Horticulture Newsletter

Martin-Gatton College of Agriculture, Food and Environment
University of Kentucky

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FEBRUARY 2024

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Master Gardener Spotlight

Carol Ullerich

Class of 2004

Cooperative Extension Service

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

MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT

Lexington, KY 40506

Martin-Gatton
College of Agriculture,
Food and Environment

MASTER GARDENER TOOLBOX

HONEY BEES

Chuck Collins, owner of The Bee Barn, will be educating the public on all things honey bees!

MARCH 5TH, 2024 5PM-6PM CST

EXTENSION AGENT FOR HORTICULTURE

MARY DOSSETT
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MCCRACKEN COUNTY EXTENSION SERVICE
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University of Kentucky
Martin-Gatton College of Agriculture Food and Environment

2024 IPM Training School
March 18th, 2024

Program

8: 00 AM Registration

Field Crops

8:25 AM	Herbicide Resistance Screening in the Commonwealth of Kentucky	*Dr. Samuel Revolinski*
8:50 AM	Herbicide Resistant Weed Control	*Dr. Travis Legleiter*
9:15 AM	Cover Crops	*Dr. Lloyd Murdock*
9:40 AM	Keeping Cover Crops from Becoming a Pest Problem	*Dr. Chad Lee*
10:05 AM	Break	
10:20 AM	Management of Important Soilborne Diseases of Soybean	*Dr. Carl Bradley*
10:45 AM	Efficacy of Insecticides in Bt-and non-Bt field Corn and Problems Capturing Pest Moths	*Drs. Ric Bessin Raul T. Villanueva*
11:10 AM	The Agronomics and Economics of Various Nutrient Sources for Crop Production	*Dr. Edwin Ritchey*
11:35 AM	Application of Low-Cost GPS Technologies to Improve Input Use	*Dr. Chris Teutsch*

Horticulture

1:00 PM	Understanding the Mildews – Downy versus Powdery	*Dr. Nicole Gauthier*
1:25 PM	Greenhouse Disease Management	*Ms. Arundathi Sharma*
1:50 PM	Cover Cropping in Vegetable Production Systems: Benefits, Challenges, and Considerations	*Dr. Rachel Rudolph*
2:15 PM	Break	
2:30 PM	Everything Old is New Again	*Dr. Shawn Wright*
2:55 PM	Impact of Invasive Species on IPM	*Dr. Jonathan Larson*
3:20 PM	Current and Future Wildlife Management Conflicts for the Mid-South	*Dr. Matt Springer*

	CEUs	CEUs
Field Crops	Category 1A: 4	Soil & Water Management: 1 IPM: 2 Crop Management: 1
Horticulture	Category 1A: 3	IPM: 2 Crop Management: 1

Location	Contacts	
Warren County Extension Office 5162 Russellville Rd. Bowling Green, KY 42101	Zenaida Viloria zenaida.viloria@uky.edu (270) 365-7541 Ext. 21336	Ric Bessin r.bessin@uky.edu (859) 323-1120

2024 IPM Training School

The 2024 Integrated Pest Management Training School meeting will take place on March 18th. This year, the event will be held at the Warren County Extension Office, Bowling Green, KY. Several University of Kentucky Extension specialists and associates will discuss diverse topics on field crops, horticulture, and wildlife management in agricultural settings

This event offers CEUs to pesticide applicators and certified crop advisers. Pesticide applicators will receive 4 and 3 CEUs for Category 1A when attending morning and afternoon sessions, respectively. Certified crop advisers will receive CEUs for soil and water management (1), IPM (2) and crop management (1) for the morning session. The afternoon program offers 2 CEUs for IPM and 1 CEU for crop management.

Registration is required to attend. https://uky.zoom.us/meeting/register/tZMufu2orDgtEtEWNfBtYMlujpYFVBnqL_BT#/registration

By Zenaida Viloria, Entomology Research Analyst

Planning For Your Future Garden

Winter is an excellent time for planning next year's garden. Take advantage of the shorter days and cooler weather to create a vision for the upcoming growing season.

The first step is to look back on the previous growing season. Revisit any photos taken to refresh your memory of the plants that brought enjoyment, utility or challenges. What grew well and what did not perform as expected? If you took any notes or recorded activities in your calendar, review those items. If something was done a little late or too early, think about how you could change your approach.

Evaluate the produce your household consumed last year. Consider if you need to grow additional quantities or increase the amount grown. Also ask yourself if there are other varieties that you would like to try.

For your garden, list the plants you intend to grow and consider where they will be planted. Even a rough-draft map can help you better understand what is possible. These records can serve as a shopping list and a reference for later. Digital tools such as spreadsheets are excellent for this purpose as they can be easily located in subsequent seasons and revised. However, the pen-and-paper method can serve the same purpose and be great for mapping out the location of plantings. There are also apps available to digitally plan your garden bed.

Once you have a general idea of the plants you want for your home garden, you can more confidently turn your attention to sourcing seeds. Seed companies can be located online, but if you prefer a physical catalog, call and request one. Reputable seed sources will identify the variety sold as well as a description, germination rate and lot number.

If you're unsure whether a seed company is reputable, don't hesitate to contact your county extension agent. Seeds for popular varieties can sell out quickly, so purchasing things ahead of springtime is a good idea. Extra or unused seeds can be stored in sealed bags or a plastic bin in a cool place and saved for later.

For more information on horticulture success, contact your McCracken County Extension office.

Kathryn Pettigrew, Horticulture Research Analyst, and Rachel Rudolph, Horticulture Assistant Professor

Photos from pixabay.com

Ordering Seeds for Vegetable Gardens

Spring may feel far away, but planning begins during the cold months of winter. Seed catalogs, store displays, and online retailers present a number of different options (Figure 1). However, successful production begins with the selection of the right seeds for each garden. Gardeners often have preferences towards certain cultivars or varieties, but if plant diseases have plagued plants in the past then it may be time to consider a change.

Figure 1: *Seeds can be purchased from a variety of sources. Note that inclusion in this image does not indicate endorsement of any brand. (Photo: Kim Leonberger, UK)*

Selection of a disease tolerant or resistant cultivar is one way to prevent or limit the impact of plant diseases in the vegetable garden. A number of cultivars are labeled as tolerant, which means that while plants may become diseased, plants still yield sufficient amounts of produce. Resistant cultivars do not become diseased, and therefore produce higher yields than those that are susceptible to disease.

While no single cultivar is resistant or tolerant to all plant diseases, use of resistant cultivars can often reduce the need for additional plant disease management practices, such as fungicide sprays. Gardeners should choose cultivars that are tolerant/resistant to the diseases of greatest concern in their garden. It is advisable to keep a garden journal of cultivars that have been grown in the past, as well as a record of previous disease issues. Proper diagnosis of plant diseases is important for future disease management. If issues arise in the vegetable garden, contact a local county Extension agent for assistance.

Select a tolerant or resistant cultivar by reviewing information on websites, seed packets, or seed catalogs. Note that disease names may be abbreviated, or a coding system may be used to indicate resistance or tolerance to specific diseases. Varieties with resistance/tolerance to common vegetable disease issues are detailed below. Additional information about resistant/tolerant varieties can be found in *Vegetable Cultivars for Kentucky Gardens* (ID-133) or by contacting a local county Extension agent.

Tomato

•Early blight is the most common disease of tomatoes in Kentucky, and often co-occurs with Septoria leaf spot. Tomatoes with some resistance to early blight are ‘Jasper,’ ‘Matt’s Wild Cherry,’ ‘Mountain Magic,’ and ‘Sun Gold’ (small cherry tomatoes), ‘Indigo Rose,’ ‘Plum Regal,’ and ‘Verona’ (Roma size), and ‘Defiant,’ ‘Iron Lady,’ ‘Mountain Fresh Plus,’ ‘Mountain Merit,’ and ‘Stellar’ (slicing size).

Pepper

•The bacterial spot pathogen causes the most common disease of peppers. There are at least ten races of the pathogen, and pepper resistance is race-specific. Commonly occurring races can vary by location, so it is recommended to choose cultivars with resistance to as many races as possible. Some suggested cultivars include: ‘Boca,’ ‘Ninja,’ ‘Outsider,’ ‘Playmaker,’ ‘Samurai,’ and ‘Tracer.’

Cucurbits (Cucumber, Squashes, Muskmelon, Watermelon, Pumpkin & Zucchini)

•Many powdery mildew resistant cultivars of picklers, slicers, pumpkins, and squash are available.
•Cultivars that are less susceptible to bacterial wilt include the pickle cukes ‘Cross Country’ and ‘County Fair,’ ‘Howden’ pumpkins, and ‘Waltham Butternut’ squash. Manage cucumber beetles for best management of bacterial wilt. All watermelons have natural resistance to bacterial wilt.

Leafy Greens

•Many lettuces have been bred for resistance to downy mildew. Consider head lettuces ‘Kweik,’ and ‘Pirat,’ green leafed lettuces ‘Black Seeded Simpson,’ and ‘Nevada,’ and red leafed lettuces ‘Galactic,’ ‘Red Zin,’ and ‘Rustica’ for their additional resistance to bacterial disease and/or white mold (drop).
•Powdery mildew-resistant lettuces include ‘Jericho’ and ‘Super Jericho’ (romaines), ‘Sandy’ (oakleaf), ‘Loma,’ ‘Red Salad Bowl,’ and ‘Skyphos’ and ‘Red Cross’ (red butterheads).
•‘Regal’ and ‘Samish’ spinaches are resistant to downy mildew and white rust.
•Kale, collards, turnip greens, and mustards are naturally resistant/tolerant to many diseases.

Legume Vegetables (Beans & Peas)

•Many French and green beans have been bred for resistance to anthracnose, but resistance in other types of beans is unavailable.
•'Caprice,' 'Espada,' 'Kentucky Blue,' 'Romano II,' 'Volunteer,' and 'Goldkist' are fungal leaf spot and/or rust resistant bean varieties, with additional resistance to various viral diseases (viruses are not common in KY).
•'Green Arrow,' 'Cascadia,' 'Sugar Daddy,' and 'Oregon Sugar Pod II' are pea cultivars suggested for their resistance to powdery mildew, Fusarium wilt, and Verticillium wilt.

Cole Crops (Cabbage, Broccoli, Cauliflower, Kohlrabi & Brussels Sprouts)

•Black rot is the most common disease of cole crops in KY. Cabbage cultivars 'Bilko,' 'Blues,' 'China Pride,' 'Blue Vantage,' and 'Bronco' carry resistance to a broad range of diseases, such as downy mildew, Fusarium yellows, and/or black rot.
•Broccoli cultivars 'Emperor,' 'Pinnacle,' and 'Green Magic', as well as cauliflower cultivar 'Majestic' are resistant to downy mildew and/or black rot.
•'Grand Duke' kohlrabi is resistant to black rot.

Additional Resources

Sustainable Disease Management of Solanaceous Crops in the Home Garden (PPFS-VG-21)
Sustainable Disease Management of Cucurbit Crops in the Home Garden (PPFS-VG-19)
Sustainable Disease Management of Leafy Green Crops in the Home Garden (PPFS-VG-20)
Sustainable Disease Management of Legume Vegetable Crops in the Home Garden (PPFS-VG-22)
Sustainable Disease Management of Cole Crops in the Home Garden (PPFS-VG-23)
Home Vegetable Gardening in Kentucky (ID-128)
Vegetable Cultivars for Kentucky Gardens (ID-133)

By Kim Leonberger, Plant Pathology Extension Associate, and Nicole Gauthier, Plant Pathology Extension Specialist

MyIPM for Vegetables: A Grower Resource

A new resource is now available for commercial vegetable growers. The MyIPM for Vegetables app is now available and includes resources for commercial production of tomatoes and cucurbits (cucumber, pumpkin, squash, and watermelon).

Growers can access information about plant diseases and insect pests that might affect their crop. Management recommendations include chemical, biological, and cultural practices. The application was developed by specialists at universities that participate in the Southeastern Vegetable Extension Workers Group, of which the University of Kentucky is a participating member. The app is available for both Apple and Android devices and is free to download. Instructions on using the MyIPM for Vegetables app can be found here.
https://plantpathology.ca.uky.edu/files/myipm_for_vegetables_0.pdf

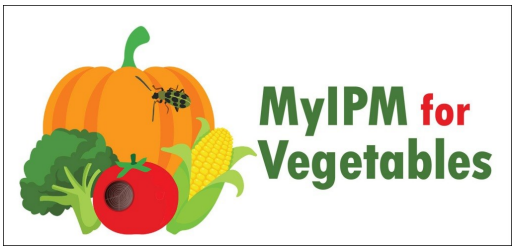

Figure 1: *MyIPM for Vegetables app (Logo)*

After using the app, developers are seeking feedback to improve the platform through a survey, which can be accessed here or through the QR code below. https://msudafvm.co1.qualtrics.com/jfe/form/SV_1X4gbifLvfkCxdY

Figure 2: *QR code to provide feedback.*

By Kim Leonberger, Plant Pathology Extension Associate, and Nicole Gauthier, Plant Pathology Extension Specialis

Broccoli Chowder

2 tablespoons canola oil
½ cup chopped onion
3 cloves garlic, finely minced
½ cup chopped carrots
2 cups diced, unpeeled red potatoes
3 cups broccoli florets
½ teaspoon dried Italian seasoning
½ teaspoon salt
¼ teaspoon pepper
3 tablespoons all-purpose flour
3½ cups low sodium chicken broth
½ cup half-and-half
½ cup low-fat, shredded cheese

In a large heavy pot, **heat** the oil over medium heat. **Add** the onion and garlic and **sauté** 2-3 minutes. **Add** the carrots, red potatoes and broccoli one at a time; **sauté** each about 2 minutes. **Add** the Italian seasoning, salt, pepper and flour and **toss** until vegetables are coated. **Cook** 1-2 minutes. **Add** the chicken broth and bring to a boil. **Reduce** heat to low, **cover** pot and **simmer** for 15 minutes. **Remove** lid and **stir** in the half-and-half. Bring back to a **simmer** and **remove** from heat. **Ladle** into bowls and top with cheese to serve.

Yield: 8,1cup servings

Nutritional Analysis: 180 calories; 8g total fat; 2.5 g saturated fat; 15 mg cholesterol; 340 mg sodium; 18 g total carbohydrate; 3 g dietary fiber; 4 g sugar; 8 g protein.

Plate it up! Kentucky Proud

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

Commercial Berry Grower Surveys

Do you grow blueberries, brambles, or strawberries commercially? If so, the University of Kentucky Extension Specialists need your help! To determine future priorities and grower needs for disease, insect, and weed management, more information about the current challenges that growers face is needed. Information can be submitted through a survey for blueberry, brambles, and strawberry, independently (Figure 1). Each survey is quick and takes approximately 5-7 minutes to complete. All submissions are anonymous. Responses to these surveys will assist in the development of new resources and trainings for growers.

Blueberry Growers Survey- https://uky.az1.qualtrics.com/jfe/form/SV_739YOWEjiqB8QYK

Bramble Growers Survey– https://uky.az1.qualtrics.com/jfe/form/SV_6fgkeBHHSiHHZhI

Strawberry Growers Survey– https://uky.az1.qualtrics.com/jfe/form/SV_eb5nmo54tJLxCBw

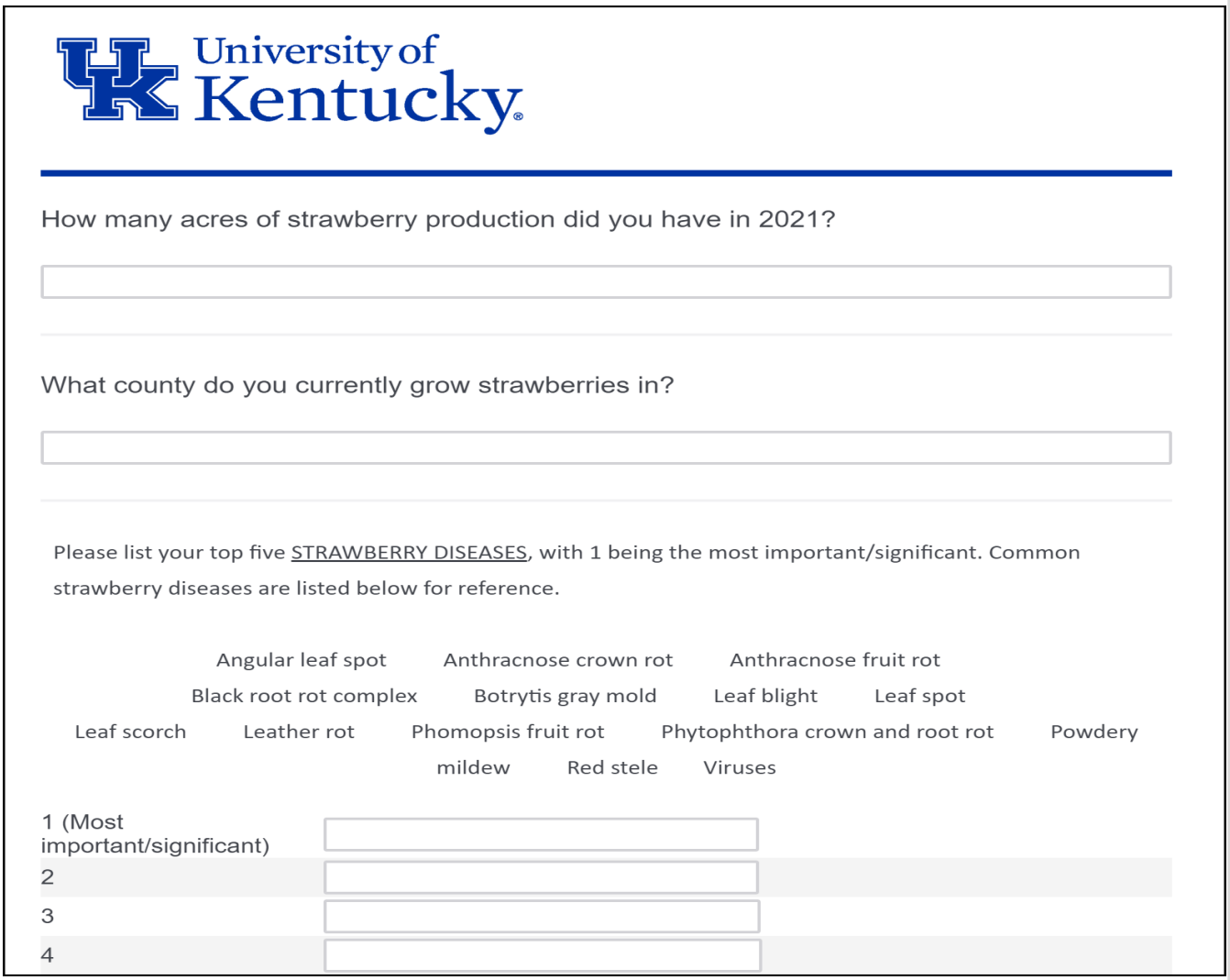

Figure 1: *A section of the Commercial Strawberry Grower Survey (Kim Leonberger, UK)*

By: Nicole Gauthier, Plant Pathology Extension Specialist, and Kim Leonberger, Plant Pathology Extension Associate