



# OFF THE HOOF



Cooperative Extension Service  
University of Kentucky

**Beef IRM Team**

**KENTUCKY BEEF CATTLE NEWSLETTER SEPTEMBER 3, 2024**

*Each article is peer-reviewed by UK Beef IRM Team and edited by Dr. Les Anderson, Beef Extension Specialist, Department of Animal & Food Science, University of Kentucky*

This month's newsletter includes:

Timely Tips – Anderson

Variable Rate Frost Seeding Evaluated at UK Research and Education Center – Teutsch, Roper, Hendrix

US Hay Production Expected to Increase Again in 2024 – Burdine

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Lungworms and Acute Respiratory Distress Syndrome in Cattle – Arnold

## Timely Tips

*Dr. Les Anderson, Beef Extension Professor, University of Kentucky*

### Spring-Calving Cows

- Bulls should have been removed from the cow herd by now! They should be pastured away from the cow herd with a good fence and allowed to regain lost weight and condition. It is a good time to evaluate physical condition, especially feet and legs. Bulls can be given medical attention and still have plenty of time to recover, e.g., corns, abscesses, split hooves, etc. Don't keep trying to get open spring cows bred – move them to fall calving or sell them when they wean this year's calf. If you don't have a bull pen and want to tighten up the calving season, remove the bull and sell him. Plan on purchasing a new bull next spring. If that is not feasible, then schedule your veterinarian to pregnancy diagnose the herd and cull cows that will calve late.
- Repair and improve corrals for fall working and weaning. Consider having an area to wean calves and retain ownership for postweaning feeding rather than selling "green", lightweight calves. Plan to participate in CPH-45 feeder calf sales in your area.
- Limited creep feeding can prepare calves for the weaning process since they can become accustomed to eating dry feed. This will especially benefit those calves which you are going to keep for a short postweaning period – like the CPH-45 program. It's time to start planning the marketing of this year's calf crop.
- Begin evaluating heifer calves for herd replacements – or culling. Each time you put them through the chute you can evaluate them for several traits, especially disposition. Consider keeping the older, heavier heifers. They will reach puberty before the onset of the breeding season and have higher conception rates.
- This has generally been a reasonably good year for pastures, but many parts of the state have experienced some drought. Evaluate moisture condition and consider stockpiling some fescue pastures. It's not too late to apply nitrogen for stockpiling fescue if moisture conditions are suitable.
- Stresses associated with weaning can be minimized by spreading-out other activities commonly associated with weaning – like vaccinations, deworming and, perhaps, castration and dehorning.

# Economic & Policy Update

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## To Store or Not to Store? Old Crop Exit Strategies

Author(s): Grant Gardner & Ryan Loy

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The June Grain Stocks report indicated 37% more corn and 44% more soybeans stored on-farm than last year, indicating that many producers still have grain in storage (Maples, 2024). Some of this stock has likely been sold, but many producers are still sitting on old crops, trying to determine whether to hold through harvest or sell. In this article, we discuss three facets of this decision: cutting losses (e.g. selling now), storage with an operating loan, and storage with cash flow using a hypothetical situation.

Assume that farmer Ethan is deciding what to do with 100,000 bushels of corn, and the cash price is currently \$4.00. He could sell, collect \$400,000 today, and use that cash to cover expenses in other areas of the operation. Or, he could also store those bushels on-farm using an operating loan or cash flow (working capital).

Using an operating loan, Ethan must continue to utilize \$400,000 (100,000 bushels × \$4.00) at a 9% interest (current rates). As prices will typically be lower at harvest due to new crop supplies, he is prepared to sell the grain in February, expecting prices to rise (6 months). Ethan's interest expense on the loan would come out to \$18,000 ( $\$400,000 \times 0.09 \times (6/12)$ ). Dividing that by 100,000 bushels, his per bushel expense is \$0.18 (\$0.03/bushel/month), meaning prices would need to increase to at least \$4.18 to pay the interest-only portion of the storage expense. Ethan would also incur forgone interest expense by storing, which is the opportunity cost of a delayed sale. Forgone interest amounts to \$0.09/bu ( $\$0.015/\text{bu}/\text{mo}$ ) in this case, which is calculated using the current CD rate of 4.5% ( $\$400,000 \times 0.045 \times (6/12)$ ). If Ethan were to account for their delayed sale (\$0.09/bu) and the interest expense of storage (\$0.18/bu), corn prices would need to increase to at least \$4.27 to pay both the direct interest expense and the opportunity cost of storing.

The final option is for Farmer Ethan to fund some of the storage using cash. As Ethan funds more of the loan using his funds, interest costs decline. If he funds all the storage with cash, his interest expense is \$0.00. However, he would still incur the forgone interest expense of \$0.09/bu. The downfall of this method is that Farmer Ethan now has less cash on hand to fund other areas of his operation.

According to farmer Ethan's hypothetical, cutting losses or storing through harvest could be viable options for producers sitting on old crops; however, we do not know how 2024/25 marketing year prices will unfold. Futures prices and basis will likely remain low as we move closer to harvest. The choice to store or sell is highly dependent on the operation. Sometimes, making sales is the best decision because it moves focus to the next marketing year, especially if an operation does not have enough storage to hold old crop stocks and new crop supplies.



In conclusion, it is worth noting that this analysis only looks at interest expenses and touches on forgone interest (opportunity cost of storage). It does not account for other expenses that occur with storage, such as quality losses, grain handling, and capital recovery. Interest rates may also improve shortly, as the Federal Reserve has discussed lowering the federal funds rate by a half or quarter percentage point in September (CME, 2024). Finally, prices may not increase by February, and all storage could result in a loss. All grain storage calculations and further discussion of interest rate impacts on storage costs are explained in Gardner (2023).

#### Sources

Maples, William E. "[Having a Way Out.](#)" *Southern Ag Today* 4(30.1). July 22, 2024. Permalink

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## Fall Frost and Freeze Information for The Bluegrass State



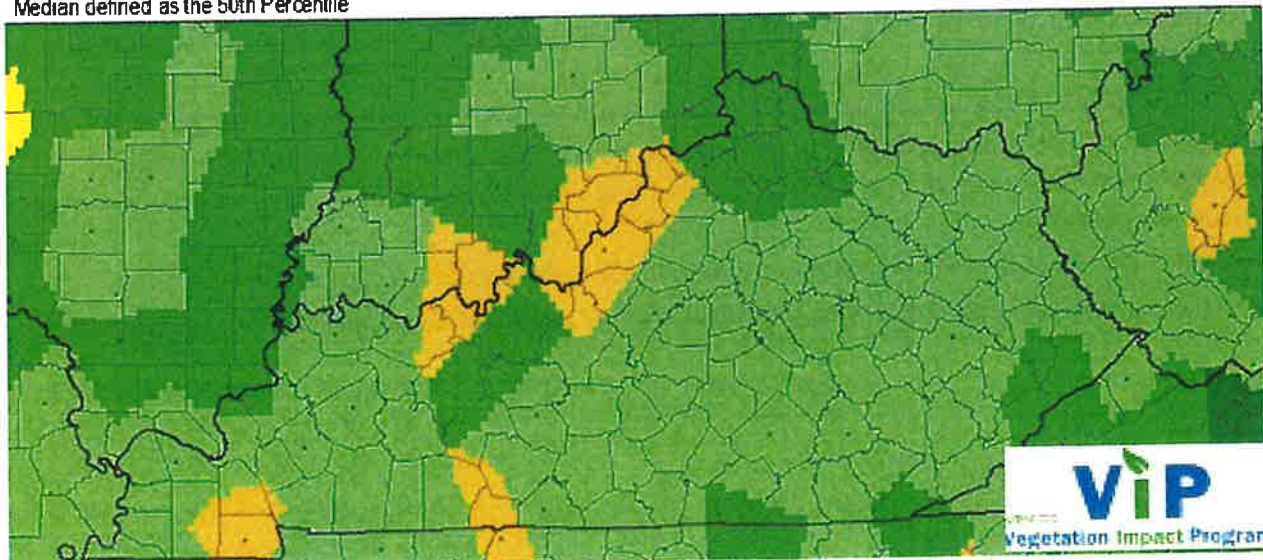
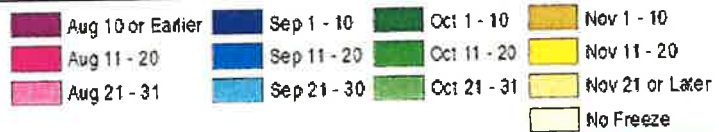
By Derrick Snyder – National Weather Service Paducah, KY

As we move through the month October, the risk of crop-killing frosts and hard freezes will quickly increase. The National Weather Service office in La Crosse, WI, compiled the following list of meteorological conditions that can lead to frost conditions:

- Clear skies lead to radiational cooling, allowing the greatest amount of heat to exit into the atmosphere.
- Calm to light winds prevent stirring of the atmosphere, which allows a thin layer of super-cooled temperatures to develop at the surface. These super-cooled temperatures can be up to 10 degrees cooler than five to six feet above the surface, where observations are typically taken. This is why frost develops even when reported temperatures are a few degrees above freezing.
- Cool temperatures, with some moisture, that promote ice crystal development. If the supercooled, freezing temperatures can cool to the dew point (the temperature at which, when cooled to at constant pressure, condensation occurs; moisture will have to come out of the atmosphere as fog, frost, etc.) frost could develop on exposed surfaces.
- Local topography also has a large role in determining if and where frost develops. Cold air will settle in the valleys since cold air is heavier than warm air, therefore frost conditions are more prone in these regions. Valleys are also sheltered from stronger winds, enhancing the potential for frost.

Other local effects, such as soil moisture and temperature, and stage of vegetation "greenness", are factors that can affect the possibility of frost forming. The Midwest Regional Climate Center has put together a map of when Kentucky can typically expect to see the first 32 degree freeze of the season. The great majority of the commonwealth will see the first hard freeze during the last 10 days of October, but this can vary a week or two sooner or later depending on the set-up for that particular year.

Climatological Date of Median First 32°F Freeze  
 For years 1990-91 to 2019-20  
 Freeze year beginning July 1st  
 Median defined as the 50th Percentile



## Return of the Fall Armyworm? – University of Kentucky - 2024

In 2021, Kentucky was one of many states that were impacted by a historic outbreak of fall armyworms. That year marked perhaps the worst year for the pest since the 1970's and has inspired fear and dread about these hungry, hungry caterpillars rearing their head again. In the past week, reports from western and central Kentucky have indicated that some folks are seeing egg masses and fall armyworms in turfgrass areas. The sudden onset of fall armyworm in 2021 created temporary shortages of effective insecticidal remedies. Reports from UKY entomologists indicate we are not at the same levels as in 2021 but it is prudent to review how this pest works and what can be done about it.

### Fall armyworm and Kentucky

Fall armyworms do not overwinter in this state. They are a tropical species, and they typically overwinter in southern Florida and southern Texas. These spots stay warm enough for them to persist and then mate to start the generations that will migrate northward as moths. They usually move from these warmer states into states like Mississippi and Alabama in April and May, arriving next in Tennessee by May or June. Typically, they start to appear in Kentucky by June.

In the bluegrass state, fall armyworms are usually associated with issues in pastures and crops (Figure 1). In this state and others, they will cross over into the home landscape to feed on turf in lawns. Initially when they feed, the tips of the blades of grass will have windowpane-like damage. As the caterpillars grow, they will progress into consuming whole blades of grass. The term "armyworm" also comes from the fact that these pests move in a group across the grass, creating a distinct line of damage opposed to undamaged grass. Newly planted sod is more susceptible to being killed by these pests than established turf areas. **What should you do now?**

Keep a close watch on your pastures/hayfields for egg masses and armyworms over the next few weeks. Egg masses may be laid on any outdoor surface and have a fuzzy covering. The eggs themselves are small and round, less than 1/8 inch in diameter. If you have 2-3 caterpillars per square foot or more, then

you should consider spraying. In other words,

these numbers will likely mean you will have considerable damage to late summer/fall growth in your pastures and hayfields. Fall armyworms have a characteristic inverted 'Y' on their headcap (Figure 2). Fall

armyworm is a sporadic late summer fall pest of alfalfa and mixed stand pastures. Best time to scout for this pest is in the early morning as they hide from the sun at mid-day. Soapy water drenches can be used to flush larvae from the soil at any time. Control should be considered if 2 to 4 larvae per square foot are found.

A potential alternative to insecticide application for hay crops near harvest stage, is to mow the crop IMMEDIATELY. Unfortunately, waiting 2 or 3 days for good curing conditions is not an option since armyworm defoliation is so rapid. Once cut, the conditions in the mowed forage become less conducive for the armyworm.

Check with your ag supplier about their current availability of insecticides. A copy of the labelled insecticides is found in Figure 3. Pyrethroids such as Warrior work best on small larvae (less than ¾ inch),

while diamides such as chlorantraniliprole works better on larger ones. Always be sure that the crop to be protected is on the label of the pesticide to be used.

Fall Armyworm Insecticides	MOA Group	Graze/harvest – Pre Harvest Interval (days)
carbaryl - Sevin XLR, Sevin 4F, etc.	1A	7 for alfalfa (May temporarily bleach tender foliage) 14 days for pasture and grasses for hay
methomyl - Lannate	1A	7 days for grazing or hay (alfalfa)
bifenthrin – Brigade 2E	3A	Not for use on alfalfa 30 days for forage and hay
<i>b</i> -cyfluthrin - Baythroid XL (1 <sup>st</sup> and 2 <sup>nd</sup> instars only)	3A	1 day forage 7 days for hay (alfalfa) 0 day forage, 7 days for hay (pasture grass)
<i>g</i> -cyhalothrin – Declare, Proaxis EC	3A	1 day forage 7 days for hay (alfalfa) 0 day forage 7 days for hay (pasture grass)
<i>l</i> -cyhalothrin – Warrior II	3A	1 day forage 7 days for hay (alfalfa) 0 day forage, 7 days for hay (pasture grass)
<i>α</i> -cypermethrin – Fastac EC	3A	3 days for cutting or grazing (alfalfa)
<i>z</i> -cypermethrin – Mustang Maxx	3A	3 days for cutting or grazing (alfalfa) 0 days for cutting or grazing (grass forage and hay)
permethrin – Ambush, Permethin 3.2 AG	3A	0 or 14 days depending on rate used (alfalfa only)
pyrethrins - PyGanic	3A	0 day forage/harvest
Spinosad - Entrust	5	0 days for forage, 3 days for hay
Bt products - Agree WG, Biobit HP, DipelDF, Javelin	11	0 days
methoxyfenozide – Intrepid 2 F	18	0 day forage, 3 days for hay (alfalfa) 0 day forage, 7 days for hay (Grass forage, fodder and hay)
chlorantraniliprole – Coragen, Prevathon, Vantacor	28	0 day alfalfa 0 day for grasses grazing or hay

Figure 3. Fall armyworm insecticides, their mode of action (MOA) and the graze/harvest-preharvest interval (days). From ENT-17, University of Kentucky.

### For the future

In terms of the future, fall armyworm will remain a threat until the first frosts of the fall. Cold weather in the fall and winter kills this insect. It can only overwinter in the extreme southern parts of the United States and re-infests the state each summer.

Watch for updates on this developing pest situation in notices from your Cooperative Extension Office, this publication, in UKY Pest News Alert (<https://plantpathology.ca.uky.edu/extension/kpn>) and UKY Forage News (<https://kyforagenews.wordpress.com/>).

Note: Jonathan Larson and Ric Bessin, both UKY entomologists, contributed significantly to this article.





Figure 1. Typical fall armyworm damage in a young orchardgrass stand.



Figure 2. Two large fall armyworm larvae forced out of the ground by a soapy water drench. Note the inverted 'Y' on the headcap of the larvae on the right.