K-STATE Research and Extension | Meadowlark District

January 30, 2026

David Hallauer
District Extension Agent, Crops & Soils

Freezing Temperatures and Insect Life

When attempting to find something good from winter cold snaps, it's not uncommon to hear well maybe it will get rid of some insects. It's a nice thought – but results could be mixed.

Insect death by freezing is often attributed to ice crystal formation in the body (bursting cells result in organ and gut damage) more so than actual temperature, and insects often have mechanisms to mitigate even those issues. Some survive a low level of ice crystallization by producing proteins to 'control' the freezing process. Others go through 'dry hibernation', ridding their body of all food/water so ice crystals can't form inside the body. They're adaptive.

Some will hide – and often do so successfully. Bean leaf beetles overwinter in more exposed areas than other insects and succumb to temperatures into the 20s. Recent temperatures *might* effect on them, depending on how protected of a hiding spot they might have found.

University of Minnesota work suggests soil surface temperatures around 13 degrees can result in 20-30 percent alfalfa weevil mortality (some survive down to one degree). That provides a *little* hope – but not enough to skip scouting. Kansas Mesonet Station temperatures across the District are all in the low 30s. If they provided enough surface level buffering, temperatures still might not have reached a lethal level and likely are *not* low enough to affect soil overwintering insects like wireworms or Japanese Beetles.

Also, like humans, many insects migrate south in winter. Fall armyworm, black cutworm and corn earworm prefer warmer winter climates, migrating north during the growing season. Only if overwintering areas see injurious temperatures will we tend to see much effect on our growing season levels – and even then, it's highly variable.

While there *could* be a detrimental effect on insect life from recent cold snaps, we likely haven't seen temperatures cold enough (for long enough) yet to support the idea of a reduction in insect life next season. On the fortunate side, however, if the damaging insect has survived, it's likely beneficials have as well and that's good news for insects like parasitoids and other natural predators that can help us keep damaging pests at bay.

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Ross Mosteller
District Extension Agent, Livestock & Natural Resources

Replacement Heifer Selection

The discussion of record low cow inventory, beef supply and heifer retention is one that has been circulating for many years now it seems. The decision to retain heifers for breeding or market them as feeders is also an ongoing debate. As spring mating decision time approaches, deciding on which heifers are likely candidates for the replacement pen is a timely topic.

Selecting the heifers that will have the optimum mature size, potential to breed quickly, annually wean a calf and stay in the herd past the point of profitability is important. Many traits can come into play to evaluate, but here are a few to consider. As we build back the national cowherd and with the price of feeders where they are, stringent culling will pay dividends.

Early puberty is a good trait to look for, as it typically relates to increased fertility. The younger a heifer begins to cycle, the better her chances of conceiving in time to calve by twenty-four months of age. Early puberty is moderately to highly heritable and positively related to future reproductive efficiency. Reproductive tract scoring can be used to evaluate puberty status. Reproduction is one of the most economically important traits and fertility should be a priority. Heifers should have sixty percent or better first service conception and with a goal of ninety percent or better in a sixty-day breeding season. Heifers who calve in the first twenty-one days of calving season have increased longevity and wean more pounds over their lifetime.

Evaluating replacement heifers for structural soundness should include the evaluation of feet, legs and eyes as soundness contributes to longevity in production. Easy fleshing heifers typically are more structurally sound, are wider based and are deeper bodied with a bolder spring of rib. Fleshing ability lends itself to breeding females that better maintain body condition and energy reserves on limited feed resources.

Moderation of frame, while maintaining good growth rate, should be the goal of an acceptable replacement heifer. My Grandfather always said driving in the middle of the road avoids the ditches and the same is true with frame. That being said, there is an optimum mature cow size relative to the production environment. Keep in mind, puberty is a function of age and weight. The target weight of yearling heifers is sixty to sixty five percent of their mature size.

Often a concern with frame moderation is calving difficulty. The reality is that pelvic area measurement is a better tool for reducing dystocia than frame size alone. Pelvic area measurement is taken in square centimeters by using a tool to measure the height and width of the pelvis. Larger heifers don't necessarily have larger pelvic areas, so measuring is the best predictor of calving ease. A general rule of thumb is that dividing a heifer's adjusted yearly pelvic measure by 2.1 gives you a general idea of the size of calf she'll be able to deliver.

A couple other considerations are disposition and mammary structure. Disposition is a moderate to highly heritable trait. Heifers with bad dispositions or those out of cows with bad dispositions should be candidates for culling. It can be difficult to assess udder potential in heifers, but considering the udder and teat structure of the dam is a good idea. Keeping heifers from cows with large teats and pendulous udders is not advised.

University research data shows that heifers born early in the calving season will be better candidates as productive females. Heifers born late in the calving season or less than thirteen months old at the start of the first breeding season will likely have greater challenges conceiving, rebreeding and sustaining as productive cows. Good luck in selecting the best possible heifer replacement for your operation.

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Laura Phillips
District Extension Agent, Horticulture

Local Food Producer Workshop Comes to Holton

Each year K-State puts on Local Food Producer workshops across Kansas to connect farmers market managers, vendors, and producers to our local food resources. This year, for the first time, we are bringing the workshop to Holton on February 20th at the Jackson County Fairgrounds (Northeast Heritage Complex).

These workshops feature informational sessions from the KDA on rules and regulations around farmers markets and small business. This includes a session on Senior Farmers Market Nutrition Program so that local vendors can accept Senior Farmers Market Nutrition Coupons. We will also certify any scales you may use when weighing goods to sell.

In the afternoon, the workshop will have a presentation on our Value-Added Foods Lab. Value added agriculture products are goods that have been processed or have ingredients added to make them more readily usable. This includes canning, freeze drying, and more. We also have sessions on using social media to advertise your market or business, and post-harvest food safety methods.

Lastly, we will host a facilitated discussion for local vendors and market managers to network with each other. If you are a local food producer, a market manager, or a market vendor, this will be a great opportunity to meet with other producers and markets in your area.

Everyone is welcome to attend, from prospective food producers to veteran market managers. Registration is required and the cost of attendance is $25 (this includes the cost of lunch). If you or anyone you know would like to register for the event, please contact any of the Meadowlark Extension offices or reach out to me directly. You can also register online by going to our website and navigating to the horticulture tab.

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Teresa Hatfield
District Extension Agent, Family and Community Wellness

Dining with Diabetes Program to be Offered in Holton

Dining with Diabetes is a series of four educational classes conducted by trained K-State Research and Extension agents. The program helps individuals learn to better manage diabetes through menu planning, understanding carbohydrates, portion control, and reading food labels. The information is valuable for people with Type 2 diabetes, as well as family members and caregivers.

The sessions will be held at Evangel Church in Holton on February 17 and 24, and March 3 and 10, 2026, from 10:30 a.m. to 12:30 p.m. Participants will gain knowledge and confidence to better manage diabetes and improve their overall health.

For many people living with diabetes, everyday food choices, portion control, and adding physical activity can feel overwhelming. Dining with Diabetes helps participants understand how the foods they eat affect blood sugar levels and teaches realistic strategies for making wise, healthy decisions. Each session builds on knowledge gained in previous classes.

Participants will also learn ways to reduce the risk of diabetes-related complications such as heart disease, kidney failure, vision problems, and peripheral neuropathy. The program offers suggested lifestyle changes that can improve blood sugar control and overall quality of life.

Dining with Diabetes features interactive lessons, cooking demonstrations, and food tastings that show healthy meals can be both practical and enjoyable. Sessions also provide opportunities for participants to ask questions, share experiences, and learn alongside others facing similar challenges.

The program is open to adults with diabetes, as well as caregivers and family members who help plan or prepare meals. Participants are encouraged to attend all four sessions to receive the greatest benefit.

For more information about the Dining with Diabetes program or to register, contact the Holton Extension Office at 785-364-4125.

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Cindy Williams
District Extension Agent, Food, Nutrition, Health and Safety

Making Plans for the Future

Why is the process of writing a will so daunting? Survey says only 35% of Americans have put their final plans in writing. There must be a reason.

Conversations indicate there are usually actually several reasons why many of us keep postponing writing a will:

- Death is not something that excites most people. Some people avoid the process of making the final plans as their way of avoiding or delaying the inevitable.
- Most of us perceive writing as being expensive and complicated. But the reality is if you don't write your own will, the courts impose the state's distribution formula. Who do you want to decide how your lifetime of work will be shared---yourself or a judge?

  After spending a lifetime of accumulating hard worn assets (all while you've been paying taxes, it seems only fair to spend a few more hours determining how your estate will be distributed. Your assets may go in 3 places—to your heirs, a charitable organization, or to Uncle Sam. You decide. The decision. The decision is yours, but you need to invest some time and thought and then work with an attorney. It is far better to plan now than to leave that responsibility to your survivors.