



News Release

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For Immediate Release

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USDA Report Shows, The Top Eight Come From OK-State

Oklahoma State University (OSU) varieties continue to lead planted acres of Hard Red Winter Wheat across the state of Oklahoma, according to the March 2022 “Oklahoma Variety Report” from USDA National Agricultural Statistics Service. For the fifth year in a row, the top four leading wheat varieties planted in the state were developed by OSU with another four listed in the top eight. A few changes appeared in the lineup compared to last year with the Doublestop CL Plus variety taking the top spot, moving the standby variety Gallagher into second place. This year’s continued increased planting of Green Hammer moved it into the third position from the sixth spot it was placed in last year. The Smith’s Gold variety garnered fourth place. The beardless variety OK Corral made a great leap moving into fifth position, which was in the 20th spot last year. Older OSU varieties with strong performance traits- Endurance, Iba and Bentley- finished in the top eight. ***(Other OSU varieties listed in the survey on Oklahoma planted acres included Baker’s Ann, Showdown, OK Bullet and Ruby Lee)*** The roots of success continue to be firmly anchored with several other up-and-coming OSU varieties being adopted by Oklahoma wheat producers. In fall of 2020, five new varieties Uncharted, Breakthrough, Butler’s Gold, Strad and Big Country will now provide producers even more options to look at when making management decisions of suitable varieties for planting. Green Hammer broke out into the survey for the first time in 2020 and its 3rd place ranking is certainly a positive note for having gone through only two cycles of certified seed increase. The Green Hammer variety having made numerous bounds last year, shows that at some point it may lead the trial survey in the coming years.

Variety Survey Line-Up

Doublestop CL Plus, the leading variety of all wheat seeded in Oklahoma, has seen an increase in planted acres over the past three years with its two-gene Clearfield technology and offers improved weed control of problem weeds such as feral rye and jointed goat-grass. It has exceptional test weight with late maturity and exceptional protein content and quality. Yield and protein 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 highly 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. Marketed under GoldnGrain® and GrazenGrain® brands.

Gallagher, is another leading variety of all wheat seeded in Oklahoma. The primary area of adaptation for this Duster offspring is from the Rolling Plains region 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. Marketed under GoldnGrain® and GrazenGrain® brands.

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 sometimes 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 GoldnGrain® and GrazenGrain® brands.

Smith's Gold, which saw a large increase in planted acres last year, is the first Gallagher progeny in the Great Plains with better leaf hygiene and a better pull of 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. Marketed under GoldnGrain® and GrazenGrain® brands.

OK Corral, sets a new beardless standard by offering exceptional grain yield potential with excellent bread baking quality. Due to its wide range of optimal economic uses and wide adaptability, OK Corral is positioned throughout the southern Plains, including situations subject to moderate aluminum toxicity and soil acidity (pH greater than 4.8) to Hessian fly infestations. Test weight on OK Corral may be optimized in more western locations including Texas and Oklahoma panhandles, though it is sensitive to stem rust and to wheat streak mosaic. Strengths include versatility from grain only to forage only systems; pasture establishment and grazing tolerance; and balance of dough strength/extensibility. Weaknesses include sensitivity to early and severe infections of leaf rust and a grain yield level that may benefit from higher seeding rates. Marketed under the GrazenGrain® brand.

Endurance, is a mainstay released by Oklahoma State University Wheat Improvement Team in 2004, and has performed well in dual-purpose and grain-only systems throughout 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. Marketed under the GrazenGrain® brand.

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 the leading planted variety in the Oklahoma panhandle region in 2022. 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 and moderately susceptible to stripe rust. 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. Marketed under GoldnGrain® and GrazenGrain® brands.

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. Until the 2018 release of Showdown, Bentley -demonstrated top-tier yield potential among all hard red winter wheat varieties. Marketed under GoldnGrain® and GrazenGrain® brands.

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:

Baker’s Ann, a premium-quality wheat variety well suited for quality-based contracted production at a yield potential comparable to Green Hammer. Baker’s Ann exhibits very strong resistance to stripe rust across a wide geography, though protection against a severe infection of leaf rust may need to be bolstered with a fungicide application. It will fit best in the Oklahoma panhandle and north central Oklahoma. Marketed under GoldnGrain® and GrazenGrain® brands.

Showdown, features a relatively high yield ceiling in a grain-only production system, and it offers complete adaptation to a dual-purpose management system with good canopy closure at adequate seeding density, outstanding forage regeneration and grazing recovery (related to its more prostrate growth habit), and Hessian fly resistance. It will be marketed under the GrazenGrain® brand. Test weight is in the Endurance range, and certainly not as high as Green Hammer or Doublestop CL Plus. Disease resistance is broad and strong, with the possible exception of leaf rust when present before heading at the level observed in 2017. Adaptation is very wide, extending from the Rolling Plains of Texas to central Kansas, including the Oklahoma panhandle. Its parentage includes an OK Bullet sister and an AgriPro experimental line.

OK Bullet, is a tall, semi-dwarf with an intermediate heading date and a semi-erect growth habit. OK Bullet is expected to have moderately good standability under conditions conducive to lodging. OK Bullet has a moderate acid soil tolerance. It consistently produces large kernels with above-average milling and baking qualities with decent protein content. Though resistant to septoria leaf blotch, and tan spot, its reaction to leaf rust and stripe rust is now surpassed by more recent OSU releases. It is moderately susceptible to barley yellow dwarf virus, intermediate to fusarium head blight (scab) and

susceptible to powdery mildew in the adult plants.

Ruby Lee, the primary area of adaptation for “Ruby Lee” encompasses all of Oklahoma wheat producing areas extending southward into north Texas and north into southern Kansas and west into the Texas High Plains (with irrigation). Ruby Lee will be at risk where stripe rust and very low soil acidity area issues. Dual purpose system production is encouraged as Ruby Lee has above-average ability to be grazed. This variety has good mix times, long stability time and acceptable proteins. The kernels are large with good thousand kernel weights and good kernel diameter. Marketed under GoldnGrain® and GrazenGrain®

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.

Newer Releases for the Future

To learn more about the latest OSU varieties Uncharted, Breakthrough, Butlers Gold, Strad and Big Country click on the following link located on the Oklahoma Genetics Incorporated website:

<https://www.okgenetics.com/hard-red-winter.html> or on the Oklahoma Wheat Commission website at <https://www.okwheat.org/wp-content/uploads/2020/12/OK-Wheat-Brief-bumper-crop-of-varieties-3.pdf>

Links to USDA reports:

Listed by Variety: [Oklahoma Wheat Variety Report \(usda.gov\)](#)

Listed by Grain Shed: [Oklahoma Wheat Variety by Grain Shed \(usda.gov\)](#)

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