

March 2025 ISSUE

# AGRICULTURE & NATURAL RESOURCES NEWSLETTER



Lindsay Arthur  
Bourbon County Cooperative Extension Agent For Agriculture and Natural Resources

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

**Bourbon County Extension Service**  
603 Millersburg Road Paris, KY 40361  
Office: (859) 987-1895  
bourbon.ca.uky.edu



Saturday,  
April 19th,  
2025



9:00 AM -  
4:00 PM EST  
Meal provided

## SHEEP & GOAT BOOTCAMP



Harrison  
County  
Fairgrounds  
2849 US HWY 27 S  
Cynthiana, KY 41031

The Sheep and Goat Bootcamp, conducted by the Kentucky Sheep & Goat Development Office, will focus on parasite management and nutrition. Participants will receive hands-on FAMACHA training.

Limited to 20 participants. To register, contact the Bourbon County Extension Office at 859-987-1895.  
Deadline to register: March 28th, 2025

\$35



Presented by Hymer Feed and the Scott County Extension Office

Cooperative Extension Service



CAIP Eligible

## EQUINE WELLNESS WORKSHOP

JOIN US!

March 22nd at the Scott County Extension Office, 1130 Cincinnati Rd. Georgetown, KY 40324.  
Starting at 10:30am with a complementary lunch at 12:00pm and more programming to follow.

### WHAT TO EXPECT

- Optimal Feed Strategies and Management
- Hay Nutrition Insights
- Proper Pasture Management
- Complementary Lunch
- Special Guest Industry and Educational Speakers

### PLAN ON ATTENDING?

RSVP to the Scott County Extension Office by March 14th by phone or email. RSVPs are first come first serve. Spots are limited!

502-863-0984

brittany.brewer@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

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Disabilities accommodated with prior notification.

## February Cattle on Feed

Tuesday, February 25, 2025

The February Cattle on Feed report was released this past Friday afternoon and reported 11.7 million head of cattle in feedlots on February 1st. This was a 0.7 percent decrease from February 1, 2024. Marketings were up 1.4 percent year-over-year. There were no big surprises in the report relative to pre-report expectations, but there were some interesting points in the report.

Placements of cattle into feedlots during January were up 1.7 percent above January 2024. Weather and winter storms delayed January 2024 placements, so the increase shown for 2025 is partially driven by a lower 2024 number. In 2024, placements were higher in February than they were in January which was the first time that had occurred since 1996. We have not seen those same challenges so far in 2025, but February placements are likely to be impacted by the lingering impacts of the Mexico cattle import ban.

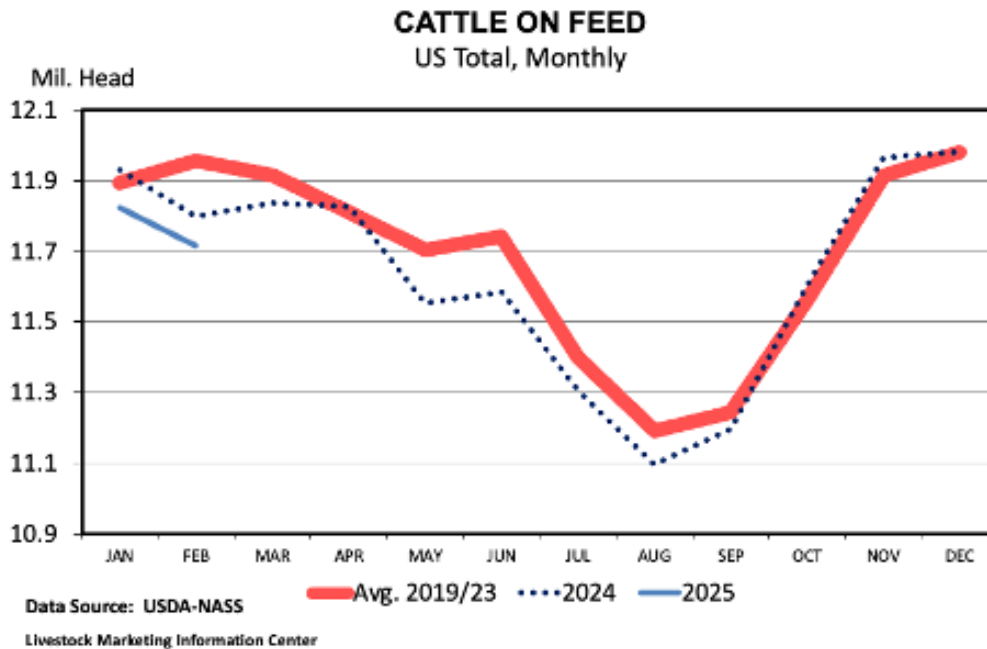
A regional look at the data implies an impact of the Mexico import ban on January placements. January 2025 placements of cattle into feedlots in Texas were 50,000 head lower than a year ago which is a 14.5 percent decrease. This was offset by a 60,000 head (15.4 percent) increase in Kansas and a 30,000 head (5.9 percent) increase in Nebraska during January.

The largest increase in placements was in the 700-799 pound weight range which were up 30,000 head (6.3 percent) from a year ago. Placements were up across all weight classes in Nebraska and Kansas and lower across all weight classes in Texas. Placements of cattle into Texas feedlots weighing less than 699 pounds were down 35,000 head during January compared to a year ago.

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The data mentioned above comes from feedlots with at least 1,000 head capacity. However, another interesting part of the February report is the detail about the distribution of cattle across feedlot sizes. There are 2,105 feedlots with at least 1,000 head feeding capacity. These feedlots housed 83 percent of cattle on feed as of January 1, 2025. The remaining 17 percent of cattle on feed were located across the 24,000 feedlots with a capacity of less than 1,000 head. Of the 1,000+ capacity feedlots, there were 80 that have a capacity of 50,000 head or more, and these were home to 35 percent of the total U.S. cattle on feed on January 1.





# REGIONAL TOBACCO GAP ANNUAL TRAINING

Please bring your GAP card with you so it can be scanned and your attendance recorded.

-  **Tuesday, March 11, 2025**
-  **6:00 - 8:00 pm**
-  **Harrison County Extension Office  
668 New Lair Road  
Cynthiana, KY 41031**
-  **A MEAL WILL BE PROVIDED SO  
PLEASE REGISTER BY CALLING  
859-234-5510**



**Cooperative Extension Service**  
 Agriculture and Natural Resources  
 115 Health Development  
 University of Kentucky, 115 Health Development  
 Lexington, KY 40546

**MARTIN-GATTON COLLEGE OF AGRICULTURE, FOOD AND ENVIRONMENT**  
 The Martin-Gatton College of Agriculture, Food and Environment is a leader in providing research-based information and education to the public. We are committed to providing the highest quality education and research to our students and faculty. We are also committed to providing the highest quality education and research to our students and faculty. We are also committed to providing the highest quality education and research to our students and faculty.



**BOURBON COUNTY BEEF CATTLE ASSOCIATION**

# CATTLE TOWN HALL and QUARTERLY MEETING

Join us for an open panel discussion with Purina Nutritionist- Dr. Chris Forcherio, Central Life Sciences - Brian Hupp, and Zinpro- Jacob Sparkman

Cattle Association meeting to follow the open panel discussion

**THURSDAY, MARCH 27, 2025**

 **6:30 PM**

 **BOURBON CO. EXTENSION OFFICE  
603 MILLERSBURG ROAD PARIS, KY 40361**

**MEAL WILL BE PROVIDED**

Please RSVP to: Steph Crouch 614-286-4516  
 or Bourbon Extension 859-987-1895  
 By 3/20/25

**QUALIFIES FOR CAIP  
 EDUCATION HOURS!!**

# ARC vs PLC Decision for 2025

Author(s): Grant Gardner & Will Snell

Slumping row crop prices have induced greater attention among grain farmers regarding farm bill safety net programs. Congress will be considering a new farm bill once again in 2025, following extensions in 2023 and 2024 of the 2018 farm bill. Eligibility and funding levels for nutrition programs relative to farm program support will steer much of the debate. Within, the farm programs, discussion will evolve around the level of reference (support) prices, base acres, and other payment parameters which ultimately will determine safety net program provisions for crops beyond the 2025 crop year. The farm bill extension passed last December continues the basic structure of the safety net programs established in the 2014 and 2018 farm bills for eligible crops for the upcoming crop year.

The current farm bill provides two programs to provide income support for specified row crops -- the Agricultural Risk Coverage (ARC) and the Price Loss Coverage (PLC) programs. The ARC program provides payments when actual crop revenues fall below a specified guaranteed level, while the PLC program provides payments when the national average market price (or the national average loan rate if higher) for a given covered commodity falls below a specified effective reference price for that commodity. Producers will be required to make an election of ARC vs PLC for 2025 farm bill crops (primarily corn, soybeans, and wheat in Kentucky) at their local Farm Service Agency (FSA) office or they can apply online by the April 15, 2025 deadline. If producers do not submit their election by April 15th, their 2024 election remains in effect. For specific enrollment details on these programs for 2025, [click here](#).

This purpose of this article is to provide some insights and tools that producers can utilize in making their ARC versus PLC decision for their 2025 crops. Several Universities including Kansas State, the University of Illinois, and Texas A&M offer decision tools to aid in the ARC/PLC discussion and are linked at the end of this article. Each tool offers a different user-interface and its own advantages and disadvantages; however, each one can aid in the decision-making process.

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In recent history, Kentucky producers have likely chosen Agricultural Risk Coverage at the County level (ARC-CO) for corn and soybeans. The added protection for low yields in combination with higher commodity prices made PLC unlikely to trigger, and thus, ARC-CO provided the most protection. The current decision for the 2025/2026 marketing year still points to ARC-CO being the best for beans; however, the lower price environment creates trade-offs for corn and wheat.

In general, ARC still offers the most protection to deep losses due to its protection over falling yields as well as price; however, PLC may cover more shallow losses due to price loss alone. To put this simply, PLC could result in higher payments should county yields be average or above and prices drop where ARC will offer higher payments if county yields fall below average. The April 15th decision date throws another wrench as we have more time (compared to our usual March 15th deadline) to collect information and estimate the season average price. We will know more about potential season average prices, particularly for corn after the release of the Prospective Planting report on March 31st as well as the potential impacts of tariffs. In general, current results point to ARC-CO enrollment which offers more protection over yield losses; however, if prices drop drastically between now and April 15th it may be beneficial to change to PLC enrollment option near the deadline.



## Empowering Your Workforce and Their Families – Partner with Us!

With the **Migrant Education Program (MEP)**, you can provide life-changing support to your workers while strengthening your business and community impact.



### Top 4 Benefits for Employers:

1. **Higher Employee Retention** – Keep experienced workers by showing you care about their families.
2. **Boosted Productivity** – Workers with less stress about family needs perform better on the job.
3. **Skilled Future Workforce** – Education for children ensures better opportunities for the next generation.
4. **Regulatory Compliance** – Ensure alignment with labor laws and educational support requirements.

Partner with us and join a growing network of agricultural leaders making a difference!

### About the Migrant Education Program (MEP):

- We specialize in providing educational services to migratory agricultural workers and their families. Together, we create opportunities for success, both on and off the field.
- Our Services for Families Include:
  - Free Tutoring & Mentorship – For children of all ages to keep up academically.
  - Parent Education Workshops – Empowering families to navigate school systems and resources.
  - School Enrollment Assistance – Ensuring children are ready and equipped for success.
  - Bilingual Support – Helping families communicate effectively with schools and service providers.
  - Free Educational Materials – From books to technology resources, we bridge gaps in learning tools.

### Exclusive Employer Benefits:

- **Customizable Family Support Plans:** Tailored services to meet your employees' specific needs.
- **Dedicated Partnership Team:** Ongoing support to ensure smooth program integration.
- **Positive Business Image:** Gain recognition for supporting worker and family wellbeing.
- **Workforce Development Opportunities:** Training for adult workers or older youth transitioning into different roles.

Ready to make a difference? Contact us today!

Kassandra Benitez Wagoner

Cell Phone: (859) 298-4694

Email: [Kassandrabenitez@bourbon.kyschools.us](mailto:Kassandrabenitez@bourbon.kyschools.us)



Scan these QR codes for more information!

# What Limits Yield- The Source or the Sink? Does it Matter?

Dr. Dennis B. Egli, University of Kentucky

Crop physiologists often analyze the yield production process in grain crops by dividing the process into two components – the source and the sink. The source is the photosynthetic machinery that supplies the raw materials and energy for plant growth. The sink is the seed that utilizes simple sugars from the source to grow. This simple division helps us understand a very complex system and makes it easier to determine what is limiting yield. If yield is limited by the source (photosynthesis), efforts to increase yield should focus on increasing photosynthesis. If the size of the sink (number of seeds per acre) is limiting, increasing photosynthesis will do no good – the number of seeds must be increased.

Source vs sink seems like a simple system – its either one or the other. Unfortunately, it is not nearly as simple as it seems. Analysis of plant growth and yield production is rarely simple. Generally speaking, yield is source limited. The size of the sink (seeds per acre) is determined during flowering and seed set by the supply of simple sugars from photosynthesis (the source). Matching seed number to source activity adjusts the reproductive output of the crop to the productivity of the environment and usually prevents a sink limitation. This adjustment occurs between growth stages R1 (initial bloom) and R5 (beginning seed fill) in soybean and from roughly 10 to 15 days before to 20 days after silking in corn.

High photosynthesis during this period usually results in a large number of seeds and high yield, while low photosynthesis results in fewer seeds and lower yield. The source is in control during this period. The crop can usually tolerate some stress during vegetative growth, but stress that reduces photosynthesis during the critical period will reduce sink size (seed number) and yield.

As promised, there are exceptions to this simple source limitation. If your corn population is too low, there will not be enough flowers on the ear(s) to handle all of the simple sugars from photosynthesis and the crop will be sink limited. The source could support more seeds, but there are not enough flowers. The number of seeds limits yield.

Soybean is not sink limited during flowering and seed set. The soybean plant is flexible, it responds to the supply of simple sugars from photosynthesis by producing branches with more nodes and more flowers increasing sink size. Fifty percent flower and small pod abortion in high-yielding soybean crops shows that the potential sink size is much larger than the actual sink size. There is no sink limitation.

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Corn is sink limited at low populations because corn lacks the flexibility to increase the number of flowers to match the supply of simple sugars. Over the years breeders favored single-ear hybrids which reduced corn's flexibility and made it susceptible to sink limitations. Corn producers increase the number of flowers per acre to avoid sink limitations by increasing population. The plant does the adjusting for soybean producers.

Corn populations increased steadily since the beginning of the high input era (~1940) to avoid sink limitations as productivity increased. Soybean populations, in comparison, stayed constant and, in recent years, declined, as the plant increased flower number to avoid a sink limitation. This difference is due to the flexibility of the plant or the lack thereof.

Most corn producers prize ears that are filled to the tip at maturity. Completely filled ears (there was no flower or small seed abortion) can indicate high yield or they can indicate a sink limitation (population was too low) with yield left in the field because there were not enough flowers. Unfortunately, there is no uncomplicated way to determine if well-filled ears are good news or bad news.

Crops are normally source limited (assuming adequate corn populations) during the critical period for seed number determination, but what about seed filling? Determining seed number is only the first part of the yield production process – the seeds still have to grow to their mature size. Source sink relationships during seed filling often depend upon changes in the environment.

Seed number will be in balance with the capacity of the crop to fill the seeds if the environment doesn't change from the critical period for seed number determination through seed filling. A productive environment that is maintained until maturity will produce large numbers of seeds and fill them to their normal size. What if the environment changes after seed number is fixed? If the environment deteriorates (i.e., the rains stop, for example, and source activity is reduced), there will not be enough simple sugars to fill the seeds and the seeds will be smaller and yield will be reduced. Sink size was set too large for the deteriorating source during seed filling. In other words, plants don't always get it right because they can't predict the weather.

What if the environment improves after seed number is fixed (i.e., rains come after a dry critical period)? Now the source is larger than the sink and the capacity of the individual seed to respond to the larger supply of simple sugars will determine what happens to yield. The crop will be sink limited if the seed cannot respond to the increase in the supply from the source. If the crop cannot convert the increase in source activity during seed filling into higher yield, yield will be sink limited. Corn seeds often fall into this category.

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If the seed can respond to the increase in source activity during seed filling, seeds will be larger, and yield will be increased. Soybean seeds fit into this category; improved conditions during seed filling often result in larger seeds and higher yields (i.e., the crop is source limited).

The response to improved environmental conditions during seed filling is always limited by the physical characteristics of the seed and pod. All seeds have a maximum potential size – after all you can't expect to find a golf ball in a soybean pod, so there is a limit to how much yield can be recovered when the environment improves after stress reduces seed number. 12

But as often happens in life, there is no downside limit – there is no limit to how much stress during seed filling can reduce seed size and yield in both corn and soybean. Thinking about sources and sinks helps us better understand the yield production process. It provides us with insights into the response of crop productivity to the environment, the effect of population on crop yield and many other aspects of crop yield. These insights lead to more informed management decisions that ultimately improve the bottom line.

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### March Tips & Tidbits

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

**Weed Control**  
Identify weeds and select the appropriate herbicide to control those weeds for a weed-free pasture.  
For optimum control, adequate moisture along with temperatures at 60°F will be needed for several consecutive days.  
Control of common weeds such as: chickweed, field pennycress, bull thistle, yellow rocket, common burdock, poison hemlock, buttercup, common yarrow, curly dock, wild garlic, and plantain as well as other common weeds.  
See UK College of Agriculture, Food and Environment publication *Weed Management in Grass Pastures, Hayfields and other Farmstead Sites* (AGR-172) for more information.

**Getting Ready to Ride**  
Consider how long your horse has been on winter vacation. Start slowly at low speeds until the animal is back in condition.  
Avoid increasing the speed of the work, the time spent working, or the distance you travel at the same time.  
Examine your horse's feet. Are they in adequate shape, or do they need additional care to get them prepared for the extra stress of riding?

**Will you need to have your horse shod?**  
As the horse acclimates to a new daily routine, monitor the BSC score to evaluate if you need to make changes in your feeding or conditioning programs.  
Remember to start your horse's fitness program early to allow enough time to prepare for the season's activities.  
Make sure your horse's health papers are up to date.  
Check all tack and equipment. Before fully returning to activity, make sure all tack and equipment has been cleaned and conditioned, and make any repairs that are needed. It's best to find problems and make repairs before you start riding.

**Pregnancy Checks**  
Have the first pregnancy check done within 14 to 18 days after mare's last breeding by a veterinarian via trans-rectal ultrasound.  
If the mare is not pregnant, she will be coming back into heat, and a check at this time will allow for adequate time to set up another breeding for the mare.  
Have another check done around 40 days. This check is important because fetal membranes attach to the endometrium and endometrial cups form around day 35.  
Monitor the mare during pregnancy for any unusual discharge or her udder developing too soon before parturition.

# Plate it Up

## Kentucky Proud Recipe



### Dijon Chicken Asparagus Roll Ups

<b>3 tablespoons</b> Dijon mustard	<b>2 teaspoons</b> dried thyme	<b>4</b> skinless, boneless chicken breast halves (about 5 ounces each)
<b>½ cup</b> low fat mayonnaise	<b>2 teaspoons</b> black pepper	<b>4</b> slices skimmed mozzarella cheese
<b>1</b> lemon, juiced (approximately 3 tablespoons)	<b>½ teaspoon</b> salt	<b>1 cup</b> panko bread crumbs
	<b>16</b> spears fresh asparagus, trimmed	

**Preheat** oven to 400 degrees F. **Grease** an 11-by-7-inch baking dish. In a bowl, **mix** together the mustard, mayonnaise, lemon juice, thyme, salt and pepper; set aside. **Place** asparagus in a microwave safe dish and **microwave** on high 1-1½ minutes. **Place** chicken breasts between two sheets of heavy plastic (a re-sealable freezer bag works well) on a firm surface. **Pound** the chicken breasts with the smooth side of a meat mallet to thickness of ¼ inch. **Place** one slice of cheese and four asparagus spears on each breast. **Tightly roll** the chicken breasts around the asparagus

and cheese. **Place** each, seam side down, in the prepared baking dish. **Apply** a coating of the mustard mixture to each chicken breast and **sprinkle** each with the panko crumbs, **pressing** the crumbs into the chicken to secure. **Bake** 35 minutes or until the chicken temperature is 165 degrees F. For crisper chicken, **place** roll-ups under the broiler for 1-2 minutes on high.

**Yield:** 4 servings

**Nutritional Analysis:**

370 calories, 10 g fat, 3.5 g saturated fat, 115 mg cholesterol, 1060 mg sodium, 2 g fiber, 2 g sugars, 41 g protein.

## Kentucky Asparagus

**SEASON:** April through May.

**NUTRITION FACTS:** Asparagus is a good source of vitamin A and folate. One-half cup of fresh, steamed asparagus has 22 calories, 2 grams of protein and 4 grams of carbohydrate.

**SELECTION:** Choose bright green stalks with tightly closed tips. The tenderest stalks are apple green in color with purple-tinged tips.

**STORAGE:** Fresh asparagus will keep 1 week or more in

the refrigerator. Store upright with cut ends wrapped in wet paper towels in a plastic bag.

**PREPARATION:** One pound of asparagus will yield 4 one-half cup servings, about six spears per serving. Wash asparagus thoroughly in cool, running water. Eat asparagus raw or lightly boil, steam, stir-fry or grill. Overcooked asparagus will be mushy. Try seasoning it with herbs, butter or Parmesan cheese.

**KENTUCKY ASPARAGUS**

**Kentucky Proud Project**  
County Extension Agents for Family and Consumer Sciences  
University of Kentucky, Dietetics and Human Nutrition students  
**March 2017**

**Source:** [www.fruitsandveggiematter.gov](http://www.fruitsandveggiematter.gov)

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<http://plateitup.ca.uky.edu>



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