barkley Beekeepers Association

When: Thursday April 20th 2023

Friday April 21st 2023

Saturday April 22nd 2023

Time: 9:00am-4:00pm daily

Where: The Williams Farm

580 KY-385, Wingo, KY 42088



No cost to attend and no sign up necessary Lunch will be provided by the LBBA for donations

EAS Certified Master Beekeeper Kent Williams and members of the Lake Barkley Beekeepers Association will present classes each day *such as:*

- Basic Hive Inspection
- Beekeeping Equipment
- Making Splits
- Varroa Management
- Basic & Advanced Queen Rearing

For more information: https://www.facebook.com/ev ents/3362410497305768/?ti=ls

Other topics may be added based on the availability of presenters. The event is held 100% outdoors, please plan accordingly, bringing a folding chair is a good idea. The class schedule is the same for each day and you are welcome to come for one day or all three days if you wish. Bring your protective gear as several classes are held in the bee yard.

Contact Chuck Collins at (270) 519-4772 for more information