

Numbered Publications Completed in Spring 2023 (March-May)

[FOR-171](#)

Best Practices for Mushroom Foraging in Kentucky

5/19/2023 (new)

Authors: [Megan Buland](#), [Ellen Crocker](#), [Brandon George](#)

Kentucky is a great place to forage wild mushrooms. Its extensive forests are home to many different edible fungi including morels, chanterelles, lions' mane, chicken of the woods, oyster mushrooms, and more. While mushroom hunting is a great hobby, it is not without risks. Many mushrooms can cause illness if consumed and some are deadly poisonous, resulting in lasting illness or even death. Even those broadly considered edible should be approached cautiously as improper storage and cooking, drug interactions, and allergies can all result in adverse reactions.

Departments: [Forestry and Natural Resources](#), [Kenton County](#)

Series: [Forestry and Natural Resources](#) (FOR series)

Size: 3.07 mb

Pages: 3

[ASC-255](#)

A Guide to Body Condition Scoring Yaks

5/1/2023 (new)

Authors: [Les Anderson](#), [Jeff Lehmkuhler](#), [Mary McCarty](#)

Having issues with cows breeding back and raising a calf every year? Are your heifers taking longer to reach puberty than you think they should? Are some calves born weak and not able to stand quickly? Reproduction is closely associated with body-fat stores and muscling. Fat cells produce a hormone, leptin, that plays a role in the hormonal cascade regulating reproduction. Learning how to assess body reserves or condition as a management tool can help improve your reproductive efficiency and farm profitability.

Departments: [Animal and Food Sciences](#), [Menifee County](#)

Series: [Animal Science](#) (ASC series)

Size: 7.38 mb

Pages: 6

[RB-350](#)

Commercial Feeds in Kentucky, 2022

4/27/2023 (new)

Authors: [Glen Harrison](#)

Kentucky's commercial feed law (KRS 250.491-250.631) dates from 1906 and was last revised in 1996. This feed law provides protection for the state's livestock, poultry, and pet owners by regulating all feed materials offered for sale or for mixing into a feed. Products falling under

regulation include all types of pet foods, livestock minerals, complete animal and poultry feeds, protein or mineral blocks, supplements, feed ingredients, specialty materials such as drug premixes, vitamin and mineral supplements, liquid feeds, pet supplements, pet treats, and other specialized pet foods. The law does provide for exemptions for whole and unprocessed grain, raw meat, hay, straw, stover, silage, cobs, husks, and hulls when not processed.

Departments: [Regulatory Services](#)
Series: [Regulatory Bulletin](#) (RB series)
Size: 1.36 mb
Pages: 36

[ID-172](#)

[An IPM Scouting Guide for Common Pests of Solanaceous Crops in Kentucky](#)

4/26/2023 (*minor revision*)

Authors: [Ric Bessin](#), [Nicole Ward Gauthier](#), [Rachel Rudolph](#), [Shawn Wright](#)

Proper identification of pathogens and insect pests as well as nutritional and physiologic disorders and even herbicide drift is essential to determining the proper course of action. The pictures included in this guide represent some common pests or problems that growers may encounter when producing solanaceous crops (tomatoes, peppers, eggplant, and potatoes) in Kentucky.

Departments: [Entomology](#), [Horticulture](#), [Plant Pathology](#)
Series: [Interdepartmental](#) (ID series)
Size: 49.27 mb
Pages: 48

[FCS3-642](#)

[Savor the Flavor: Using Kitchen Tools and Appliances](#)

4/25/2023 (*new*)

Authors: [Janet Mullins](#), [Heather Norman-Burgdolf](#), [Annhall Norris](#)

When adding flavor to a meal, what is the first thing you think of? Is it herbs and spices? Or the cooking method, such as sauteing or braising? There are several kitchen appliances and food preparation tools that can also take the flavor of your meal to the next level. Are these tools and appliances organized in your kitchen in a way that makes them easy to use? This publication will focus on seven different tools and cooking techniques that add flavor to meals.

Departments: [Dietetics and Human Nutrition](#), [Family and Consumer Sciences](#)
Series: [FCS: Food and Nutrition](#) (FCS3 series)
Size: 1.79 mb
Pages: 5

[4BA-08MJ](#)

[4-H Agricultural Land Judging and Homesite Evaluation in Kentucky](#)

4/17/2023 (*minor revision*)

Authors: [Bob Pearce](#), [Edwin Ritchey](#)

Land judging is a way of appraising the physical nature and capability of soils. Certain soil properties, such as slope, depth, and color, that can be seen, felt, or measured, are reliable indicators of soil characteristics that impact crop growth and productivity. Land judging does not replace soil testing. Laboratory tests that determine the chemical and physical nature of soil help us predict plant response to lime and fertilizer, estimate the amount of a waste product that can be safely applied to the soil, and determine the limitations for uses such as homesites and roads.

Departments: [4-H Programs](#), [Plant and Soil Sciences](#)

Series: [4-H Plant Science and Crops: Plant and Soil Science](#) (4BA series)

Size: 7.92 mb

Pages: 26

[AGR-273](#)

[Soil Acidity: What It Is, How It Is Measured, Why It Is Important](#)

4/13/2023 (*new*)

Authors: [John Grove](#), [Edwin Ritchey](#)

Soil chemical health is strongly related to soil acidity. This acidity consists of acidic cations, hydrogen (H⁺), aluminum (Al³⁺), and in some soils, manganese (Mn²⁺). The acid cations are neutralized by basic anions, carbonate (CO₃²⁻), hydroxyl (OH⁻), and oxide (O²⁻) provided by materials such as agricultural, hydrated/slaked, and quick/burnt limes, respectively. Lime application rates are based on the amount of acidity measured in your soil sample.

Departments: [Plant and Soil Sciences](#)

Series: [Agronomy](#) (AGR series)

Size: 553 kb

Pages: 2

[FCS8-128](#)

[Understanding Obesity](#)

4/7/2023 (*new*)

Authors: [Emily DeWitt](#), [Heather Norman-Burgdolf](#)

Obesity affects both adults and youths in the United States. More than one in three adults and one in five youths have obesity. Experts define being overweight or having obesity as increased body fat that may play a role in health risk.

Departments: [Dietetics and Human Nutrition](#), [Family and Consumer Sciences](#)

Series: [FCS: Health and Wellness](#) (FCS8 series)

Size: 1.95 mb

Pages: 4

[FCS8-129](#)

[Naloxone](#)

4/6/2023 (new)

Authors: [Alex Elswick](#)

Overdose deaths surpassed car accidents in 2016 as the leading cause of preventable death in the United States. In 2021, the U.S. experienced more than 100,000 overdoses. That is twice the capacity of most major college football stadiums, and every single overdose is preventable. While research shows that there are many ways to reduce overdoses and overdose deaths, the most effective is access to naloxone.

Departments: [Family and Consumer Sciences](#), [Family Sciences](#)

Series: [FCS: Health and Wellness](#) (FCS8 series)

Size: 326 kb

Pages: 2

[FCS8-130](#)

[Talking to Kids about Drugs](#)

4/6/2023 (new)

Authors: [Alex Elswick](#)

The "drug talk" may be one of the most uncomfortable yet important conversations a caregiver will have with a child. The conversation is important because of the long-term implications for the child's health, development, and future, but it is uncomfortable because most caregivers have not received meaningful guidance on how to have this dialogue. Fortunately, new research has shed light on how to talk to kids about drugs.

Departments: [Family and Consumer Sciences](#), [Family Sciences](#)

Series: [FCS: Health and Wellness](#) (FCS8 series)

Size: 903 kb

Pages: 3

[ID-274](#)

Economic Efficiency in Organic Dairy Operations

4/3/2023 (new)

Authors: [John Allison](#), [Kenny Burdine](#), [Ray Smith](#)

Organic dairy operations have historically commanded a higher milk price than conventional dairy operations (Organic all milk price 2021 average: \$31.55 per hundredweight (USDA AMS, 2021), Conventional all milk price 2021 average: \$20.25 per hundredweight (USDA ERS, 2021)). However, the economics of decision-making and management still play a pivotal role in farm profitability.

Departments: [Agricultural Economics](#), [Plant and Soil Sciences](#)

Series: [Interdepartmental](#) (ID series)

Size: 170 kb

Pages: 4

[FCS8-127](#)

Does Body Weight Matter?

3/29/2023 (new)

Authors: [Emily DeWitt](#), [Heather Norman-Burgdolf](#)

Our society has trained us to think our body weight directly reflects our health. However, body weight is complex and something about which researchers still are learning. This publication will explain the basics of body weight, body fat, and the relationship between weight and health. Practical strategies are also included to help you focus on overall health rather than weight alone.

Departments: [Dietetics and Human Nutrition](#), [Family and Consumer Sciences](#)

Series: [FCS: Health and Wellness](#) (FCS8 series)

Size: 2.77 mb

Pages: 4

[AGR-270](#)

Restoring a Flood-damaged Lawn

3/14/2023 (new)

Authors: [Kenneth Clayton](#), [Paul Andrew Rideout](#), [Jason Vaughn](#), [Beth Wilson](#)

Flooding across Kentucky has been an increasing problem in recent years and has caused significant damage to many properties, including home lawns. The deterioration or death of turfgrass is often caused by grass being smothered with silt and sand deposits left from the flood or grass being submerged under water for prolonged periods. Lack of oxygen to the plant can cause death when submerged, and the rate of death is often worse with higher water temperatures. Repairing these areas is important for reducing chances of erosion as well as allowing a return to the regular use of the lawn.

Departments: [Extension Field Programs](#), [Henderson County](#), [Plant and Soil Sciences](#), [Pulaski County](#)

Series: [Agronomy](#) (AGR series)

Size: 1.19 mb
Pages: 2

[AGR-1](#)

Lime and Fertilizer Recommendations, 2020-2021

3/13/2023 (*revised*)

Authors: [Josh McGrath](#), [Edwin Ritchey](#)

Recommended nutrient additions, based on a soil test, are only made when a crop yield or economic response has been measured for that crop under Kentucky soil-climatic conditions. Many field studies have been conducted by the Kentucky Agricultural Experiment Station under Kentucky farm conditions to determine the extent of any primary, secondary, or micronutrient needs. Yield and soil test data from these studies serve as guidelines for establishing recommendations contained in this publication. Recommendations in this publication strive to supply the plant nutrients needed to achieve maximum economic return assuming good management practices.

Departments: [Plant and Soil Sciences](#)

Series: [Agronomy](#) (AGR series)

Size: 608 kb

Pages: 29

[AGR-106](#)

Determining the Quality of Aglime: Using Relative Neutralizing Values

3/13/2023 (*revised*)

Authors: [Lloyd Murdock](#), [Monroe Rasnake](#), [Greg Schwab](#), [Bill Thom](#)

Most Kentucky soils need to have lime applied in order to keep the pH in the optimum range for growing crops. Lime applications should always be based on a good soil test that takes into account the existing pH and the buffering capacity of the soil. However, even when all this is done and lime is applied as recommended, the desired change in soil pH may not occur. The problem may be due to the use of low quality lime.

Departments: [Plant and Soil Sciences](#)

Series: [Agronomy](#) (AGR series)

Size: 228 kb

Pages: 2

[AGR-16](#)

Taking Soil Test Samples

3/13/2023 (revised)

Authors: [Lloyd Murdock](#), [Greg Schwab](#), [Frank Sikora](#), [Bill Thom](#)

The most important part of making fertilizer recommendations is collecting a good, representative soil sample. Soil test results and fertilizer recommendations are based solely on the few ounces of soil submitted to the laboratory for analysis. These few ounces can represent several million pounds of soil in the field. If this sample does not reflect actual soil conditions, the results can be misleading and lead to costly over- or under-fertilization. It is necessary to make sure that the soil sample sent to the laboratory accurately represents the area sampled.

Departments: [Plant and Soil Sciences](#), [Regulatory Services](#)

Series: [Agronomy](#) (AGR series)

Size: 353 kb

Pages: 4

[AGR-265](#)

Soil Sampling and Nutrient Management in Small Ruminant Pastures

3/13/2023 (revised)

Authors: [Jimmy Henning](#), [Josh McGrath](#), [Edwin Ritchey](#), [Ray Smith](#), [Chris Teutsch](#)

Pastures for sheep and goats are fertilized to ensure a reliable supply of energy, protein, and other nutrients for a long season of grazing. Management of plant nutrients maintains a balance of improved grasses and legumes and improves forage species competitiveness with many pasture weeds. The most important part of obtaining fertilizer recommendations is collecting a representative soil sample to send to the lab.

Departments: [Plant and Soil Sciences](#)

Series: [Agronomy](#) (AGR series)

Size: 1.89 mb

Pages: 5

[ID-123](#)

Livestock Waste Sampling and Testing

3/13/2023 (revised)

Authors: [Doug Overhults](#), [Monroe Rasnake](#)

It is estimated that about 25 million tons of animal manure are currently produced on Kentucky farms each year. Most of this is deposited by grazing animals on pastures where the nutrients are recycled. However, an increasing percentage is accumulated in feed lots, barns, poultry houses, lagoons, and other facilities until it can be spread on the land.

Departments: [Biosystems and Agricultural Engineering](#), [Plant and Soil Sciences](#)
Series: [Interdepartmental](#) (ID series)
Size: 260 kb
Pages: 4

[ID-163](#)

[Agricultural Lime Recommendations Based on Lime Quality](#)

3/13/2023 (revised)

Authors: [David Ditsch](#), [Josh McGrath](#), [Lloyd Murdock](#), [Edwin Ritchey](#), [Frank Sikora](#)

Soil acidity is one of the most important soil factors affecting crop growth and ultimately, yield and profitability. It is determined by measuring the soil pH, which is a measure of the amount of hydrogen ions in the soil solution. As soil acidity increases, the soil pH decreases. Soils tend to be naturally acidic in areas where rainfall is sufficient to cause substantial leaching of basic ions (such as calcium and magnesium), which are replaced by hydrogen ions. Most soils in Kentucky are naturally acidic because of our abundant rainfall.

Departments: [Plant and Soil Sciences](#), [Regulatory Services](#)
Series: [Interdepartmental](#) (ID series)
Size: 473 kb
Pages: 6

[ID-199](#)

[Prechilling Switchgrass Seed on Farm to Break Dormancy](#)

3/13/2023 (revised)

Authors: [Holly Boyd](#), [Cindy Finneseth](#), [Tom Keene](#), [Laura Schwer](#), [Ray Smith](#)

Switchgrass (*Panicum virgatum* L.) is a warm-season, perennial bunch-type grass native to the North American Tallgrass Prairie. It has been investigated as a renewable energy crop due to its high productivity across a wide geographic range including various environmental conditions and soil types. Switchgrass has also been used for erosion control, summer grazing in pasture and hay systems for cattle, native prairie restoration, wildlife habitat, fiber production, and as an ornamental grass.

Departments: [Plant and Soil Sciences](#), [Regulatory Services](#)
Series: [Interdepartmental](#) (ID series)
Size: 424 kb
Pages: 4

[RB-349](#)

Annual Report Analyses of Official Fertilizer Samples July 2021 - June 2022

3/10/2023 (new)

Authors: [Steve McMurry](#)

This bulletin presents the results of the analysis of 2,263 official samples of commercial fertilizer taken during the period of July 1, 2021 through June 30, 2022 by the field inspection staff. The samples represented approximately 43,900 tons of fertilizer out of the approximately 997,000 tons sold during this period. The Laboratory made 1810 nitrogen, 1,396 phosphorus, 1,542 potassium, and 1518 secondary and minor element and certain other analyses on these samples.

Departments: [Regulatory Services](#)

Series: [Regulatory Bulletin](#) (RB series)

Size: 4.44 mb

Pages: 258

[AGR-271](#)

Frost Seeding Clover: A Recipe for Success

3/2/2023 (new)

Authors: [Jimmy Henning](#), [Ray Smith](#), [Chris Teutsch](#)

Legumes are an essential part of a strong and healthy grassland ecosystems. They form a symbiotic relationship with Rhizobium bacteria in which the bacteria fix nitrogen from the air into a plant-available form and share it with the legume. Clover also increases forage quality and quantity and helps to manage tall fescue toxicosis. In the past, the positive impact of clover on tall fescue toxicosis has always been thought to simply be a dilution effect, but new research from the USDA's Forage Animal Production Unit in Lexington shows that compounds found in red clover can reverse vasoconstriction that is caused by the ergot alkaloids in toxic tall fescue. The primary compound found in red clover is a vasodilator called "Biochanin A."

Departments: [Plant and Soil Sciences](#)

Series: [Agronomy](#) (AGR series)

Size: 3.01 mb

Pages: 3