



News Release

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For Immediate Release

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USDA Report Shows OSU Wheat Varieties Glean Greater Value to Producers

Oklahoma State University (OSU) varieties see an increase in acres planted of Hard Red Winter Wheat across the state of Oklahoma, according to the March 2020 “Oklahoma Variety Report” from USDA National Agricultural Statistics Service. For the third year in a row, the top four leading wheat varieties planted in the state were developed by OSU with another two listed in the top eight. A few changes appeared in the lineup compared to last year with the Gallagher variety still holding the top spot. This year a large increase in plantings of the Smith’s Gold variety moved it into the second position. Doublestop CL Plus, also saw an increase putting it in third place, with Bentley located in the fourth position. Plantings of Endurance held steady, with a slight decline in acres planted to Iba, allowing them to move into the seventh and eighth spots. ***(Other OSU varieties listed in the survey on Oklahoma planted acres included Ruby Lee, Duster, Deliver, Billings, Chisholm, OK Bullet, and Green Hammer.)*** The roots of success continue to be firmly anchored with several other up-and-coming OSU varieties being adopted by Oklahoma wheat producers. In 2018, four new varieties Baker’s Ann, Showdown, Green Hammer and Skydance were released. In 2019, a new beardless wheat variety called OK Corral was released. Green Hammer broke out into the survey for the first time this planting season, a positive note for having gone through only one cycle of certified seed increase. In addition Smith’s Gold moved from 16th place last year to being the second highest planted variety across the state in the 2019-2020 season.

Variety Survey Line-Up

Gallagher, the leading variety of all wheat seeded in Oklahoma, accounted for the largest percentage of the state’s 2019 planted wheat acres. The primary area of adaptation for this Duster offspring is from the northern regions of Texas to the south central region of Kansas and throughout the Hard Red Winter wheat production area of southern, central and north central Oklahoma.

Gallagher, though an early maturing variety, is known for its good graze-ability, disease resistance and Hessian fly resistance. It is resistant to leaf rust, powdery mildew and moderately resistant to barley yellow dwarf. It is resistant to the wheat soilborne mosaic and wheat spindle streak mosaic complex, and to stripe rust in the adult-plant stages. Gallagher has intermediate septoria leaf blotch resistance for no-till high residue systems. This variety also has the ability to exceed 12 percent wheat protein with adequate fertilization. It carries a key segment of a rye chromosome that lends greater yielding ability, but unlike most varieties with this feature, Gallagher has provided above-average milling and baking quality.

Smith's Gold, which saw a large increase in planted acres last year, is the First Gallagher progeny with better leaf hygiene, an excellent GrazenGrain® variety with later pull-off date. It has improved baking quality as verified by Wheat Quality Council, resistance to Hessian fly and greenbug, and improved resistance to stripe rust over Gallagher. Smith's Gold has excellent flavor profiles appropriate for any bread maker, with less bitter and tannic flavors, making it also suitable for fresh noodle pasta and its GoldnGrain® distinction. This variety has many versatile uses for several bread product lines that include anything from traditional breads, bakery snacks, and rolls to steam breads. As with Gallagher, Smith's Gold is resistant to the Great Plains biotype of Hessian fly. This is of particular benefit to producers wishing to sow early to maximize forage yield or those who no-till wheat after wheat.

Doublestop CL Plus, which also saw an increase in planted acres over the past three years, with its two-gene Clearfield technology, offers improved weed control of problem weeds such as feral rye and jointed goat-grass. It has excellent test weight with late maturity and exceptional protein content and quality. Yield stability of this variety across a wide range of environments is a virtue, including drought stressed and high-yield systems. This variety has an Endurance-type graze-ability with acceptable forage production and late first hollow stem. It is tolerant of acid soils and is resistant to leaf and stripe rust in the adult stages. It is resistant to wheat soil borne mosaic, and recently was confirmed to have moderate resistance to wheat spindle streak mosaic.

Bentley has good forage production with excellent recovery from grazing. With late first hollow stem but medium heading, it offers extended grazing without delay in harvest. Bentley is moderately tolerant of acid soils and its test weight is below average. Timely harvest of Bentley is important. It has moderate resistance to tan spot for no-till production systems. The Bentley variety has intermediate resistance to most foliar diseases and is likely to tolerate light to moderate disease infection but will require a fungicide in years with heavy leaf rust pressure.

Endurance wheat, a mainstay released by Oklahoma State University Wheat Improvement Team in 2004, has performed well in dual-purpose and grain-only systems throughout the state of Oklahoma and beyond. It shows an unusual ability to break winter dormancy consistently late from year to year, yet will catch up on heading date relative to Duster. Still Endurance finishes relatively late and often benefits from moderate temperatures during May. Years of yield data indicate that Endurance has the ability to maintain good yield potential in a wide range of stress environments as well. Given these attributes, it should be no surprise that the OSU Wheat Improvement Team has used Duster and Endurance as a sturdy foundation for creating new, improved varieties.

Iba, a variety also with Duster parentage, has outstanding test weight and a broad area of adaptation with proven yielding ability in performance tests from Kansas to Texas. It is resistant to current races of leaf rust, and moderately resistant to powdery mildew, tan spot and barley yellow dwarf, but susceptible to septoria leaf blotch. It is resistant to the wheat soilborne mosaic and wheat spindle streak mosaic complex. Iba is best suited for soil pH of 5.5 and above, and adequate nitrogen fertility is required to ensure 12% wheat protein.

Thanks to wheat improvement programs like the one at OSU, producers continue to have improved and expanded options of wheat varieties to plant. Whether it is improved stress or pest tolerance or increased yields at the level of end-use quality expected by our food industry, the Oklahoma Wheat Improvement Team at OSU is working to develop varieties that are meeting producers' changing needs.

Most importantly, OSU wheat varieties are locally adapted but globally marketed.

It is important to note the varieties released by the Wheat Improvement Team at OSU have been through several years of testing for quality-based attributes that domestic and foreign customers expect in their milling and baking operations. Variety development programs that rush a variety to release may not provide the same level of scrutiny for end-use performance. By finding important traits that are beneficial to grain buyers, the OSU Wheat Improvement Team is also working to penetrate a wider segment in the food sector by creating varieties that have dual benefit to farmers and end users.

New Breakout variety for the 2020 crop:

Green Hammer-Offers a critical yield protection advantage that could allow lower input costs. It carries a highly effective level of dual resistance to leaf rust and stripe rust, thus often neutralizing the positive effect of a fungicide application based on trials in Oklahoma and Kansas. Protein content has averaged about a point higher than Gallagher at a similar test weight level. Altogether, Green Hammer is considered OSU's best offering at this time for combining disease and Hessian fly resistance, protein content (and protein quality), and test weight into one variety. Its region of adaptation is centered on southwest, central and north central Oklahoma. Green Hammer is a progeny of the three-way cross, OK Bullet/TAM 303 sister//Shocker. Note that TAM 303 was one of the two parents of Bentley. Green Hammer will be marketed under the GrazenGrain® and GoldnGrain® brand.

Other important OSU varieties planted by Oklahoma wheat producers as sighted in the "Oklahoma Wheat Variety Report" from the USDA National Agricultural Statistics Service include:

Ruby Lee- an excellent grazing variety with large seed size and outstanding milling and baking quality.

Duster- Duster has been a consistent top performer in OSU wheat variety tests for several years. It performs well in both grain-only and dual-purpose systems, and has above-average tillering ability that allows it to recover well from grazing. It emerges well in hot, dry soil conditions and closes the canopy rapidly. These traits, along with good forage production and medium-late first hollow stem, make Duster a nice fit for dual-purpose production systems. Duster is considered to have the strongest resistance to leaf rust in winter wheat, due in part to an unusual combination of multiple adult-plant resistance genes. Moderate susceptibility to tan spot and septoria means Duster should be monitored for these diseases in continuous no-till wheat production systems.

Deliver- a reliable beardless type with all the expectations of a high-quality bearded variety

Billings- still maintains moderate resistance to stripe rust and leaf rust

Chisholm- A hallmark wheat variety known for its GrazenGrain® capability, replaced by more suitable varieties; Duster, Gallagher and now Smith's Gold.

OK Bullet- tall but lodging-resistant variety, soon to be replaced with the shorter statured Spirit Rider

Link to USDA NASS Oklahoma Wheat Variety report -

https://www.nass.usda.gov/Statistics_by_State/Oklahoma/Publications/Oklahoma_Crop_Reports/2020/ok-wheat-variety-2020.pdf

Newer Releases for the Future

To learn more about the latest OSU varieties Baker's Ann, Green Hammer, Lonerider, Showdown, Skydance, Smith's Gold, and Spirit Rider click on the following link located on the Oklahoma Genetics Incorporated website: <https://www.okgenetics.com/hard-red-winter.html> Information on the new beardless wheat variety OK Corral can be found at https://news.okstate.edu/articles/agricultural-sciences-natural-resources/2019/stotts_ok-coral-wheat-seed.html

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