

# Weed It and Reap

## FRANKLIN COUNTY COOPERATIVE EXTENSION FEBRUARY 2023 NEWSLETTER



University of Kentucky  
College of Agriculture,  
Food and Environment  
Cooperative Extension Service  
Franklin County  
101 Lakeview Court  
Frankfort, KY 40601-8750  
(502) 695-9035  
Fax: (502) 695-9309  
franklin.ca.uky.edu



### Seed Starting 101

AKA how to get your gardening fix in winter!

By Sue Van Patten

#### 1. Soil

- Use sterile **soiless seed starting mix**. This is critical to avoid losing all your young seedling to 'dampening off'. ProMix is a good option and available in 3.8 cu ft bales and sometimes smaller sizes. Note a 3.8 cu ft dry bale will fill 900 3" pots!
- **Dampen** your soiless seed starting medium with warm water... you'll have to mix to get the soil moist using a trowel and wheelbarrow or muck tub. Then repeat, repeat....it takes a while! **Don't soak** the medium as this can cause the seeds to rot.

#### 2. Labels

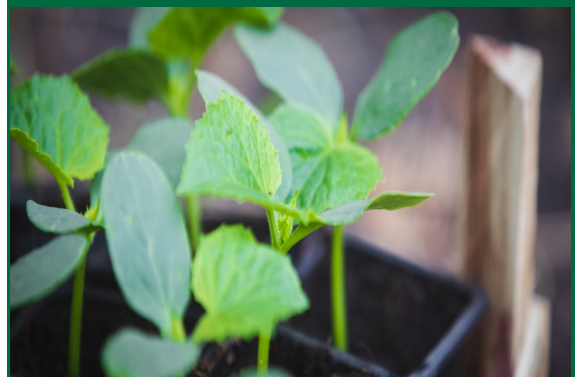
- To avoid 'mystery plants', be sure and create labels for each pot before you start seeding. You can purchase labels or lots of 'reuse' options: cut up plastic jugs, mini blinds etc.
- Use a 'Garden Marker Pen, Permanent Outdoor Marker'. You can use a Sharpie but it will fade quickly when it's outside. Or 'bury' the written end upside down in the soil so it won't fade.

#### 3. Pots and Flats

- So many options for pots. For Master Gardener Plant Sale we use:  
POTS:
  - o 3" square x 3" deep 'sheet pots' (18 pots per flat) for most tomatoes, peppers, herbs and small annuals.
  - o 3" square 'deep pots' for smaller perennials that have deep roots. Can use for tomatoes and peppers but be aware a flat of 18 pots is heavy when you start moving them in/out daily for hardening off.

### IN THIS ISSUE

SEED STARTING 101 .....	1-4
EVENTS .....	5, 10, 11
ORDERING SEEDS FOR VEGETABLE GARDENS .....	6-7
THE LIFE OF A WILLOW .....	8-9
COMPLAINT PROCEDURE .....	12



*(Continued on pg. 2)*

*(Continued from pg. 1, Seed Starting 101)*

## FLATS

- o Solid bottom '1020' flats
- o 1020 flats with holes
- o Weave flats

We nest the flats for bottom watering and strength:

Pots / flats with holes / solid flat / weave flat

- Reduce your 'plastic footprint' by reusing your pots. Just be sure to clean them in warm, soapy water then soak in 10% bleach solution for 30 minutes.

**4. Seed**

- **Read the seed packet!** Most have information you will need about when to sow the seed and under what conditions. Some seeds need light to germinate and are sown on the top of the soil. Generally, most seeds are sown about the depth of the size of the seed.

- **Some** seeds will germinate faster if you **soak them before planting**, but no longer than 24 hours to prevent rot. This applies to hard-coated seeds like parsley, nasturtiums, morning glories, chard, beets, and okra. Tomatoes, eggplant, and peppers do not have a hard seed coat and therefore don't require pre-soaking before you plant them.

- **Scarification and/or stratification:** Some seed packets or seed information will include this requirement. In general **stratification** means cold stratification which means the seeds must remain below a certain temperature to germinate. You may accomplish this by sowing the seeds and placing them out of doors in flats in winter or by mixing the seeds with a little potting soil and placing them in a refrigerator or freezer. Example: Almost many natives and all milkweeds require cold stratification. **Scarification** requires that the seed capsules be altered in some way to germinate. In the case of beets and okra, this means a simple overnight soak in warm water. Other seeds may need to be rubbed with sandpaper.

- **Can I use old seed?** Depends on the type of seed, and if it was stored properly (cool, dry). You can do a germination test or plant a few extra seeds per pots if you think the germination rate has dropped. Many are OK for 4-5 years: tomato, basil, eggplant. Peppers 2-4 yrs, parsley 1-3 yrs. But I've had many 6+ year old tomato seeds germinate fine...although a bit slower to germinate than new seed.

**5. Planting**

- Fill a flat of pots or cells or other containers with sterile seed starting mix. Don't pack too densely. Fill loosely, tap the flat once on the floor, then top off. Place the seeds on top of the moist medium. Cover loosely with sterile seed mix.

- **How many seeds per pot?** There are many options (debates?) on this! A couple popular ones:

- o 1-3 seeds per container: One if you're feeling lucky and have fresh seed, 2 or 3 if you want some insurance. If all germinate, clip off all but one at soil level when they get their first true leaves if you don't want to move to a new pot. Or you can separate into individual pots.
- o "Dense Planting Technique" (Craig LeHoullier): Plant 20-30 seeds per 3" pot. Once the seedlings are about 3" tall and have set of true leaves, gently separate and transplant individual seedlings to single containers.



Tomatoes do well with the technique and allows you to 'plant deeper' to build more roots. Has also worked well with peppers and herbs.

- Sprinkle planting medium over the seeds, just to cover them, about 1/16th of an inch unless the need light to germinate.

- Don't forget the labels!

## 6. Germination

- No need to put your flats under lights until they germinate.

- **Heat:** Most seeds benefit from bottom heat but it's not required. Use a seed heating mat or the top of a refrigerator works well.

- **Cold.** Read the instruction on your seed packet about when to plant. If the instruction is to plant as soon as the ground can be worked, chances are you don't really need bottom heat. It likely won't hurt but these flats will do okay without it. If the instruction is to plant after the soil has warmed, the flat will do well with some bottom heat. It also helps to avoid watering with cold water.

- **Humidity:** Covering the flats with a dome or plastic wrap can help with germination. But be sure to remove as soon as you have germination to prevent damping off. This occurs when too much moisture and humidity weaken the young stems of the seedlings and they simply collapse. It is a sad thing. The frustrating part is the seeds won't germinate all at the same time. When to remove the dome? A general rule of thumb is 75% germination. The other 25% may come along in due time and often do just that. Or if you fear damping off....remove the cover when you have a few germinate If you use plastic wrap you can cut and cover individual or groups of pots until they germinate. A bit OCD...don't judge me!

## 7. Watering

- **Bottom watering:** Fill the bottom flat with enough water, preferably around room temperature, to cover the bottom ½" or so of the pots. Depending on how dry they are, check back to see if they absorbed all the water and if soil is dry, refill trays. Be careful not to overwater because you can starve your plants of oxygen if the roots get waterlogged. It's a fine balance of providing enough moisture for your plants and then letting them dry out a little between waterings.

## 8. Light

- Once seedlings have emerged, it's time to move them under lights.

- Positioning your lights is very important. The **lights should be 1-2 inches above the plants/trays\***. As the seedlings begin to shoot up, you will need to raise the lights. Too high and you will get gangly plants with weak stems. Too low and the tender leaves will burn.

- Adjustable Rope Ratchet Hangers are available on Amazon and are a easy way to raise/lower lights.

- Shop lights are fine as supplemental lighting. But of course, you can also get so many other options! You just need to decide how much space and money you want to commit to growing.

- \*If using the new strong LED lights, be careful...they will 'sunburn' your plants if they are too close. They may need to be as much as a couple FEET from the seedlings, depending on the wattage.

- The heat mats no longer needed. Its job was to aid in germination.

- **Timers** are helpful on lights but of course not required. Having lights on 16 hours land off 8 hours is a good ratio.

- **Fan:** A fan blowing gently on your seedling can help strengthen them. Or just brushing them with your hand.

## 9. Fertilizing

- Seedlings grown in a soil-less mix will benefit from a weak general purpose water-soluble fertilizer mixed 1/4 strength about once a week.

## 10. Hardening Off

- Hardening off is very important to ready your seedlings for outside and it takes **PATIENCE!** It can be surprising how quickly the sun's rays will scorch young seedlings.

*(Continued on pg. 4)*



*(Continued from pg. 3, Seed Starting 101 )*

Regardless of how much supplemental lighting you've provided indoors, the sun – even on a cloudy day – is even more powerful.

- Start by taking your seedlings outdoors on a warm, calm day. Place them in the shade out of the wind for about 30 minutes, then back inside under the lights. Then gradually increase their outdoor time about 30 minutes each day (weather permitting) as well as amount of sun, until they can remain out of doors all day.
- Do not leave tender seedlings outdoors overnight until nighttime temperatures stay above 55 degrees. This does not necessarily apply to cold hardy plants which may stay out in colder temperatures. However, they must first go through the process of hardening off before they can be left outside all the time.
- Once your seedlings can be watered out of doors, remove the solid bottom tray and replace it with a mesh tray.

**11. Take notes!**

- Dates, varieties, germination times. And of course, after they are in the garden as well. You'll thank yourself next year!

**12. Dates for starting seeds**

- One of the hardest things for gardeners is starting seeds too soon. I know, it's winter and we just want a bit of green poking out of some soil. But tall floppy transplants are not fun to handle nor healthy. The best transplants are short and stocky (not the giant ones at Big Box stores).
- For April 30 plant sale here are recommended start dates:
  - o Parsley, Thyme: early February. Also overnight soak of seeds helps germination.
  - o Peppers, Basil, Torch Tithonia: Mid February
  - o Tomatoes: Mid March
  - o Squash: late March/early April

**Joe Gardener Podcast and Webpage** is a great resource: Episode 037-Starting Seeds Indoors: The Non-Negotiables for Success, Part 1. Also, Part 2 & 3.

<https://joegardener.com/podcast/037-starting-seeds-indoors-pt-1/>

Good luck and have fun!

February 2023

Sue Van Patten





# Reforest Frankfort 2023

Join us for a day of FREE EARTH FRIENDLY EDUCATION!



Harold R. Benson Research and Demonstration Farm  
1525 Mills Lane, Frankfort, KY 40601



April 15, 2023 | 9 a.m. - 1 p.m.

For more information, contact [acunningham@frankfort.ky.gov](mailto:acunningham@frankfort.ky.gov) | (502) 875-8575



**Not a pet friendly event. Service Dogs Only.**



## Ordering Seeds for Vegetable Gardens

Spring may feel far away, but vegetable garden 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 reduce or elevate 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 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 less susceptible 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.

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

#### 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](#))



## The Life of a Willow

Joyce Fry

One recent winter day, my partner, Joyce, and I were birding around our property in northern Franklin County. Joyce, the ever-alert land manager, noticed quite a bit of woodpecker damage to one of the black willow (*Salix nigra*) trees that line the pond. Woodpeckers apparently had detected the presence of insect larvae or pupae within its branches and trunk. Arguably, this find is a double-edged sword. On the one hand, the denizen woodpeckers, of which our local area is home to seven species in the winter, have been well fed; on the other, the damage is an indication that the tree is stressed. Predominately, insects attack stressed trees and plants, which under duress, will emanate volatile chemicals. Perhaps the drought we experienced last August-September (2022), contributed to an insect attack by inducing stress in this tree.

According to entomologist and wildlife expert, Douglas Tallamy, *Salix* species are host trees for wood-boring beetles, and clearwing moths, both of which lay their eggs on the bark of their host tree. When the whitish, hairless, round-headed clearwing moth larva emerges from its egg, it crawls around looking for access points beneath the bark. It tunnels while feeding, excreting brown frass (fecal material) from the bark as it goes. When its pupal phase is completed, the clearwing adult moth emerges, leaving an empty, brown exoskeleton protruding from the bark.

Another possible culprit for the insect attack on our black willow tree is a wood-boring beetle, possibly the metallic wood-boring beetle, known as a flat-head beetle as a larva. Female wood-boring beetles lay their eggs in crevices or wounds in the bark. The whitish, legless flat-headed larva chew through the egg, directly into the phloem layer, feeding on starch and other compounds, the cambium layer, destroying growth cells, and through to the sapwood (xylem), where the conduits for water and minerals reside. They may girdle the trunk or branches with their winding tunnels, leaving packed, brown frass behind.

Both insects inflict much damage during the larval stage of their life cycles. You may see dieback on or thinning of branches or crown, cankers, calluses, cracked bark, and weakened or broken limbs. Eventually, the tree may not be healthy enough to play host in the spring to the myriad butterfly species to which *Salix* have been known to host. These species include comma, viceroy, red-spotted purple, mourning cloak, and hairstreak. *Salix* is second only to *Quercus* (oak) as host to the most Lepidopteran species. You'll find *S. nigra*, *S. sericea* (silky willow), and *S. interior* (sandbar willow), all native willow species in Kentucky, along streams, in wetlands, wet bottomlands and floodplains, and along the shores of lakes and ponds.





Joyce's observation of woodpeckers feeding on wood-boring insect larvae feeding on *Salix nigra* illustrates an interesting ecological phenomenon known as "Resource Partitioning." Resource partitioning can be defined as "the division of limited resources by species to reduce competition in an ecological niche." In this case, there is obvious pileated woodpecker damage on the lower, larger-diameter tree trunk, while downy woodpecker damage can be observed on its much smaller branches. The pileated, our largest woodpecker, excavated a relatively large hole characteristically rectangular in shape, but with rounded corners, while the downy, our smallest woodpecker, essentially just splintered the branches during its hunt for insect larvae.

This one little observation of damage to a black willow tells a never-ending story of nature's connectivity and renewal, even in the face of death. The beetles feast to reproduce; the woodpeckers dine on them and reproduce; the black willow will be reduced eventually to frass, soggy wood and sawdust, dropping its branches into the pond; they become food and refugia for aquatic invertebrates; invertebrates become food for frogs, salamanders, and crayfish; they, in turn, provide sustenance for the occasional mink, racoon, and snapping turtle.....to be continued!

## Homebased Microprocessing Workshop



Thursday, February 16, 2023  
9:30 AM - 2:30 PM

Franklin County Cooperative Extension Office  
101 Lakeview Ct., Frankfort Kentucky 40601

This workshop can be accessed virtually or in-person.

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

For more information & to register:  
[ukfcs.net/HBM](http://ukfcs.net/HBM)

or call (502) 695-9035

Join our workshop!  
Homebased microprocessors are farmers who grow and harvest produce to use in their value-added products. Homebased microprocessors are required to grow a predominant ingredient in the products they make. The first step to becoming certified as a homebased microprocessor is to attend a Homebased Microprocessor (HBM) workshop presented by the University of Kentucky.

The cost of the workshop is \$50.00.

**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.

Disabilities  
accommodated  
with prior notification.

LEXINGTON, KY 40546



**WHEN: Tuesdays, Feb 7—April 11**

**WHERE: Paul Sawyier Public Library**

**HOW: BY APPOINTMENT ONLY**

On January 23 or after, between 9 am and 6 pm: Call 502-783-7035 on Monday, Wednesday, or Thursday to schedule an appointment.

1. Leave your name and phone number; your call will be returned in the order tax aides receive it.
2. After tax aides have scheduled your appointment, and in advance of your appointment, you will pick up a packet at the library so you can complete the paperwork prior to your appointment.





# Community Gardens WORKSHOPS



## COMPOSTING 101

February 25th @ 10am

Location: Thornhill Education Center



## STARTING TRANSPLANTS INDOORS

March 11th @ 10am

Location: Thornhill Education Center



## GROWING YOUR OWN MUSHROOMS

April 22th @ 10am

Location: Thornhill Education Center



## POLLINATOR GARDENS

May 13th @ 10am

Location: Dolly Graham Park/Fantasy Forest



## CONTAINER GARDENING

May 20th @ 10am

Location: Thornhill Education Center



FOLLOW US:



Thornhill Education Center  
700 Leslie Ave., Frankfort, KY  
Dolly Graham Park  
125-199 Logan St, Frankfort, KY

CONTACT US:

CGNFRANKFORT@GMAIL.COM  
<https://franklincenterforinnovation.com/thorn-hill-garden-1>





Saturday, March 25, from 11:00 AM - 3:00 PM  
 Paul Sawyer Public Library  
 319 Wapping Street | Frankfort, KY 40601

If you would like to help support the event by donating seed packets in advance, drop them off at the PSPL Check-Out Desk anytime during the month of February!



For more info, visit [www.pspl.org/event/community-seed-swap](http://www.pspl.org/event/community-seed-swap), or contact Diane Dehoney at [diane@pspl.org](mailto:diane@pspl.org).



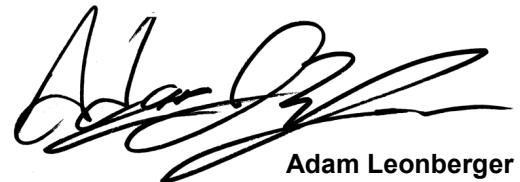


University of Kentucky  
 College of Agriculture,  
 Food and Environment  
 Cooperative Extension Service

Franklin County  
 101 Lakeview Court  
 Frankfort, KY 40601-8750

## Civil Rights Act-Compliant Statement

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, the UK Office of Institutional Equity and Equal Opportunity, 13 Main Building, University of Kentucky, Lexington, KY 40506-0032 or US Department of Agriculture, Office of the Assistant Secretary for Civil Rights, 1400 Independence Avenue, SW, Washington, D.C. 20250-9410.



**Adam Leonberger**  
 County Extension Agent for Horticulture Education

**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.