



UK Wheat Field Day

May 14, 2024

TOPICS INCLUDE:

- ◆ **Evolution of Carbon Markets: Are There Opportunities for Kentucky Wheat Producers?** - Dr. Jordan Shockley
- ◆ **Wheat Disease Update** - Dr. Carl Bradley
- ◆ **Wheat Breeding: Process and Methods** - Dr. Dave Van Sanford
- ◆ **Wheat Fertilization** - Dr. Edwin Ritchey
- ◆ **Residual Herbicide Timing for Ryegrass Control in Wheat** - Dr. Travis Legleiter
- ◆ **International, Domestic, and Local Trends That Inform Wheat Marketing Decisions** - Dr. Grant Gardner
- ◆ **Wheat Variety Trial (Walk Through)** - Bill Bruening

UKREC Farm

1205 Hopkinsville St,
Princeton, Ky 42445
9 am - NOON (Central time)
Registration: 8 am



Martin-Gatton
College of Agriculture,
Food and Environment
Wheat Science



KENTUCKY
Small Grain
GROWERS' ASSOCIATION

EDUCATIONAL CREDITS:

CCA: PM 1hr, CM 0.5hr,
Prof Dev 0.5
Pesticide: 1 CEU cat 1A,
1CEU cat 10

For additional information contact Colette Laurent : (859) 562-1321 or claurent@uky.edu

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

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, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. University of Kentucky, Kentucky State University, U.S. Department of Agriculture, and Kentucky Counties, Cooperating. Lexington, KY 40506



Disabilities
accommodated
with prior notification.

2024 Kentucky Corn Nematode Survey

Dr. Kiersten A. Wise, UKY Extension Plant Pathologist

Once again we will be conducting the FREE corn nematode survey. Please remember this is different than SCN sampling. **Samples need to be from actively growing corn plants in growth stages V2-V6.**

Our past surveys have been very valuable in helping us understand the corn nematode population in Kentucky, and I greatly appreciate your help in collecting samples for the survey.

If you would like to participate in this survey please contact Katie at 270-389-1400.

2024 Wheat Virus Survey

Dr. Carl A. Bradley , UKY Extension Plant Pathologist

Wheat fields need to be sampled before plants are fully mature.

For the 2022 wheat virus survey, the results are summarized in an article in the 2022 UK Wheat Science Research Reports (page 25): That link is here: <https://graincrops.ca.uky.edu/>. Once on that page, you can scroll down to “Research Reports” and then click on the “Wheat Research Report, 2021-2022”, and go to page 25.

The 2023 results have not been summarized, but briefly, we had a total of 41 samples. The only positives for viruses that we had in 2023 were 1 sample positive for Barley yellow dwarf virus-pav, and 2 samples positive for Wheat streak mosaic virus.

If you would like to participate in this survey please contact Katie at 270-389-1400.

Forage Timely Tips for May

- Start hay harvests for quality forage. Consider making baleage to facilitate timely cutting.
- Seed warm season grasses for supplemental forage once soil temperature is at 60 F.
- Clip, graze, or make hay to prevent seedhead formation.
- Rotate pastures as based in height rather than time: TF 8 to 10 / 3 to 4; OG 8 to 10 / 4-5; Bermuda 4 to 6 / 1 to 2; Sorghum Sudangrass 20 to 24 / 8 to 12
- Consider temporary electric fencing to subdivide larger pastures and exclude areas for mechanical harvesting.
- Scout pastures for summer annual weeds and control when small.

Drivers of Commodity Prices: Export

Dr. Grant Gardner, UKY Ag Eco Specialist

Since the onset of COVID, agricultural commodity charts have resembled the track of a roller coaster, with huge peaks and valleys. Global geopolitical events and conflict intensify these peaks and valleys. During the 2023/24 marketing year, commodity prices have transitioned downward. As prices start to level out, we can likely expect more consistent commodity prices on a year-to-year basis. In a less volatile price environment, marketing decisions are made easier by focusing on fundamental drivers of prices. Examples include exports, the acreage battle, and domestic use. This article is the first in a series I will publish in the Department of Agricultural Economics' *Economic and Policy Update* on fundamental drivers of commodity prices. In this article, I focus on exports and why exports are a crucial driver of U.S. commodity prices.

Exports drive U.S. prices because US production outpaces domestic use, creating a reliance on export markets. Figures 1, 2, and 3 show the aggregate percentage of corn, soybean, and wheat exports by country and U.S. marketing year from 2018/19 to 2022/23. Export numbers are obtained from the USDA FAS Production, Supply, and Distribution Database. Figures 1-3 indicate that each crop has a small number of large players; however, wheat export markets are more competitive than corn or soybean markets. Figure 1 suggests that the four major players in corn exports are the U.S., Brazil, Argentina, and Ukraine, which make up 85% of world exports. Figure 2 indicates Brazil has been the leading soybean supplier for the past five years; however, Figure 2 is a little misleading as Argentina makes up 4% of soybean exports but is the largest supplier of soybean meal, at 39%. In combination, the U.S., Brazil, and Argentina supply 90% of soybean exports and 84% of soybean meal exports. Wheat is a global crop with more competitive export markets. Figure 3 indicates that the U.S., Russia, the European Union, Canada, Australia, Ukraine, and Argentina combine to make up 84% of wheat export markets.

Although the U.S. has been the leading corn exporter for the past five years, Brazil surpassed the U.S. in corn exports during the 2022/23 marketing year and is expected to have similar corn exports as the U.S. in 2023/24 (USDA WASDE, 2024). Continual agricultural expansions are expected in Brazil, making Brazil the largest U.S. competitor in corn export markets. A similar story can be told for soybean exports. During the 2022/23 marketing year, Brazilian soybean exports nearly doubled U.S. exports. Brazil was also the largest soybean meal exporter in 2022/23. 2023/24 projections indicate Brazil will more than double the US in exports and surpass Argentina in meal exports (USDA WASDE, 2024). Wheat exports will continue in a similar position to the last five years. It is worth noting that even with the conflict in Ukraine, Russian and Ukrainian wheat exports have remained relatively consistent. The same can be said of Ukrainian corn exports.

The export information covered above can aid in marketing directly and indirectly. Directly, any U.S. export bookings positively impact U.S. commodity prices. However, we must remember that commodity prices already account for a certain amount of U.S. exports. Thus, exports surpassing the projected amount will have a bullish effect on commodity prices, which could be a good indicator for booking commodity sales. Indirectly, weather events in other countries can also indicate a good time to book commodity sales, especially in corn and soybeans. Specifically, weather events in Brazil and Argentina that slow planting or impact yield. Specific months to watch South American weather include September-May. As wheat is a global crop, it is less reactive to weather changes, but recent events have shown that geopolitical news and weather can indirectly affect U.S. prices. Specific months are harder to pinpoint.

In conclusion, exports are an important driver of U.S. commodity prices. As a few countries make up large portions of world corn, soybean, and wheat exports, we can inform marketing decisions by paying attention to direct and indirect indicators of export change. As we move into a more predictable period of commodity prices, it will be important to pay attention to the direct effects of changing exports and indirect effects, such as changing weather conditions in major exporting countries, to inform commodity marketing decisions.

Drivers of Commodity Prices: Export, Continued;

Figure 1: World Corn Exports by Country, 2018/19-2022/23 Marketing Year (%)

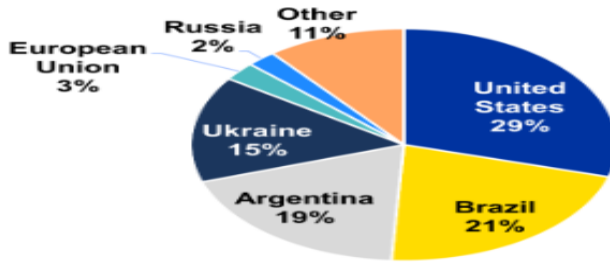


Figure 2: World Soybean Exports by Country, 2018/19-2022/23 Marketing Year (%)

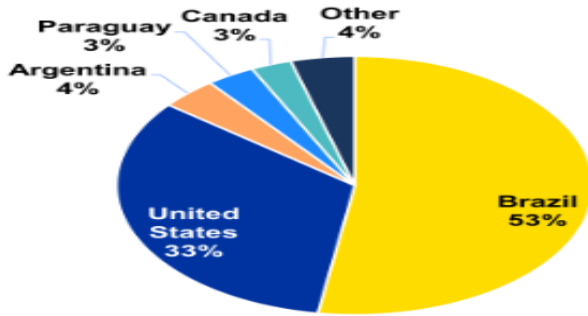
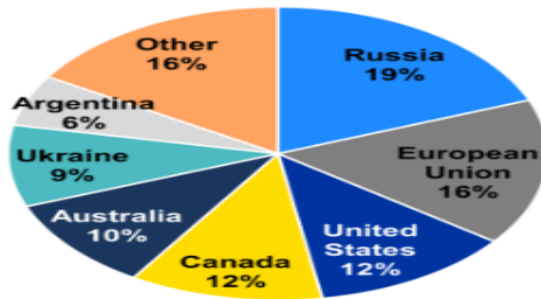


Figure 3: World Wheat Exports by Country, 2018/19-2022/23 Marketing Year (%)



Upcoming Events

2024 CPH60 Sale Dates

Aug 8 and Dec 5

Union Co Fair

June 17-22,2024

Corn, Soybean and Tobacco Field Day-Princeton, KY

July 23,2024

Pizza Garden Workshop

May 21, 2024

5:30pm

Union Co Extension Office



Come learn how to plant and grow a Pizza Garden Container. All supplies will be provided for you to create your own!



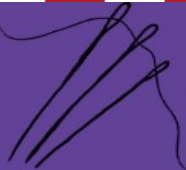
Cost is \$5.00

Payment/Signup due: May 14, 2024

Union Co Extension Office
1938 US HWY 60W Morganfield

For more information contact: Katie Hughes,
ANR Agent 270-389-1400 or katie.n.hughes@uky.edu

This class is part of the Homesteading Series



Basic Sewing Class

June 26, 2024

5:30PM

Union Co Extension Office

(1938 US HWY 60W Morganfield)

This is part of the homesteading series. Picture is the project that will be done for this class. Class shows hand sewing, a few basic sewing hints, current quick fix items available for rip and tears.



This class is free! Sign up by June 19 to the Union Co Extension Office 270-389-1400 For additional information contact Katie Hughes, ANR Agent katie.n.hughes@uky.edu



ADM Requiring Farmer Data to Satisfy Upcoming Demands

Dr. Chad Lee, UKY Grain Crops Specialists

One of our county agents was contacted by a farmer asking about new requirements from ADM on soybeans being sold at ADM Silver Grove location in the fall of 2024. That county agent contacted me. With help from the Kentucky Soybean Board, I was able to set up a meeting with three people from ADM who are working with the European Union to deliver these certified soybeans.

The following is what I gleaned from that meeting.

1. The European Union (EU) will be requiring “deforestation-free” soybeans, and they will require traceability to the field.
2. The EU set the requirement for December 2024, meaning that the 2024 crop will need to be documented.
3. Farmers will need to create an account with Farmers Business Network (FBN). The FBN account is free of charge to the farmer. The farmer can choose to participate in other FBN programs if the farmer wishes.
4. Farmers need enroll in “ADM resource” via the FBN website or FBN app.
5. ADM is partnering with FBN for some of their carbon market programs as well.
6. Farmers need to send field boundaries to FBN. (Again, the EU will require traceability of the soybeans to each field.)
7. FBN will look at satellite imagery to confirm that the field was not forested before December 31, 2020.
8. The EU is defining a forested area bigger than 1.24 acres (with some other parameters) being removed counts as deforested for that field. The ADM people and I discussed fence rows being removed. If they were over 1.24 acres, then they probably count as being deforested. The FBN people working on this project and can provide definitive answers.
9. The geo-references to fields will not be linked to farmer names when the data is submitted to the EU. But, both FBN and ADM will have that data.
10. Most of the ADM sites in the program are the sites close to the rivers to make tracing easier.
11. The Silver Grove site (and possibly some other Kentucky sites) will only accept deforestation -free soybeans. So, while a farmer has a choice as to where to sell soybeans, if they want to sell to Silver Grove (or some of the other locations), they will have to enroll with the deforestation-free program and provide the required data.
12. The people at ADM said that anyone selling soybeans into the EU will have to have similar documentation. ADM is trying to directly account for those acres with this program. The people at ADM said that Bunge and Cargill will need to develop similar programs if they want to sell soybeans to the EU. ADM is not aware of how Bunge and Cargill will set up their programs.
13. ADM is offering "up to" a \$0.20/bushel premium if farmers join the program by May 1, 2024. If farmers join after that date, ADM is offering up to a \$0.15/bushel premium
14. Final enrollment date is June 1, 2024 and field boundaries for the entire operation need to be submitted no later than July 15, 2024.

This ADM Deforestation-free Frequently Asked Questions website has a good outline of the key points. After my meeting, I went to this site to double-check my notes: <https://admadvantage.com/adm-resource-questions/> Please, go to this website and read through the Frequently Asked Questions.

My notes above do not cover every question you may have. This website will get you closer to all of those questions. This is a new era for farmers in Kentucky. The EU is demanding traceability. ADM is interpreting that as needing geo-referenced field boundaries on every acre. To sell soybeans at certain ADM locations, farmers will need to submit their farm data to FBN and ADM and that data will be anonymized and shared with the EU.

Farmers have been sharing their data for years with USDA FSA, John Deere, Case IH, private soil testing labs, Pioneer, DeKalb, and others. In some cases, they have paid the companies to share their data with them. But this is the first time of which I am aware that farmers are sharing their data with grain buyers, including companies and foreign governments. I doubt this will be the last. As you all hear and learn about these programs, please reach out to me

Spring 2024 Farm Observations Across Kentucky KFBM Program

The [Kentucky Farm Business Management Program](#) is a program of the Department of Agricultural Economics at the University of Kentucky. Extension Specialists serve four Farm Analysis Associations working with cooperating members to improve farm management techniques and decisions through recordkeeping and analysis. Currently, KFBM serves 355 farms that are representatives of 49 counties. KFBM specialists work very closely with a diversity of farms and this article will share some of the real-time observations that they have seen this spring.

Lincoln Trail Association

Spring is here and producers are taking advantage of the dry weather between rain showers to spread fertilizer. It is still early but wheat looks good after getting much-needed fertilizer applied. One concern for most is commodity prices. Producers are not confident that current commodity price levels will result in positive gains for the year. The decline in farm incomes in 2023, coupled with low commodity prices will make for a challenging 2024. Input costs have backed off some to help with profitability, but producers are still considering ways to lower expenses. Another concern is interest rates and if rates will come down in 2024. Interest expense on operating notes has become a larger percentage of the farm operating budget, and this was not there in the past years. After 2022 and 2023, cash is no longer there for producers to utilize so finding the right lending products will be beneficial to most.

Ohio Valley Association

Field operations and planting continue in the Ohio Valley area. Several acres of soybeans have been planted as of mid-April. A small amount of corn has been planted. We received much-needed rain about a week ago. Talk in the area indicates producers will continue their usual rotation despite the outlook of the budgets. Some adjustments to the amount of fertilizer may occur to stem some of the costs. In addition, the market for used equipment has decreased.

There was a broad range in Net Farm Incomes and Management Returns for 2023. A lot depended on when the fertilizer was purchased, but there was also a variation in yields across the Ohio Valley. Some had excellent yields and some were on the verge of a crop insurance claim. However, overall, we expect a large drop in management returns. Poultry producers had another strong year, and cattle producers saw profits last year since cattle prices were strong most of the year. Interest rates were a topic of nearly every visit this winter as we have been experiencing higher rates for over a year. Interest on the line of credit was the biggest concern, but equipment rates have increased significantly as well, and many are factoring that in when discussing trades. Higher equipment costs and higher interest rates really add up.

Concerns are growing for the 2024 crop year. Fertilizer prices have come down some, but not in proportion to grain prices. Current market prices look to be below break-even levels for the 2024 crop using average yields.

There have been several land sales in the last month and land is not coming down. Rents are also holding strong, despite the negative incomes last year.

Wheat and rapeseed crops in the Ohio Valley area look outstanding, despite being very dry over the winter. Rapeseed is in full bloom and those producers should make a profit since their price was locked in. The wheat producers need another year of outstanding yields to make a profit since wheat prices have also dropped. The early April rains provided much-needed moisture. To put into perspective the dryness, one producer has a pond that they water cattle out of dried up in March; it usually doesn't go dry until August.

The Ohio River is very high now and some crop ground is under water that was planted in early beans. As soon as the fields dry up, most of the crop will be planted quickly. Most everyone had anhydrous and fertilizer applied by the end of March and was sitting on go when the cold temperatures came back for a week.

Cattle producers are all pretty positive right now. Cattle prices have held strong and most producers selling feeders now are surprisingly getting better prices than they did in 2023. If we can continue to get rain to help the hay crop this summer, it is looking like cattle may see another profitable year.

Pennyroyal Farm Analysis Group

In the Pennyroyal area, winter wheat is looking good, and some fields have started to head out. Each day that passes relieves a bit of fear of a late freeze and encourages the idea of a strong wheat crop like the last three years. Some farms are reporting a bit of freeze damage because of the mid-March freeze, but the 2023 wheat crop also showed some freeze damage at a similar growth stage and farms still reported near-record yields.

Spring 2024 Farm Observations Across Kentucky, Continued;

Corn planting has begun in the region but has been slowed in some areas due to wet weather. A few farms are finished planting, and some have not begun as they are waiting for soil temperatures to moderate. There are a few farms that have planted some soybeans. However, with the recent rains, the need for replanting is becoming a concern. Tobacco plants are growing in greenhouses, and a few tobacco farmers in the area are starting to welcome back the first round of H2A workers that will help with seeding, prepping equipment, and greenhouse work. There have been reports of cutworms appearing in the tobacco seedlings much earlier than usual.

Many tobacco farmers took a hit over the winter, as several tobacco companies cut contracts by anywhere from 20-60%. Coupled with large cuts in 2022, 2021, and 2020, several tobacco farmers are facing major operation shrinkage. There are some growers whose contracts were eliminated and others who chose to exit tobacco production altogether. Continued increasing wages in the H2A program and a decline in H2A worker productivity have frustrated some growers beyond the point that they are willing to continue in the industry.

Farmers are fully feeling the impact of lower grain prices and higher interest rates. We have now had a full operating cycle of higher interest rates, and many farmers are feeling the impact on their cash flow. The volume of unpriced old crop grain, not just in Kentucky but across the country, has farmers concerned about the prospect of market rallies. The decision to sell grain and lock in prices to stop storage and interest costs versus holding onto it for a market increase is a tough one that many farmers are still struggling with. Reports of bankers either not renewing operating lines or putting farms on notice are unfortunately on the rise.

Purchase Area Association

Spring planting is underway. This spring has been relatively dry, with mostly favorable weather, although slightly cool at times. This has allowed many producers to start spring planting preparations. Producers were able to do some early tillage and fertilization, which will make actual planting go much faster and smoother. Conditions allowed for both hog and chicken manure applications to be made this spring ahead of planting. Several producers have opted to plant early soybeans ahead of corn, waiting for the ground temperatures to warm just a little more before planting much corn. Over the last couple of years, there has been a greater interest in planting early soybeans and so far, yields have been favorable. Planting soybeans this early does require some extra seed treatments to protect the seed as it stays in the ground a little longer before germinating than later planted soybeans.

Crop prices for the 2024 crop are not where most producers or lenders would like them to be. Despite the lower prices, there does not appear to be many producers who are changing their crop rotations. There does seem to be less wheat across the area this spring, as June wheat prices were around \$5.00 last fall, not providing much incentive to plant the crop. Several producers are still holding onto a little bit of the 2023 crop, hoping for some marketing gains.

However, more and more are being forced to sell the crop, as they need to generate revenue to help start the 2024 crop. Most producers have been disappointed after putting the 2023 crop in storage, as there have not been many opportunities to sell above the harvest price.

Tobacco producers are struggling this year, as contracted pounds were cut by tobacco companies over the winter. Several producers experienced reductions in the number of pounds they have contracted of more than 30%. For many, this causes questions about whether they can afford to bring in their H2A workers. Tobacco has typically been a profitable enterprise for Kentucky producers. Without the revenue from tobacco sales, these producers will likely experience decreased profitability.

The profitability outlook for the 2024 crop is questionable. While input prices on fertilizer are much lower than in the last couple of years, the output prices are significantly lower as well. Producers will be looking for any rally in the market and will hopefully take advantage of any opportunities to lock in some higher prices. Several producers burned through some of the cash reserves they had from the 2021 and 2022 crops in 2023. This reduction in available cash will make the 2024 crop year feel much tighter. Lenders are also looking very closely at cash flow projections for the 2024 crop. With higher interest rates, the options of doing a refinance to help with cash flow are off the table. The increase in interest costs makes the refinanced payments just as high or higher than existing payments in many cases.

Union County Fair

Hay Show

Open to
Union
Crittenden
Henderson
Webster
County Residents

Tuesday, June 18, 2024

9AM-11AM

Staging Area

(behind John Arnold Arena)

Sturgis, KY

If you are unable to make the show, you can bring your hay sample to the Union Co Extension Office the Thursday, Friday, or Monday prior to the hay show from 8am-4:30pm. But your sample must be chopped (hay probe) and a full sandwich bag of the sample.

All hay will be analyzed by KY dept of Agriculture Hay Testing Service.

Haylage cannot be done on the mobile but can be taken back to the lab for \$10 per sample.

Hay must have been produced and baled on the farm of the exhibitor since Aug 1 of 2023.

Class Type:

**Alfalfa- Less than 10% Grass
Grass**

**Red Clover- Less than 10% Grass
Small Grain Hay (Wheat)**

Grass Hay- Less than 10% Legumes

Grass Legume Hay- Over 30% Legumes

Small square bales will be unloaded for testing at the staging area. Exhibitors are to leave the large round bales on their truck, trailer or other carrier for testing

The Union County Fair Board thanks the KY Department of Agriculture Hay Testing program for this service.

For More Information Contact:

Katie Hughes, Union Co ANR Agent

270-389-1400 or katie.n.hughes@uky.edu

Sponsored by the Union County Cattleman's Association

Vertical Gardens

KYREADYSETGROW

Kids love to climb and watch others — both people and animals — climb. They are often thrilled to realize that they can train plants to climb too. Vertical gardens provide a venue for them to experiment with an infinite number of strategies for encouraging plants to go up.

Soil is optional in some vertical gardens, and it is an exciting lesson in botany to learn how to grow plants without it. Most kids have seen plants forcing their way through a crack in the sidewalk or floating on the surface of a lake, but they may not realize that some plants can flourish in mediums other than soil.

WHAT ARE VERTICAL GARDENS?

A vertical garden is a garden that grows up rather than out. Usually, people install vertical gardens to save space, but they also can offer fascinating aesthetics. They work well in small areas and urban environments with little outside space for a garden. These gardens can be very productive, considering the minimal space they require to thrive.

Plants in a vertical garden can grow up a trellis, arbor, or pergola, or even up a wall, fence, light pole, or drainpipe. Sometimes containers such as garden pots hooked on a trellis or fence are attached to the vertical structure. There are also commercial vertical gardens that include planter pockets and hydroponic systems.

ADVANTAGES

Small Space, Big Results - They take up very little space and can be quite productive.

Great for Climbing Plants - They are ideal for growing plants that climb naturally, like runner beans, peas, gourds, chayote, passion fruit, kiwi, grapes, and flowering vines.

Visually Stimulating - They add height to horizontal gardens, making them more visually thought-provoking.

Covers Unsightly Walls and Fences - Hanging wall gardens can beautify unattractive walls and fences. **Cozy, Shady Spaces** They can create intimate space in larger gardens and provide shade on hot, sunny days.

Disadvantages

Limited Growing Options - Not all plants do well in vertical gardens. For example, plants that do not climb tend to struggle in a vertical garden, and large plants such as corn, squash, and tomatoes need wider spaces for their roots to spread.

Tall for Kids - Vertical gardens are often difficult for children to access.

Space Is Limited - They are not ideal for working with large groups of students.

Can Be an Incomplete Teaching Tool - Hydroponic hanging wall gardens are very productive, but they also leave out a very important piece of the biological puzzle in a garden: soil.

Can Be Expensive - Vertical gardens can be expensive when purchased as a kit or a custom-made design.

DESIGNING THE GARDEN

1. Choosing a Location:

- Before you begin to develop your vertical garden, observe how the sunlight moves through the space.
- Vines that grow on trellises, arbors, or pergolas will need at least 6–8 hours of direct sunlight per day.

- In general, east-, west-, and south-facing walls will be the best for growing vegetables, herbs, and flowers in the Northern Hemisphere, but hanging gardens can grow well with different orientations as long as you make sure that you choose a more shade-tolerant type of planting for north-facing walls. Consider other activities that may impact the garden, such as sports or other play, as well as the configuration of the space. For example, narrow corridors with heavy traffic may not work for a hanging wall or fence garden.

- Think about the average height of your students. Will they be able to reach the garden without a ladder?

- Will they be able to help build it without much technical knowledge?

- How many kids will be able to engage with the vertical garden at one time?

2. Selecting Materials

- Trellises can be built out of many different materials such as wood, bamboo, iron, and reinforcement steel. They can be purchased or made by hand.

- Hanging wall gardens can also be purchased or built by hand. If you want to build a wall garden, consider making hanging containers out of wood, recycled plastic, repurposed lightweight containers such as watering cans, or breathable felt cloth like the material used to make “Woolly Pockets.”

- Whatever you use, make sure the containers are securely fastened to the wall or fence.

Vertical Gardens, Continued:

3. Selecting Soil

For trellised gardens, it is easiest to use an organic soil mix from a nursery, local topsoil straight out of the ground, or a combination of the two. Regardless of the source, apply a fertilizer, such as organic compost or decomposed animal manure, that is appropriate for the types of plants you will grow.

For most hanging wall gardens, you'll need to use a growing medium such as soil. Choosing which type to use will depend on the type of garden you are building. A hanging container or pocket garden should have organic soil mix, similar to that in raised beds or container gardens.

A hydroponic hanging wall does not need soil. It does, however, need a system for adding nutrients to the water and cycling water from the bottom of the wall garden to the top after it percolates down. It needs a water reservoir, pump, and a nearby power source to plug in the pump. Unless you have carpentry skills, purchasing this equipment is advisable. Many hanging hydroponic garden kits have solar panels connected to them so that when the sun shines, the solar energy pumps water from the reservoir back up to the top of the garden.

4. Choosing Plants

- Climbing plants such as runner beans, peas, gourds, chayote, passion fruit, kiwi, grapes, and flowering vines are best for trellis gardens.
- Smaller plants such as herbs, lettuces, and leafy greens grow well in hanging wall gardens, whether in a container with soil or grown hydroponically.

5. Maintaining a Vertical Garden

Maintaining a vertical garden is similar to maintaining any garden. For information on maintenance, see the sidebars "[Harvesting](#)" in the Introduction, "Irrigating Your Garden" in this chapter, "Composting" in Chapter 3, and "Weeding" and "Controlling Pests" in Chapter 4.

Maintaining hydroponic vertical gardens is different, however. They must be checked regularly and the water level in the reservoir must be closely monitored, since water is lost to the plants and evaporation. Since they use an electrical power pump, remember to clean it on a regular basis and to replenish the nutrients in the water regularly. Plants often grow very quickly in hydroponic agricultural systems, so frequent harvesting and replanting is also necessary.

CHECKLIST OF MATERIALS FOR VERTICAL GARDENS

When building a **trellis garden** you will need:

- A premade trellis, arbor, pergola, or the building materials to make one (bamboo, wood, reinforcement steel); a light pole or vertical drainpipe
- Tools to work with the building materials (saws, drills, hammers, nails/screws, level, welding tools, etc.)

- Soil

- Plants that like to climb

When building a **hanging wall garden** you will need:

- Containers to attach to the

wall or fence (either wooden, plastic, burlap, or woven recycled plastic such as "Woolly Pockets")

- Brackets and screws/bolts to attach containers to the wall or fence
- Plants that will thrive in a small container (see illustration, previous page) When building a hydroponic hanging wall garden you will need:
 - A premade hydroponic hanging wall kit or the materials to make one
 - Plants that will thrive in a hydroponic garden

SAVE THE DATE



June 27, 2024

Register at: <https://tinyurl.com/2j9y33md>



Sign-in and welcome will be held at the
Princeton First Baptist Church Christian Life Center
(behind NAPA Auto Parts on West Market Street) then caravan to the
UKREC.

Continuing Education Units for CCA and KY Pesticide applicator training will be available.

Registration is free—Lunch will be provided

Beware of Reducing Feed at Calving!

Dr. Les Anderson, UKY Beef Extension Specialist

I presented at a Master Cattlemen session last night and, after the meeting, got asked a common question about body condition and feeding cows at calving. His question was he had heard that he should reduce feed to his cows before calving to keep birthweights lower to reduce calving problems. He indicated that the BCS of his cows as they begin to calve was only 4. This is a frustrating question because it comes up often and nothing could be further from the truth.

Several researchers have addressed this issue over the last 20-30 years. Each of these experiments had cows that were fed to maintain weight, decrease weight, or increase weight right before calving began. The result of under-feeding cows before calving results in the exact problem the producer is trying to avoid. The research demonstrated that poor nutrition and low BCS precalving:

- Increased calving problems
- Decreased calf health (low colostrum consumption and poor-quality colostrum)
- Increased calf death loss
- Increased the number of days for females to resume estrous cycles.

One of the most extreme research trials on prebreeding nutrition in cows was conducted by Dr. Steve Loerch at The Ohio State University. At that time, the cost of hay was much higher than the cost of grain and Dr. Loerch was examining the impact of feeding corn as an alternative to hay for gestating and lactating cows. The cows used were large framed Charolais-cross cows and were either fed around 11 pounds of whole shelled corn, 2.5 pounds of a pelleted supplement, and 2 pounds of hay (dry matter basis) or offered hay and a salt and mineral mix free choice from November to April. Hay was predominantly first-cutting orchardgrass testing around 72% neutral detergent fiber (NDF) and 9.5% crude protein (CP). Cows fed free choice hay ate twice as much feed resulting in double the feed costs compared to limit feeding the corn-based diet. In this study, cows consuming the corn-based diet had fewer calving problems than the cows consuming forage-based diets. Limit-feeding corn to meet the nutrient requirements of cows did not negatively impact calving performance, pregnancy rate, or calf weaning weight. I don't bring this trial up to endorse feeding gestating cows corn-based diets but rather to reinforce that feeding cows prior to calving does not increase calving problems even if cows are fed corn-based diets.

This producer indicated that his cows were at a BCS of 4 prior to calving and this is going to create some issues for him. Rebreding performance of cows is greatly influenced by BCS at calving. Cows that are thin (BCS < 5; visible ribs) at calving take longer to resume estrous cycles and therefore are delayed in their ability to rebreed. As precalving BCS decreases, the number of days from one calving to the next (calving interval) increases in beef cows. Females with a precalving BCS < 5 tend to have production cycles greater than 1 year. For example, cows with a precalving BCS of 3 would be expected to have a calving interval of approximately 400+ days, while a cow with a precalving BCS of 6 would have a calving interval of approximately 360 days. Thin cows are anestrous for a longer period of time and are therefore more likely to be open at the end of the breeding season. They may also result in lighter calves to sell the next year because the calves from these thin cows will be born later in the calving season.

Let's consider the impact of anestrus and calving date for a herd in BCS 4 that calves from March 1 until May 10. Bull turnout is May 20 and the length of anestrus for mature cows (BCS 4) is 90-120 days and for young cows is 120-150 days. A mature cow (BCS 4) that calves on March 1 will begin to cycle sometime in the month of June and will likely conceive later than desired. However, the thin mature cow that calves on April 20 won't cycle until end of July/middle of August and her opportunity to conceive is minimal. Thin two-year olds nursing their first calf will likely begin cycles 4-5 months after calving and will have limited opportunities to conceive. Reducing nutrients before calving is a huge mistake but this strategy has been circulating in the beef industry for decades. At first glance, it seems logical, but no research supports the notion of limit feeding cows prior to calving and this dogma has cost the industry millions of dollars. So, beware of reducing feed to your cows at calving. It won't impact calf size but will impact your cows ability to rebreed.



WORLD'S GREATEST BABY SHOWER

NEW & EXPECTANT MOTHERS
THURSDAY, JUNE 6TH, 2024
5:00 - 7:30 PM
UNION COUNTY EXTENSION OFFICE
1938 US HWY 60 W
MORGANFIELD, KY 42437

Call to Register: 270-389-1400
Deadline to Register: May 31, 2024

COMMUNITY PARTNERS

DEACONESS HENDERSON HOSPITAL
DEACONESS UNION COUNTY HOSPITAL
UNION COUNTY FAMILY RESOURCE (FRYSC)
UNION COUNTY HOMEMAKERS
GREEN RIVER DISTRICT HEALTH
DEPARTMENT
UNION COUNTY EARLY CHILDHOOD COUNCIL
UNION- KY AGENCY FOR SUBSTANCE ABUSE
POLICY
HEALTH FIRST
RIVER VIEW COAL

Rinse and Return Recycling Program

July 10, 2024

9am-11am

Union Co Road Dept

The Rinse and Return Program is a voluntary, cooperative program sponsored by the Kentucky Department of Agriculture and the Agri-Business Association of Kentucky (ABAK). Due to the materials previously held by these pesticide containers they cannot be recycled with your ordinary household plastics. This program allows for the proper recycling of these pesticide containers. This reduces the amount of material entering the landfill or being disposed of by other means.

Be sure to triple rinse all chemical containers before bringing them:

- Remove cover from container. Empty the pesticide into the spray tank and let the container drain for 30 seconds.
- Fill the container 10% to 20% full of water or rinse solution.
- Secure the cover on the container.
- Swirl the container to rinse all inside surfaces.
- Remove cover from the container. Add the rinsate from the container to sprayer tank and let drain for 30 seconds or more.
- Repeat steps 2 through 5 two more times.
- Puncture container.

Union County Farm City Tour

Save the Date
August 9, 2024

Union County is a diverse and prosperous agricultural county which benefits our county as a whole and not just those working in agriculture.

Join the Union Co Extension Office and Morganfield Lions Club for the 1st Annual Farm City Tour!

Everyone is welcome to come learn and see the operations that will be on this year tour!
This tour will be free to attend!!

Stay tuned for more details about our Farm City Tour.



Union County

Farmer's Appreciation Dinner

JULY 30, 2024

5:00PM SILENT AUCTION OPENS
6:00PM DINNER STARTS

UNION COUNTY EXPO CENTER
125 PRYOR BLVD STURGIS, KY



SPEAKER:

JONATHAN SHELL, KENTUCKY
AGRICULTURE COMMISSIONER

TICKETS \$40.00

TICKETS GO ON SALE JUNE 3, 2024
TICKETS SOLD AT UNION CO EXTENSION OFFICE
1938 US HWY 60W MORGANFIELD, KY

ALL PROCEEDS BENEFIT
UC FRYSC
CHRISTMAS ANGELS

FARMER APPRECIATION DINNER SHIRT



All proceeds go to Union County Family Resource Youth Service Center (FRYSC)~ Christmas Angels

Price: Youth to Adult XL \$15.00 (2XL-3XL: +\$2.00)

You can also come by the Union County Extension Office to place order. Make checks payable to Union County Soil Lab.

Order By: July 8, 2024

Name	Phone #	Size	Price

Total:

Extension Office will be Closed:

May 27,2024

June 19,2024

Katie Hughes

Katie Hughes

UK-Union Co Extension

ANR Agent

270-389-1400

Katie.n.hughes@uky.edu

The Martin-Gatton 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 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, physical or mental disability or reprisal or retaliation for prior civil rights activity. Reasonable accommodation of disability may be available with prior notice. Program information may be made available in languages other than English. 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, Martin-Gatton 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.



Union Co Cooperative Extension Service
1938 US Highway 60 West
Morganfield, KY 42437-6246

RETURN SERVICE REQUESTED

For daily and local ag news, “LIKE” Union County KY Agriculture Extension on Facebook at

www.facebook.com/UnionCountyKYAgricultureExtension