

OSU wheat breeding program releases new variety

Oklahoma State University has a new hard red winter wheat variety on its way to the commercial market this fall.

OK18510, which will be called High Cotton, first came into existence in 2010 in what OSU wheat genetics chair Brett Carver called the “maternity ward” of wheat varieties — an OSU greenhouse in Stillwater.

Carver said he chose the variety name of High Cotton because he wanted to draw attention to its elite performance through a name that is easy to remember.

“I wanted to suggest that adoption of this variety would put producers in a position to enjoy a bountiful harvest,” he said.

Wheat is the No. 1 plant commodity in Oklahoma reported by the Department of Agriculture’s National Agricultural Statistics Service, said Mike Schulte, executive director of the Oklahoma Wheat Commission. Wheat is a \$1 billion industry in the state, and data shows that more than 50% of Oklahoma wheat producers grow OSU varieties.

“That’s a great testament to the impact of those varieties, whether they be high-yielding and disease resistant or have traits highly regarded by millers and bakers in both the domestic and international markets,” Schulte said.

He added the name of the new variety is likely to pique producer interest.

“It’s about the OSU wheat breed-



ing program being in the best of times,” Schulte said. “The hope is this variety will make great contributions for the wheat producers in our state over the next five to six years.”

Scott Senseman, associate vice president of OSU Ag Research, said High Cotton’s potential resilience will also be appealing to producers.

“Our Wheat Improvement Team continues to move the needle from a yield perspective, but its disease profile appears to provide another level of yield stability that will also be attractive to growers,” he said.

Carver said High Cotton caught his eye in its first year of Oklahoma variety yield trials in 2018.

“It has continued to rank either first or second in our breeding trials for five consecutive years,” he said.

What does High Cotton have to offer? The increased yield of this variety is expected to offset potential declines in planted wheat acreage in the future and help maintain the nation’s current food supply.

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- With yield, High Cotton exceeds Showdown, Smith's Gold, Bentley and Gallagher wheat varieties by 5 to 13 bushels per acre. It performed at 17% above average in OSU statewide yield trials.
- Its test weight has averaged 1.2 pounds per bushel above the average research trials, and the Wheat Quality Council found it to have acceptable milling and baking attributes.
- It has dual resistance to leaf and stripe rust as well as resistance to other common wheat diseases in Oklahoma.
- High Cotton is a dual-purpose wheat that provides early grazing opportunities while sustaining winter dormancy.

Performance potential

High Cotton was created by breeding OSU wheat variety Ruby Lee with an experimental line developed in Turkey as part of the International Maize and Wheat Improvement Center breeding program, the largest wheat breeding program in the world. This hybrid was then crossed with an OSU experimental line bred from a collection of Pioneer hard red winter

wheat.

"High Cotton will allow wheat producers to reap the benefits of the most advanced wheat genetics currently on the market," Carver said. "We hope that wheat growers from eastern Oklahoma to far western Oklahoma will have an interest in adopting High Cotton in their next variety lineup." Scientists in the OSU wheat breeding program intend to have seed available this fall.

"If we get it harvested as we anticipate, we should have 3,000 to 4,000 bushels of foundation seed available through the Oklahoma Foundation Seed Stocks," Carver said.



Brett Carver, Oklahoma State University wheat genetics chair, talks to producers about the potential of the OSU wheat variety OK18510 at the Chickasha Wheat Field Day in 2022. The variety has been approved for commercial release under the name High Cotton. (Photo by Alisa Boswell-Gore, OSU Agriculture)

Backyard Chickens

Raise your hand if you've said, "Man, I wish I had my own chickens," at the grocery store in the last six months. You're not alone! While egg prices have started to decline, many consumers are still considering starting their own flock. Here's what you should know before you bring home a box of chicks:

1. While baby chicks are cute, chickens are livestock, and all livestock requires time, effort and money.
2. Check your city/county's chicken regulations. Many municipalities in Oklahoma have limitations on how many chickens you can keep in your backyard. If you have an HOA, be sure to check with them as well.
3. Chicks need to be kept in a brooder until they're fully feathered (around 6-8 weeks old).
4. Evaluate what kind of housing your new feathered friends will need. Small breeds require 2 square feet per chicken, while large breeds need at least 4 square feet. You can choose to DIY the coop or purchase one pre-made.
5. Chickens are incredibly vulnerable to predation by hawks, raccoons, snakes, coyotes and even dogs. It's important to think through preventative measures before committing to a backyard flock.

6. Feed costs are important to consider, especially if your goal is to save money on your grocery bill. You can find our budget calculator for backyard chickens at the link in our bio.
 7. Raising chickens requires some financial and labor investments, but it can be an incredibly rewarding way for you and your family to learn about animal husbandry and farm-to-table practices.
 8. Contact your county's Extension educator for personalized advice on starting your backyard flock!
- So, do the costs outweigh the benefits? Luckily, it doesn't take a mathma-chicken to find out! Visit <https://extension.okstate.edu/programs/backyard-poultry/> to learn more about backyard chickens, access OSU Extension's backyard chicken online course and use our free chicken budget calculator.

Interested in raising backyard chickens? Looking to expand your current backyard operation? Enroll in the OSU Extension Backyard Chickens in person class. Learn best practices for raising and caring for backyard poultry. Course includes information on poultry nutrition, health issues, biosecurity practices, egg sales and more.
Autry Technology Center Main Campus—
April 13th 6-8 pm and April 20th 6-8 pm.
Enroll online at <https://autrytech.edu>



Beef specialist warn of bloat on wheat pasture



Varying degrees of drought across the state have caused cool-season grasses to grow a little later than usual this year, and Oklahoma State University Extension specialists have received reports of bloat in calves grazing wheat and other small grain pastures.

Growing conditions improved for these pastures, which have been grazed short this winter with regrowth that is all highly digestible leaf.

“We have also had some late winter frost events that can damage the cell walls in the new growth, releasing the cell contents for rapid availability in the rumen, said Paul Beck, OSU Extension beef cattle nutrition specialist. “These plant fractions are the most bloat provocative and can very quickly cause bloat in grazing calves.”

Death can occur rapidly from bloat, but so can relief. Calves can return to normal soon after supplements containing Bloatguard (Poloxalene 6.6%). Bloatguard is commercially available in blocks, mineral supplements and topdresses for concentrate supplements.

- Don't wait until the bloat outbreak occurs. Have some type of block, supplement or mineral on hand that contains Bloatguard. Not all feed stores carry this item. Ranchers may have to travel to another town to find it.
- Feed calves a few days a week throughout the winter to keep them coming up to troughs so they can be easily gathered if bloat occurs.
- Mineral or supplements providing ionophore monensin decrease the incidence and severity of bloat. This will make it more manageable to identify bloat outbreaks before they cause death losses and allow time to take corrective measures.

OSU Extension also offers the following guidelines in [herd management this time of year](#).

Replacement heifers and spring breeding

- Should be 14 to 15 months of age
- Roughly at 2/3 of their mature weight
- Over 90% of heifers at this age and weight will be fertile, ready to conceive and on schedule to calve at 2 years of age

“At this point in the year, typically if we've got normal wheat pasture in Oklahoma, it's relatively easy to get those heifers to that target weight, but if we've been in a situation with limited hay and feed resources and we've not had any winter cool-season grass to graze, we might want to take inventory of those heifers,” said Mark Johnson, OSU Extension beef cattle breeding specialist. “If we've got some wheat pasture coming on or just need to adjust our feeding program, we've still got time to get those heifers to where they need to be to breed at 2 years of age.”

Body Condition score of cow herd

- Heifers should be at about a 6
- Cows should be at a 5 ½
- Monitoring body condition scores is as important as it's ever been this year because of the large amount of nontraditional hays that have been fed

“Different feeding programs that we consider are supplemental feed, mineral supplementation and protein supplementation,” Johnson said. “You could add in an ionophore to cows' diets if we need to put on a little weight and body condition score going into calving season. That way, we can get prompt breed back and keep them on schedule for calving once a year.”

Deworming

Deworming can be the least expensive way for cattle to maintain or add body conditioning. Johnson recommends checking records and analyzing the cost effectiveness of deworming the herd.

Read more about preventing bloat in the Feb. 6 issue of OSU Extension's [Cow-Calf Corner Newsletter](#).

Retained Placenta in Beef Cattle

Mark Z. Johnson, Oklahoma State University Extension Beef Cattle Breeding Specialist

Retention of fetal membranes, or retained placenta, in cows usually is defined as failure to expel fetal membranes within 24 hours after parturition. Normally the expulsion occurs within eight hours after delivery of the calf. The placenta is retained when the cotyledons on the placenta do not detach from the caruncles on the uterus during parturition. Although retained placenta is rare in most cow herds, this year I am hearing that producers are seeing a higher incidence of this problem.

Retained placenta creates the potential for problems. It hangs from the vulva which permits manure and micro-organisms from the manure into the uterus. As well, when the cow lays down in dirt or mud which is loaded with bacteria, it permits bacteria to cause infection in the uterus and can have serious negative consequences. Infection in the uterus can cause the cow to become ill (fever, weight loss, etc). In severe cases of infection the cow can actually die. When the uterus becomes infected and inflamed, it takes longer for the cow to clean and be ready for the next breeding season.

Retained placentas can result in delayed re-breeding or cows coming up open at the end of breeding season. Bottomline: retained placentas jeopardize reproductive efficiency and can rob operations of profit potential.

What follows is a list of the typical causes of retained placenta.

1. Dystocia, as a result of too large a calf, twins or abnormal presentation of the fetus, calving difficulty is a cause.
2. Poor nutrition. Inadequate consumption of energy or protein during pregnancy can result in thin cows. Dietary deficiency of Vitamin A, Selenium, Iodine or Vitamin E have been linked to retained placenta. Retained placenta is most

often associated with nutrition, in particular, low levels of Vitamin A or the mineral Selenium.

3. Stress, obesity and genetics can play a role.
4. Infectious diseases like Brucellosis, Leptospirosis, IBR virus or BVD virus.

What are the best management practices to prevent retained placenta? Over time, proper nutrition, herd health and mineral supplementation should solve most the problems. If not, consult your veterinarian.

Why are we potentially seeing more retained placenta this year? Many operations are feeding "non-traditional" hays over the past several months which may not be very green or leafy. Typically the best source of vitamin A for cattle is green, leafy forage. A good quality free choice mineral supplement containing Selenium is advised. Cows and heifers in Body Condition Scores of 5 to 6 at calving time is advised. If you are dealing with sick cows as a result of retained placenta, consult your veterinarian for best treatment options.

Reference: Vet Views. University of California-Davis. Dr. John Maas. 2008.



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Persons with disabilities who require alternative means for communication or program information or reasonable accommodation need to contact Rick Nelson, Ag Educator at (580)237-1228 or rick.nelson@okstate.edu at least two weeks prior to the event.