

# Celebrating 100 years of beef research at Princeton center

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In the mid-1920s, a determined group of Caldwell County residents took a bold leap to reshape agriculture in Western Kentucky. Pooling their resources, they purchased 400 acres of farmland near Princeton and invited the University of Kentucky to establish a forward-thinking experiment substation dedicated to crop and livestock research.

Although tobacco and soil fertility captured headlines at first, the community had something else squarely in its sight: beef cattle. From the very beginning, the promise of bigger, healthier herds fueled a pioneering spirit that would go on to transform the region's farming landscape.

When the West Kentucky Sub-Experiment Station opened in 1925, the very first facilities included a dairy barn and modest paddocks. While dairying dominated the early livestock projects, extension agents and local producers began pushing for more research on beef cattle management, health and feeding strategies.

In 1928, the station launched its first beef-centered trial by introducing small groups of yearling steers onto improved pastures. Researchers tracked weight gains and profitability, using fields that were carefully limed and reseeded with clover. The results were dramatic: Cattle on these improved plots gained far more than those on unimproved, weedy pastures. Those findings demonstrated how better grazing practices could bolster beef production in an era



Photo furnished

**In 1928, the station launched its first beef-centered trial by introducing small groups of yearling steers onto improved pastures.**

when local pastures were often nutrient-poor.

By the early 1930s and '40s, Princeton had expanded its beef work to include many studies such as feedlot-style "fattening" trials and more partnerships with surrounding producers. Fattening improvements involved better pastures.

Samual Lowry, the facility's first superintendent, stated that "It is my belief that our brightest ray of hope for any marked increase in the agricultural wealth of Kentucky will be found in further development of our livestock industry, following the development of better pastures, and that the average farmer will of necessity be led to produce better pastures."

In 1961, the station started a purebred Hereford breeding herd, a popular beef breed at the time. Establishing a purebred herd signaled that UK's Research and Education Center (UKREC) would be a source of improved beef genetics and breeding insight for Kentucky producers. The herd allowed researchers to

conduct breeding trials, evaluate cow-calf management under Western Kentucky conditions, and raise bulls for testing.

In 1962, almost immediately after the Hereford herd was formed, the facility hosted Kentucky's first performance-tested bull sale. This annual "Princeton Bull Sale" became a celebrated event for the next two decades, where bulls from the station's herd (and later from cooperating breeders) were sold to farmers based on measured performance.

The 1970s and '80s ushered in a new era of comprehensive beef research. In those years, faculty and staff recognized that a robust, uniform and well-managed herd was essential for meaningful science.

"Our cattle herd back then was all over the place — different ages, breeds, you name it," said Roy Burris, emeritus faculty in the Beef Center of Excellence.

The turnaround really gained steam in the early 1980s under new leadership and vision. Researchers and farm managers worked to

develop a more uniform, well-managed herd (Herefords were being replaced by Black Angus) that would serve as a reliable platform for experiments.

"We essentially rebuilt the herd from the ground up," Burris said. "They shortened the calving season so that calves were born in a tight window, and they introduced performance-based culling to remove poor producers. Over time, the Princeton herd became known for its uniformity and health and surprised a lot of people."

Expanding research: Preconditioning and nutrition

With a solid herd in place, UKREC expanded into new areas of beef research in the late 20th century. One major focus became "preconditioning" — the process of preparing weaned calves for the next stage of production through vaccinations, weaning and nutrition protocols. Kentucky was an early adopter of preconditioning programs (like the state's renowned CPH-45 feeder calf sales) and UKREC provided the science to back them up.

Station experts studied how preconditioning affects calf weight gain and health, demonstrating that calves managed under these protocols brought producers higher returns at market and reduced sickness.

"We proved what our producers suspected — investing in herd health before sales pay off," Burris said.

Nutrition research also took off. UKREC researchers investigated optimal feed programs for cow-calf operations, from improved pasture forages to supplemental feeding strategies

during winter.

In the 1990s, partnerships with UK's Lexington campus allowed the facility to analyze cattle feed efficiency and growth at a deeper level. Nutritionists in Lexington ran lab tests on forage quality, while UKREC staff conducted feeding trials on-site. This tag-team approach led to advances in using by-product feeds (like distillers' grains from the bourbon industry) and refining mineral supplementation to prevent deficiencies in Kentucky herds.

Future growth, lasting commitment

In recent years, UKREC has embraced cutting-edge technology, including "smart" ear tags to measure animal behavior and alert herd managers and researchers to animal health concerns and reproductive performance. The herd has also undergone genomic testing to learn more about the genetics of individual animals within the herd.

The unit has also utilized technology to measure individual animal feed and mineral intake, which is a powerful tool in nutrition studies. Animals within the herd have been managed under two different mineral supplementation strategies for over 15 years to study the impact of selenium source on animal performance and reproduction.

Results from this work have been incorporated into industry recommendations to help producers combat selenium deficiency, which is a common challenge in Kentucky and the region.

"One of the reasons this work has been so impactful is that the amount of selenium that can be fed to live-

stock is regulated, so producers cannot simply feed more selenium to combat deficiencies, but they can feed a better type of selenium," said Katherine VanValin, assistant professor in the Department of Animal and Food Sciences at UKREC.

While technology assists researchers with collecting cutting-edge data from cattle out on pasture, these technologies also represent future opportunities for Kentucky's beef producers, with a secondary goal of determining how these technologies can be adopted and utilized by producers to improve efficiency on their own operations.

The unit is also the future home of the Beef Extension Education Farm, which will provide a location for producers to see demonstrations of best management practices in a practical environment and participate in hands-on experiential learning opportunities and programs. Efforts are underway to construct facilities to support these efforts and welcome producers back to the farm.

After a century of progress, the UK Research and Education Center at Princeton stands as a cornerstone of Kentucky's \$1 billion beef cattle industry. Generations of farmers have attended UKREC field days and carried new ideas home to their pastures. The facility's influence now extends beyond state lines. Other land-grant universities often look to UKREC's beef program as a model for integrating research, extension and producer partnerships.

To see the latest UKREC research, visit <https://ukrec.ca.uky.edu/>.

**502**

FROM **PAGE A5**

it easier for businesses and other organizations.

"It's signage, it's stationary,

it's websites, it's all of it, and all of their state filings where they're registered," she said. "For a small business, that is a lot of stuff."

Scott Wantland, with Wantland Law PLLC in Shepherdsville, can sym-

pathize. He spoke Monday and told the crowd that changing area codes would be "economically devastating to me."

Residents and business owners can attend any of the public forums and register their

thoughts on which option they prefer, or online at [psc.ky.gov](https://psc.ky.gov).

Documents in the 502 area code case can be found on the PSC Web site. The case number is 2024-00333. <https://psc.ky.gov/Case/ViewCaseFilings/2024-00333>.

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## Watermelon Salad with Feta and Mint

Recipe courtesy of National Watermelon Promotion Board

- 1/4 cup lemon vinaigrette
- 4 cups cubed watermelon
- 1/2 English cucumber, cut into 1/4-inch half moons
- 1/2 small red onion, thinly sliced
- 1/4 cup crumbled feta cheese
- 2 tablespoons fresh mint, roughly chopped

Drizzle vinaigrette in bottom of large canning jar. Layer with watermelon, cucumber, red onion, feta and mint.

Cover tightly with lid and shake to combine. Keep refrigerated until ready to serve.

Substitution: Use Greek dressing in place of lemon vinaigrette.