Pulaski County Extension Office

Agricultural & Natural Resources Newsletter

October 2021

Fall is a great time to get out and explore our community and support local agricultural businesses. Take a drive and enjoy the scenery while looking for pumpkins and other directions for fall.

Fall hay season should be coming to a close. Proper hay storage will help extend the nutritional value of your hard earned work. Call the office to get help with how to best design your storage, to best meet the needs of your operation.

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- Slug Management
- 2021 KY Forage & Grassland Council Fall Grazing Conference
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- Market Ready Producer Training
- Cut Flowers for Community Supported Agriculture Production

A Note From the Agent

T.J. Adkins: Agent for Agriculture & Natural Resources

Fall is upon us and grain harvest is soon to be under way, as well as, the fall tourism season. Regardless of which side of the industry you are on remember we are always here to help in any way we can.

We have been hosting in-person events. Most recent was our successful Cattlemen's Field Day! If you missed this event you missed out on a great time full of information, a delicious meal and an overall great time with fellow members. If you would like information on how to be a part of this in the future you can contact our office.

Here's to wishing everyone a Happy Fall and again you can contact the office at 606-679-6361, anytime for questions or request for help.

Effects of Various Rates of Potash and Molluscicides in the Management of Slugs

Slugs, a pest once found in homeowner's gardens and greenhouses, have quickly become a problem in crop fields. Slugs belong to the gastropod family, which includes slugs and snails. Slugs have a unique biology because they have both male and female reproductive parts, making them a hermaphrodite. If slugs do not find a mate, they are capable of self-fertilization so that eggs are guaranteed to be laid. Slugs usually lay eggs in batches of around 10-50 eggs.

Slugs can cause significant damage to field crops in their early stages. Slug outbreaks and feeding can reduce plant population densities and damage plants beyond the point of recovery. In soybeans, slugs usually feed on plants in the VE and VC development stages. If this occurs and the apical meristems are injured, the plant cannot recover . Slugs prefer weather that is cool, moist and, cloudy; under these conditions they will be active and feed all day. Otherwise, you are most likely to find them feeding from dusk to the early morning hours. It is important for farmers to know when to scout for slugs in their crops so they can take preventative actions to avoid a slug outbreak that would cause them to have to replant. In the spring of 2021, it was reported that there were soybean farmers that had to replant at least 4 times due to slugs feeding on seedlings in Central and Western Kentucky.

Management: there are many different approaches to controlling slug outbreaks. There is not a one-size-fits-all solution and treatment plans can vary from farmer to farmer. There are biological, chemical, and physical methods to control or reduce population of slugs.

- Natural enemies: Nematodes are being used to control mollusks in Europe. However, this approach has not been used in the United States yet. Carabid beetles also are known to be predacious of slugs. Josey Tolley (unpublished coauthor of this report), has been evaluating carabid species (ground beetles) feeding on slugs at the Research and Education Center at Princeton, KY during this season on field and laboratory studies.

- Molluscicides: A typical method for controlling slugs in vegetables or produce of high value is through applying molluscicides. They suppress the slug population by drawing slugs to the area of application and then killing them after the molluscicide has been ingested. Since slugs are becoming more of a problem in field crops, some farmers have started using molluscicides in their fields. In Hardin County, a farmer has applied molluscicides to his soybean field at costs averaging $20/acre to avoid replanting due to damage from slugs. In his case this farmer said that this is a feasible practice.

- Fertilizers: It is commonly believed that potash is effective in repelling or reducing slugs. Some farmers use this approach, but there is not much evidence that supports this claim. Potash is an alkaline potassium compound, or a salt. It is believed that it could burn or suffocate slugs. Below we are going to describe studies conducted about this topic.

In this article, we are providing preliminary results regarding the use of potash to reduce slugs. The research for this project was conducted in the spring and summer of 2021 at the Research and Education Center in Princeton, KY. Both field and laboratory studies are included in this report. In the field study, potash was applied at 2 rates of 100 and 200 lbs/A and plots were replicated 5 times. Tallies of slugs were conducted in these plots after application of potash in 4-ft row lengths and compared with an untreated plot. Six days after the application of potash, the number of slugs found in the 200 lbs/A plot were reduced to less than 1 slug and remained at that level for the rest of the study. In the control and 100 lbs/A plot, the number of slugs were above 1 during most dates of the study. The greater number of slugs in the control and 100 lbs/A plot could be a result of the 200 lbs/A plot of potash effectively repelling the slugs to an area where a lesser or no rate of potash was applied.

In the laboratory, we studied the mortality of slugs caused by different rates of potash representing 50, 200, and 300 lbs of potash/A as well as 2 molluscicides (metaldehyde and iron phosphate (Sluggo®)) using plastic containers filled with soil. Potash and molluscicides were sprinkled on the soil. In each container we released a known number of slugs to evaluate slug mortalities and oviposition. In this study, we found that the molluscicide treatment (10 lb/A of metaldehyde) had the greatest percentage of slug mortalities (60%) followed by the recommended rate of iron phosphate (44 lbs/A) (55%), and the 200 lbs/A potash treatment caused 47% mortality (Figure 4). Interestingly, other rates of potash were used, and the mortality effects varied. For example, in the 300 lbs/A potash application there was a mortality rate of only 31% . In addition, in this study we found that the number of eggs oviposited was not affected by any of the potash rates, whereas molluscicides affected oviposition by reducing the number of eggs or totally blocking reproduction.

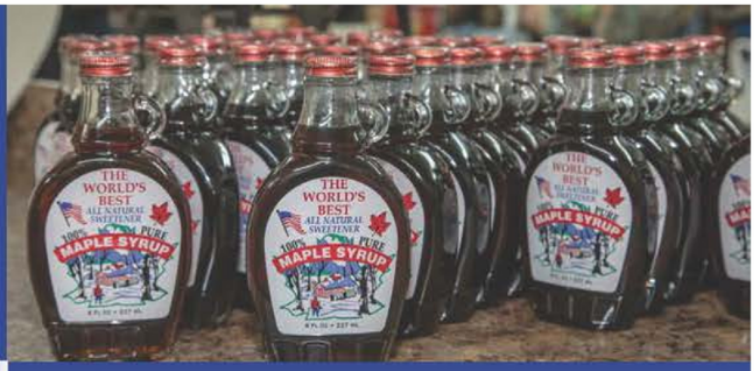
Conclusion Potash has some effect in repelling slugs, but the exact efficiency of its application or the recommended rate to use is still undetermined. Based on this project, the 200 lbs/A application of potash seemed to be useful in repelling slugs in the field study and it did a fair job of killing slugs in the laboratory study. However, when comparing molluscicides to potash, molluscicides had a higher rate of mortality in the laboratory study

SAVE THE DATES - UPCOMING KENTUCKY MAPLE SYRUP WORKSHOPS

9/14/21 | 7-8:30 PM ET, Zoom

Sugaring in the South: Maple Syrup in Kentucky

An intro to maple syrup and what you need to know



10/14/21 | 7-8:30 PM ET, Zoom

The Maple Syrup Toolbox

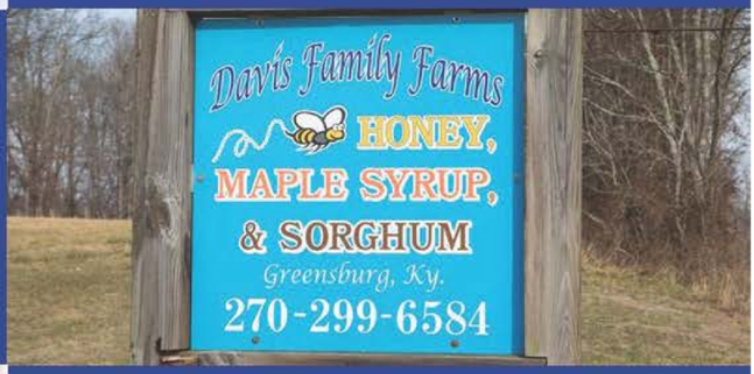
The next steps in maple syrup production

10/23/21 | 11-2 PM CT

Kentucky Maple Tour

@ DAVIS FAMILY FARM - GREEN COUNTY

Tour a working maple syrup farm



11/6/21 | 10-3:30 PM ET

2021 Kentucky Maple School

@ LETCHER COUNTY EXTENSION OFFICE

Get to know maple producers and learn about current topics in maple production

REGISTER AT: KY-MAPLESYRUP.CA.UKY.EDU

College of Agriculture, Food and Environment

Forestry and Natural Resources Extension

Kentucky Maple Syrup Association

KCARD

Kentucky Center for Agriculture and Rural Development

Funding for Project was made possible by the U.S. Department of Agriculture's (USDA) Agricultural Marketing Service through grant AM200100XXXXG007. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the USDA.

SOYBEAN: UPDATE

The University of Kentucky Plant Disease Diagnostic Lab in Princeton confirmed the first case of red crown rot in the state during the week of Sept. 13. At this point in the growing season, this disease will have the most impact on double-crop soybeans, said Carl Bradley, extension plant pathologist with the UK College of Agriculture, Food and Environment.

A local agronomist found the disease in a few soybean fields in Graves County, and he contacted UK to confirm the disease.

"Unfortunately, the disease is causing noticeable damage in the double-crop fields we scouted last week, and those fields will probably have yield losses," Bradley said. "It will likely be too late for growers to observe red crown rot symptoms in full-season soybeans, as many of those fields are close to harvest."

Red crown rot is caused by the fungus Calonectria ilicicola. The fungus infects soybean roots and causes root rot and dark red discoloration on the part of the stem closest to the soil. Red reproductive structures and white fungal growth may appear on the lower stem and roots. The fungus also produces a toxin that can accumulate in the leaves. It causes leaf tissue to turn yellow and die while the veins in the leaf remain green.

Soybean producers in Louisiana and Mississippi have dealt with this disease for years. There, the disease can cause as much as 25% to 30% yield loss. It was also found in Illinois in 2018.

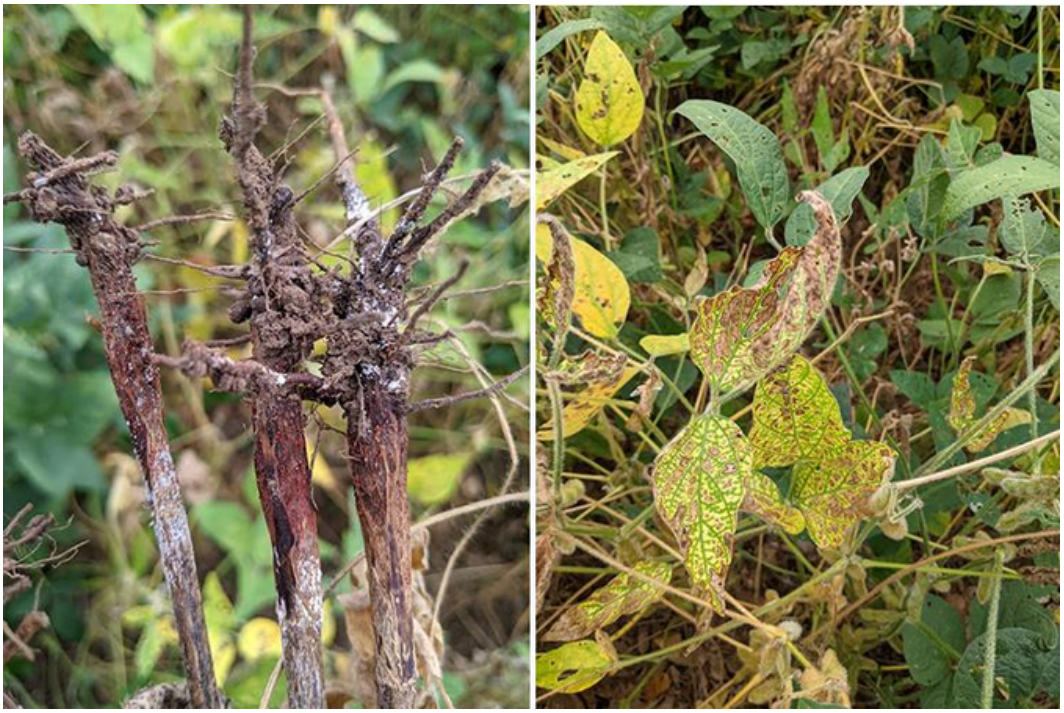
"We will need to conduct research to determine the best management practices for this disease in Kentucky," Bradley said. "We hope to be able to do some yield loss determinations in some of the fields we found red crown rot in last week."

The fungus can survive in the soil for several years. Producers in southern states manage the disease by rotating away from soybeans, planting less-susceptible varieties and delaying planting in infected fields.

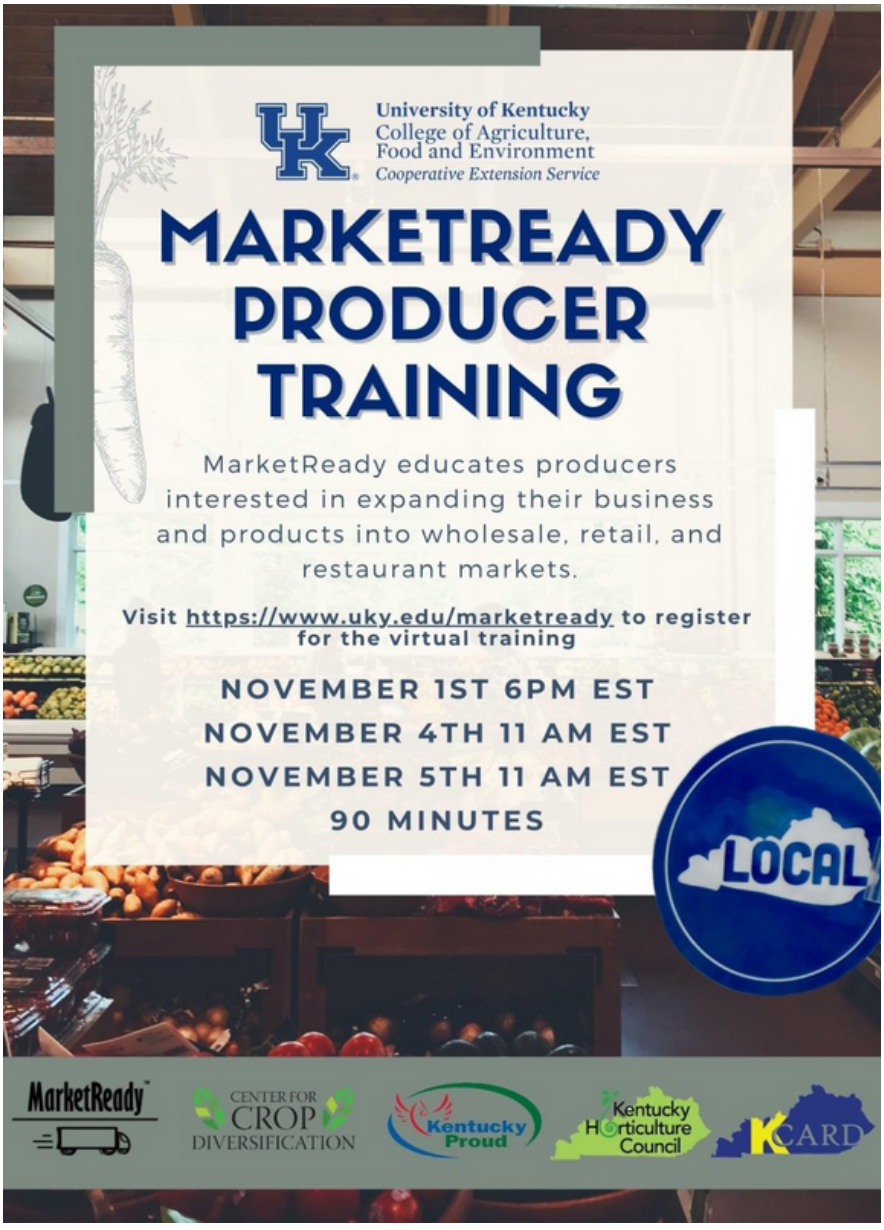
Kentucky producers who suspect they may have red crown rot should contact their county agriculture and natural resources agent with the UK Cooperative Extension Service. Agents can help producers submit samples for diagnosis at UK's Plant Disease Diagnostic labs in Princeton or Lexington.

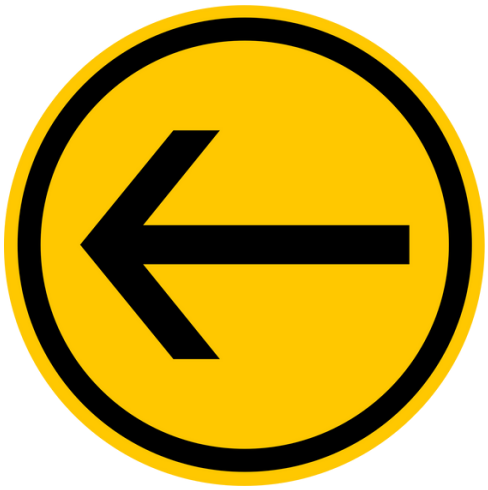
Additional information about the disease is available in Kentucky Pest News, https://kentuckypestnews.wordpress.com/.

Contact:
Carl Bradley, carl.bradley@uky.edu
Writer: Katie Pratt, katie.pratt@uky.edu



These two pictures show symptoms of red crown rot damage to soybean stems, roots and leaves. Photos by Carl Bradley, UK extension plant pathologist





Check it out!!!!!

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

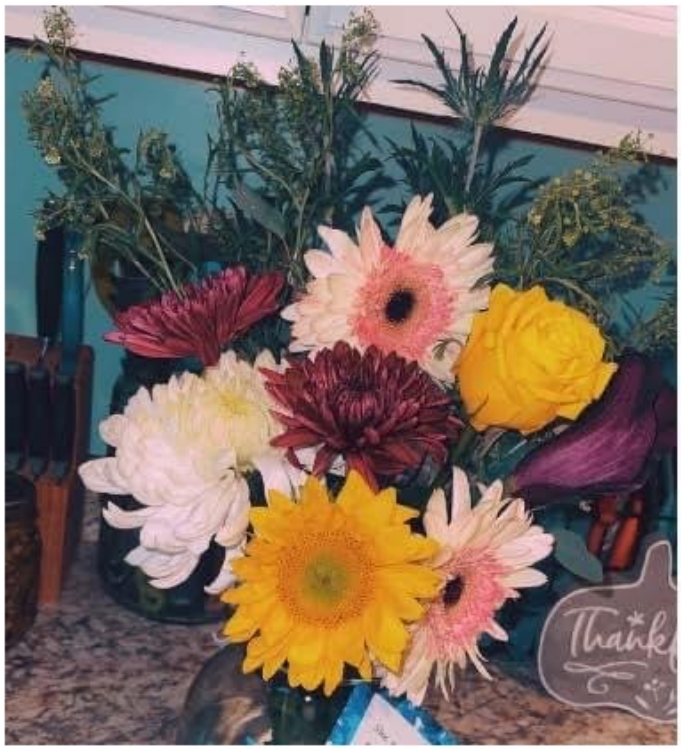
Center for Crop Diversification Crop Profile
CCD-MR-2

Cut Flowers for Community Supported Agriculture Production

Savannah L. Columbia[1] and Melanie Stock[2]

Introduction

Community Supported Agriculture (CSA) has been a marketing channel for close to 35 years now. CSA is a direct farm marketing method, which delivers pre-paid shares to members or subscribers over a pre-set number of weeks during the year. In 2016, there were almost 60 CSAs in the state, according to the Kentucky Department of Agriculture. CSA is dependent on community members sharing both the success and risks of farming, along with providing the farmers with working capital before the season starts. Receiving working capital in advance is one of the many benefits of this direct farm-marketing channel. Typically, CSAs offer a wide variety of in-season vegetables, fruit, and/or herbs. Some operations also include meat, eggs, and value-added products such as baked goods or jarred and canned items. Recently, cut flowers have become popular addition to CSA shares, as well as a single commodity share of their own. Currently, there are 83 cut flower operations in Kentucky, according to the Kentucky Horticulture Council. However, not all 83 operations are participating in the CSA marketing channel. Common cut flower marketing channels, in addition to CSA, are farmer's markets, wholesale, and wedding design. Cut flowers are growing in popularity and do not require a large amount of land so they can be a good opportunity for growers to consider if they are interested .



Cut flower arrangement sourced with cut flowers from a local grocery store, August 2021

The Cut Flower CSA Model

The CSA model allows a slice of freedom for the grower. The most common form of a cut flower CSA is the "grower's choice" arrangement. This model allows the grower to work with the product(s) they have available and not be restricted to certain design or material elements. Having this kind of freedom makes it easier for the grower to design arrangements and substitute or place flowers as needed during the season. Flexibility in bouquet design during the season is a relief for growers as it can be hard to predict an entire season due to the variability in weather and outside forces.

Many farmers start out growing a variety of flowers because they are unsure about what will be popular or what will grow well in their operation. Growing a variety, or mix of flowers, may not be ideal for florists because they require bulk

CENTER FOR CROP DIVERSIFICATION
www.uky.edu/CCD

[1] Savannah L. Columbia is an Agricultural Extension Associate in the Department of Agricultural Economics at the University of Kentucky

[2] Melanie Stock is an Assistant Professor and Urban & Small Farms Extension Specialist at Utah State University

2021 Kentucky Forage and Grassland Council Fall Grazing Conference

Sustainable Intensification of Pasture Management in the Mid-South

This program is a joint effort of the Kentucky Forage and Grassland Council, University of Kentucky Cooperative Extension, and the University of Kentucky Master Grazer Program

Where and when: October 26 at UK Research and Education Center, Princeton, KY
October 27 at Hardin County Extension Office, Elizabethtown, KY
October 28 at Clark County Extension Office, Winchester, KY

Registration Fee: **BEFORE October 18 -** $35/participant
At the door - $50/participant
Students and Youth - $10/participant

The KENTUCKY Forage and Grassland COUNCIL

TOPICS AND AGENDA

8:00 AM	Registration
8:25 AM	Welcome and sponsor recognition
8:30 AM	Pasture ecology 101: What is living in my pasture? - Ed Rayburn, West Virginia University
9:15 AM	Long-term weather trends and implications for grazing operations in the mid-South - Matthew Dixon, University of Kentucky
9:45 AM	Break and visit with sponsors
10:15 AM	An integrated approach to weed management in pastures - JD Green, University of Kentucky
10:45 AM	Right Source, Rate, Timing and Placement: More Bang for the Pasture Fertilizer Buck - John Grove, University of Kentucky
11:15 AM	Bale grazing: challenges, opportunities, and tips for getting it right - Greg Halich
11:45 AM	Kentucky Forage and Grassland Council business meeting
12:00 PM	Lunch and awards
1:00 PM	Expert grazing panel or forage spokesperson contest
1:45 PM	Precision ag isn't just for the row crop guys - Chris Teutsch, University of Kentucky
2:15 PM	Designing flexible fencing and watering systems - Morgan Hayes, University of Kentucky
2:45 PM	GRAZE: a program balancing forage availability and livestock needs - Jimmy Henning, University of Kentucky
3:00 PM	Survey and Adjourn

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

Kentucky Master Grazer Educational Program

KADF KENTUCKY AGRICULTURAL DEVELOPMENT FUND

2021 Kentucky Forage and Grassland Council Fall Grazing Conference

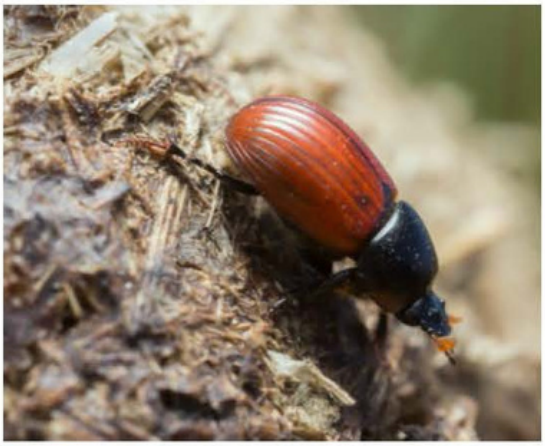
PROGRAM REGISTRATION

Online Registration with CREDIT CARD

October 26 in Princeton, KY at https://2021grazingconferenceprinceton.eventbrite.com

October 27 in Elizabethtown, KY at https://2021grazingconferenceelizabethtown.eventbrite.com

October 28 in Winchester, KY at https://2021grazingschoolwinchester.eventbrite.com



Registration by U.S. Mail with CHECK:

Make CHECKS payable to KFGC and mail check and form to:

Atten: Carrie Thrailkill
UKREC
348 University Drive
Princeton, KY 42445

Call Carrie at 270-625-5253!!!

Name(s): _____

Street: _____

City: _____

State: _____ Zip Code: _____

Cell Phone: _____

Email: _____

Select Location: _____ Princeton _____ Elizabethtown _____ Winchester

$35 per person x _____ number of persons = _____ **TOTAL**

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

Disabilities accommodated with prior notification.

College of Agriculture, Food and Environment
Pulaski County Extension Office
P.O. BOX 720
SOMERSET, KY 42502
(606) 679-6361

Pumpkin Apple Muffins

1¼ cups all-purpose flour
1¼ cups whole-wheat flour
1¼ teaspoons baking soda
½ teaspoon salt
1½ teaspoons ground cinnamon
½ teaspoon ground ginger
½ teaspoon ground nutmeg
1¼ cups honey
2 large eggs
1½ cups fresh pureed pumpkin
½ cup canola oil
2 cups Granny Smith apples, finely chopped

Preheat oven to 325 degrees F. In a large bowl, **combine** flours, baking soda, salt and spices. In a small bowl, **combine** honey, eggs, pumpkin and oil; **stir** into dry ingredients just until moistened. **Fold** in apples. **Fill** greased or paper lined muffin cups, two-thirds full. **Bake** for 25 to 30 minutes or until muffins test done. **Cool** for 10 minutes before removing from pan.

Note: Can substitute two cups granulated sugar for honey, decrease baking soda by ¼ teaspoon and increase oven temperature to 350 degrees F.

Yield: 18 muffins

Nutritional Analysis: 200 calories, 7 g fat, 0.5 g saturated fat, 35 mg cholesterol, 160 mg sodium, 35 g carbohydrate, 2 g fiber, 20 g sugar, 3 g protein

Plate it up!

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

good way to use local produce