

AGRICULTURE & NATURAL RESOURCES
Alicia Boor – K-State Research and Extension

Making the Most of Damaged Wheat:
Feeding Low Bushel Weight and
Sprouted Wheat to Beef Cattle

This year’s weather has delayed harvest and left many wheat growers with fields of low-test weight and sprouted grain. This damage causes large discounts at the elevator because the grain does not meet standards for milling or export. Wheat that does not meet market specs still have value as live-stock feed either as part of supplements for grazing cattle or in mixed diets to growing and finishing cattle.

Feeding Value and Nutritional Considerations

Despite its poor appearance, **low test weight or sprouted wheat retains much of its energy and protein content as animal feed.** In fact, the nutrient composition often compares well to regular wheat:

Crude Protein: Often 12–14%, depending on variety and growing conditions.

Total Digestible Nutrients (TDN): Generally, 80–85%, making it a high-energy feed.

Sprouting Effect: Enzymatic changes during sprouting may actually increase starch digestibility, though spoilage is a concern if storage is poor.

The main challenge is balancing the ration correctly. Wheat is **high in starch and low in fiber**, so overfeeding can lead to digestive upsets like **acidosis** or **founder** making feeding management a key consideration.

Tips for Feeding Damaged Wheat Safely

- 1. **Limit Inclusion:**

Start with low levels and increase gradually.

Supplementing grazing cattle: limit feeding to 0.3 to 0.5% of bodyweight per feeding or as only ½ of less of a supplement fed at a higher rate. No more than 2 to 3 pounds per day for a growing calf or 4 to 6 pounds for a mature beef cow. Increase feeding frequency when feeding wheat, doubling the feeding rate and feeding every other day is not recommended.

Growing and finishing cattle on mixed rations: wheat can replace part of the corn. We recommend no more than 1/3 of the total ration or ½ of the grain in the concentrate portion of the ration. Feeding management becomes more important when feeding highly digestible grains like wheat.

2. **Process with Care:** Processing increases digestibility of wheat by 20 to 30%. Coarsely rolling wheat improves digestibility but avoid fine grinding. When processing is too fine the starch in wheat is digested too fast in the rumen and increases the risk of ruminal acidosis.

3. **Balance the Ration:** Wheat should be fed with adequate **roughage** (hay, silage, or straw) to maintain rumen health. Avoid low-roughage low-fiber diets.

4. **Monitor Intakes Closely:** Watch for signs of overeating, scours, or bloating when feeding sprouted or damaged wheat.

Other Considerations

Storage is Key: Keep wheat dry and cool. Sprouted grain with higher moisture is especially vulnerable to spoilage.

Test for Mycotoxins or Mold: Sprouted wheat may be more prone to spoilage. If stored improperly, mold and toxins can develop. Always test suspect lots before feeding.

Feeding downgraded wheat can be a benefit for cattle producers to gain access to a high-energy feed at a discount — provided it’s done safely and with proper nutrition support. Before incorporating low-quality wheat into your feeding program, consult with a **livestock nutritionist** or **Extension specialist** to balance the ration and ensure safety with careful management.

Used with permission from Paul Beck, Oklahoma State University Cooperative Extension Beef Cattle Nutrition Specialist

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COTTONWOOD EXTENSION DISTRICT
Stacy Campbell - Crop Production Ext. Agent

Registration open for the K-State/
KARA Summer Field Day

Kansas State University and the Kansas Agribusiness Retailers Association (KARA) are hosting two 2-day Summer Field School sessions on July 8–9 and July 10–11, 2025, at the K-State Agronomy Education Center (2213 Agronomy Farm Road), located just north of the K-State football stadium in Manhattan. The field days are the same on the two different dates. This year’s program will spotlight soybean and cotton production, with comprehensive, hands-on sessions covering:

- Crop growth and soil fertility for soybeans and cotton production
- Herbicide symptomol-

ogy and glufosinate optimization

- Weed identification
- Precision agriculture
- Soil health
- Crop diseases and insect management

Registration Information

- 2-day program: \$220 (includes lunch both days)
- 1-day option: \$135 (includes lunch for that day)
- Earn multiple Certified Crop Advisor (CCA) and 1A credits (exact credit total forthcoming)

The complete program overview and registration link are available at the KS. Agribusiness Retailers site: <https://www.ksagretailers.org/events-training/ksu-field-days/>

Lodging & Details

Lodging options and additional information are listed on the registration page.

This field day is open to anyone who is interested. If you have any questions, contact Peter Tomlinson, K-State Environmental Quality Specialist at ptomlin@ksu.edu

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COTTONWOOD EXTENSION DISTRICT
Monique Koerner, Family and Community Wellness Agent

Leg Strength

Last week I discussed grip strength as it relates to health and longevity. This week we will discuss emerging research that underscores the critical role of leg strength in overall health. From enhancing mobility to reducing the risk of falls and chronic diseases, strong legs are foundational to maintain independence and vitality as we age.

Importance of Leg Strength

Leg muscles, particularly quadriceps, hamstrings and glutes are vital for daily activities such as standing, walking and climbing stairs. Maintaining robust lower body strength is associated with:

Reduced risk of falls: strong legs enhance balance and coordination, decreasing the likelihood of falls, which can lead to serious injuries in older adults

Improved cardiovascular health: studies indicate that individuals with great leg strength have a lower risk of heart failure and better outcomes after heart attacks. For instance, research presented at the European Society of Cardiology’s Heart Failure 2023 congress found that strong quadriceps were linked to reduced risk of developing heart failure post-heart attack.

Enhanced metabolic function: leg strength contributes to better glucose metabolism, aiding in the prevention and management of type 2 diabetes.

Longevity: a study published in BMJ Open Sport & Exercise Medicine revealed that older adults who engaged in heavy resistance training, maintained leg strength over a

four-year period, suggesting long term benefits of strength training on mobility and independence.

Building and Maintaining Leg Strength

Incorporating leg strengthening exercises into your routine can yield significant health benefits. Effective exercises include:

Squats and Lunges: these compound movements target multiple leg muscles, enhancing strength and coordination

Leg Presses: utilizing gym equipment to perform leg presses can build quadriceps, hamstring and glute strength.

Calf Raises: Strengthening the calves supports balance and stability.

Resistance Training: Engaging in weightlifting or resistance band exercises can improve muscle mass and function.

Leg Strength as a Predictor of Health Outcomes

Leg Strength serves as a reliable indicator of overall health and can predict various health outcomes:

Mortality Risk: research indicates that lower extremity strength is inversely associated with all-cause mortality, even among sedentary individuals.

Recovery from illness: individuals with stronger legs recover more quickly from surgeries and illnesses, highlighting the importance of maintaining leg strength for resilience.

Functional Independence: strong legs are essential for performing daily tasks independently, reducing the need for assistance or long-term care.

Prioritizing leg strength is crucial for maintaining health, independence, and

quality of life, especially as we age. Regular leg strengthening exercises can lead to improved mobility, reduced risk of chronic disease, and enhanced longevity. Incorporating such exercises into your fitness routine is a proactive step toward healthier aging.

Source : García-Hermoso A, Cavero-Redondo I, Ramírez-Vélez R, Ruiz JR, Ortega FB, Lee DC, Martínez-Vizcaíno V. Muscular Strength as a Predictor of All-Cause Mortality in an Apparently Healthy Population: A Systematic Review and Meta-Analysis of Data From Approximately 2 Million Men and Women. Arch Phys Med Rehabil. 2018 Oct;99(10):2100-2113.e5. doi: 10.1016/j.apmr.2018.01.008. Epub 2018 Feb 7. PMID: 29425700.

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WANTED



NEWS
about
Your
Family,
Friends,
and
Neighbors

THE WORD ON
MAIN STREET

Maybe so

Fred, who keeps things running down on the Gulf coast sends these.

Never confuse education with intelligence.

– Everyone talks about leaving a better planet for our children.

Why doesn’t anyone try to leave better children for our planet?

– My neighbor just yelled at her kids so loudly that even I brushed my teeth and went to bed.

– Sign in a restaurant: We do not have WiFi. Talk to each other. Pretend it’s 1995.

– By replacing your morning coffee with green tea, you can lose up to 87% of what little joy you still have left in your life.

– I’m not losing my memory. I’m just really good at leatting go of the past.

– It’s better grow old with a sense of humor than to grow old with no sense at all.

– Sign outside a business: Help wanted. Now hiring people that show up.

Husband: “Why do you keep buying plants when you just end up killing them?”

Wife: “Just to remind you what I’m capable of.”

– I put an old fridge outside with a sign saying “Free.” Three days later and nobody had touched it. So I changed the sign

to “Fridge, \$50.”

It was stolen that night.

– One of the weirdest things about being an adult is having a favorite stove top burner. No one ever talks about it, but y’all know it’s true.

– I phoned by wife earlier and asked her if she wanted me to pick up fish and chips on my way home from work, but she just grunted at me.

I think she still regrets letting me name the twins.

Cured!

A woman went to the emergency room, where she was seen by a young new doctor.

After about three minutes in the examination room, the doctor told her she was pregnant.

She burst out of the room and ran down the hall screaming. An older doctor stopped her and asked what the problem was. After listening to her story, he calmed her down, sat her in another room, and told her he’d be right back.

“What’s wrong with you?” he demanded of the new doctor. “That woman is 63 years old, has two grown children, several grandchildren, and you diagnosed her as pregnant?”

The new doctor continued to write on her clipboard without looking up and asked, “Does she still have the hiccups?”

First in line

A minister dies and is waiting in line at the Pearly Gates. Ahead of him is a man dressed in sunglasses, a loud shirt, leather jacket, and jeans.

Saint Peter addresses this guy, “Who are you, so that I may know whether or not to admit you to the Kingdom of Heaven?”

The man replies, “I’m Joey Shasta, retired airline pilot.”

Saint Peter consults his list. He smiles and says to the pilot, “Take this silken robe and golden staff and enter the Kingdom.” The pilot goes into Heaven with his robe and staff.

Next it’s the minister’s turn. He stands erect and booms out, “I am Joseph Snow, pastor of Saint Mary’s for 43 years.”

Saint Peter consults his list. He says to the minister, “Take this cotton robe and wooden staff and enter the Kingdom.”

“Just a minute,” says the minister. “That man was a pilot and he gets a silken robe and golden staff. How can that be?”

“Up here, we work by results,” says Saint Peter. “While you preached, people slept; while he flew, people prayed.”

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