

2019 SMALL GRAIN PERFORMANCE TRIALS



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SMALL GRAIN PERFORMANCE TRIALS

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Performance of Small Grain Varieties in Louisiana, 2018-19

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INTRODUCTION

Small grain variety trials are conducted annually by scientists of the Louisiana State University Agricultural Center Agricultural Experiment Station (LSUAC) to evaluate grain yield, agronomic performance, and disease reaction of varieties and advanced lines. The trials are conducted at seven LSUAC research stations representative of the major soil and climate regions of the state. Entries are included in the trials based upon previous performance or at the request of the originating agency. Inclusion of an entry in the trials does not constitute an endorsement. Beginning in 2017, the performance trial in north Louisiana is divided by relative maturity into two groups, early and medium-late (normal). This was done to facilitate planting and harvest. The north Louisiana early trial included 9 varieties (bold font) and 6 experimental lines (normal font) while the normal trial included 53 entries. The 2019 southern performance trials included 40 entries.

New entries in the statewide trials are tested in the north Louisiana normal trial and in a south Louisiana vernalization trial, unless prior testing in Baton Rouge nurseries indicates an entry is adapted to south Louisiana, in which case it is also tested in the south Louisiana variety trials. South Louisiana consists of the Baton Rouge, Crowley, and Jeanerette locations; whereas North Louisiana consists of locations at Alexandria, Bossier City, St. Joseph, and Winnsboro.

When choosing varieties, growers should consult their local extension agents and choose varieties based on two-year data within a region, not based on a single year or location. Growers should also consider specific data from the LSUAC variety trial location that most closely matches the weather and soil conditions of their farm and should avoid growing a single variety on a large acreage. Growing several varieties helps hedge against losing the entire crop to chance occurrences in weather or shifts in pathogen or pest races or virulence patterns. Yield, test weight, maturity, and disease resistance are important traits to consider when selecting varieties. If a grower plans to plant wheat early, he should avoid varieties that have a very early heading date in order to reduce the danger of freeze damage.

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 - 6 Research Associate, Associate Professor and Research Associates, respectively. Macon Ridge Research Station, Winnsboro.
 - 7 Research Associate. Iberia Research Station, Jeanerette.

Specific management and cultural practices for a location are presented at the bottom of the tables, along with unusual or key observations about that test. All plots were seeded at the recommended rate with seed provided by the originating agency or company (Appendix A).

Characters Evaluated and Statistics Reported:

Data are collected on grain yield, test weight, heading and maturity dates, plant height, lodging, and disease reaction, as appropriate at each location. Grain yield was adjusted to 13% moisture. **Least significant differences (LSD's)** are reported at the 10% probability level. An LSD of 10% probability ($\alpha=0.10$) is the level of difference in a trait (like yield) that occurs between two varieties once in every 10 comparisons as a result of random chance due to greater soil fertility, better drainage, slightly greater harvest length, or any other "uncontrollable or unmeasurable factors" in the test, even if the varieties had the same genetic yield potential. If the LSD (0.10) for yield in a trial is 7.0 bu/a, there is a 10% chance that two varieties with a reported yield difference of 7.0 bu/acre are genetically equal and a 90% probability they have differences in genetic potential in that particular environment. LSD values are influenced by the degree of precision that soil fertility, stand establishment, plot length, harvest efficiency, and other variables of the trials are controlled, and by the number of replications of each variety or treatment. The letters 'NS' are used in the text and tables to indicate lack of significance (**not significantly different**) at the 10% probability level. Correlations are sometimes given to indicate the degree to which two traits, such as rust rating and yield, are related. A correlation between rust rating and yield of $r = -1.0$ would indicate that for every unit increase in rust there was a proportional decrease in yield.

Wheat leaf rust (*Puccinia triticina*), stripe rust (*Puccinia striiformis*), and oat crown rust (*Puccinia coronata*) are reported as percentage of the upper two leaves affected by the disease. Two replications are evaluated for leaf rust, between flowering and the early dough stage of kernel development. Wheat and oat stem rust (*Puccinia graminis*) are reported on a scale of 0-9, where a 0 indicates no disease and a 9 indicates that the plant was killed by the disease. Stem rust is normally rated somewhat later than leaf rust.

Bacterial streak (*Xanthomonas campestris* pv. *translucens*), Septoria leaf (*Mycosphaerella graminicola*) and glume blotch (*Leptosphaeria nodorum*) are rated on a scale of 0 to 9 during the dough stage of development. A rating of 0 indicates that no disease was present, while a 9 indicates very severe disease. The upper few leaves, heads, and stems below the head are the portions rated for these diseases. Since bacterial streak (black chaff) is not controlled by fungicides, it is important that this disease be distinguished from septoria blotch. Heading day is given as calendar day (day of year). Lodging is rated on a 0-9 scale, where a 0 indicates that all plants were completely upright.

Traits and Rating Scales for LAES Wheat and Oat Performance Trials.		
Trait	Abbreviation	Description
Yield	Yield	Grain yield in bushels per acre adjusted to 13% moisture.
Test weight	Test wt	Volume weight of grain in pounds per bushel
Heading day	Head day	Day of calendar year (days after December 31) until 50% heading.
Plant height	Ht	Plant height in inches.
Lodging rating	Lod	Lodging rated on a scale of 0 - 9, where a 0 indicates no lodging and a 9 indicates complete lodging (all plants flat).
Leaf rust	Leaf rust	Percent of upper two leaves affected by leaf rust, rated during grain fill. This rating is generally taken during soft to mid-dough, but varies somewhat by location and variety.
Stripe rust	Stripe rust	Percent of upper two leaves affected by stripe rust, rated between flag leaf and mid grain fill.
Septoria	Sept	Septoria leaf & glume blotch rated on a scale of 0 - 9, where 0 indicates no disease and 9 indicates severe disease on the flag leaf and head.
Bacterial Streak	Bact	Bacterial streak (black chaff) rated on a scale of 0 - 9, where 0 indicates no disease and 9 indicates severe disease on the flag leaf and head.
Powdery mildew	Powd mild	Powdery mildew rating on a scale of 0 - 9, where 0 indicates no disease and 9 indicates severe disease present on the foliage. Rated in early to mid spring.
Phenotype	Phe	Phenotypic rating, an overall visual rating prior to harvest. 0=poor, 9=excellent. This rating is a visual rating of 'eye-appeal'.

Growing Conditions and General Comments for 2018-2019

The 2018-2019 growing season got off to a difficult start with adverse weather conditions. Heavy, prolonged rains prevented planting at the Bossier City and St. Joseph locations. The Baton Rouge location was planted, but heavy rains soon after planting resulted in poor stands and abandonment of the wheat variety trial at this location. Oat variety trials were lost at all locations due to excessive rains which resulted in poor stands after planting or lodging and collapse prior to harvest. Weather conditions during grain fill were mild. Disease pressure was moderate and test weights and yields were good.

Results and Discussion

Performance of Wheat Varieties Across South Louisiana

South Region Means:

The 2019 South Louisiana Trials, harvested at Crowley and Jeanerette, included 40 entries (Table 1). Three LA experimental lines, LA09225C-33-3 (70.1 bu/acre), LA01110D-150-241 (69.0 bu/acre), LA08080C-31-1 (68.8 bu/acre) and one AR experimental line, AR06146E-1-4 (68.3 bu/acre) all had yields far above the mean of 60.4 bu/acre and test weights above the mean of 56.5 lbs/bu. Only one variety, Go Wheat LA754, yielded above 67 bu/acre. The four top yielding entries all headed 2 or more days after the mean of 85 days. Three of the five earliest-heading entries had yields below the mean of 60.4 bu/acre. The two latest-heading entries had very low test weights and yields, a result of heading out too late and entering grain fill during the hot part of late spring. For south Louisiana it is generally advisable to choose varieties with heading dates around the test mean or slightly later, and avoid the extremes in heading dates. There was very little disease pressure at the two south Louisiana locations.

South Louisiana performance for two years includes data from Crowley and Jeanerette for 2018 and 2019, and Baton Rouge for 2018 (Table 2). Out of 16 entries, 6 varieties, AGS2055 (86.1 bu/ac), Delta Grow 3500 (85.6 bu/ac), USG 3640 (84.0 bu/acre), GO Wheat LA754, and 2 experimental lines, AR06146E-1-4 (83.6 bu/ac) and LA01110D-150-241 (83.1 bu/acre) had yields well above 83.0 bu/ac. The average yield was 78.8 bu/acre. AGS 2055 is a cross-check from the late trial. It had the highest yield but also had a test weight below the mean of 58.7 lbs/bu. AGS3000 was the only entry with significant leaf rust and FHB pressure was light. The average heading date was 86 days (of year = March 28)

LA01110D-150-625 (75.1 bu/acre) had the highest yield of 10 entries over three years in South Louisiana (Table 3). The variety Go Wheat LA754 (74.7 bu/acre) and a second experimental LA line, LA01110D-150-241 (74.4 bu/acre) also had yields well above the mean of 69.7 bu/acre. The two LA0110D lines are selections out of LA754. All had test weights above the mean of 57.1 lbs/bu, with the exception of LA01110D-150-241 and all headed after the mean of 82 days. Out of all ten entries, only AGS 3000 had a leaf rust rating greater than 0%. FHB scores were low with a mean of 1.5 (0-9 scale) and lodging was moderate with a score mean of 3.1 (0-9 scale).

Baton Rouge

Test was abandoned due to poor stands resulting from heavy rains immediately after planting.

Crowley

Yields and test weights were excellent at Crowley (Table 4). This test was harvested before the latest entries were fully dried down due to predicted heavy rainfall over an extended period, which proved to be a wise decision. The late maturing varieties AGS 2055, USG 3118, and Progeny Ag Berkeley and experimental line DH12SRW056-058 all had low test weights due to high moisture at harvest. Four experimental lines, DH12SRW056-058 (84.4 bu/acre), LA08080C-31-1 (84.1 bu/acre), LA09225C-33-3

(84.0 bu/acre) and GA 071518-16E39 (81.4 bu/acre) had the highest yields compared to the mean of 74.6 bu/acre. With the exception of DH12SRW056-058, all had test weights above the mean of 57.5 lbs/bu. The three highest yielding entries all headed out after the mean of 76 days. There was no disease pressure at Crowley in 2019.

Over two years at Crowley, AGS 2055 (98.5 bu/acre), Delta Grow 3500 (94.7 bu/acre) and LA09225C-33-3 (94.3 bu/acre) had the highest yield of 16 entries, all with yields well above the mean of 85.3 bu/acre.

Jeanerette

Three experimental lines, LA01110D-150-241 (58.0 bu/acre), AR06146E-1-4 (56.3 bu/acre) and LA09225C-33-3 (56.2 bu/acre) and two varieties, Go Wheat LA754 (56.0 bu/acre) and Dyna-Gro Plantation (55.1 bu/acre) led in yield of the 40 entries in Jeanerette in 2019 (Table 5). Test weights ranged from 59.8 lbs/bu to 40.5 bu/acre with a mean of 55.5 bu/acre. LA01110D-150-241, the highest yielding entry, had a test weight below the mean. The mean heading day was 95 days with 9 entries having heading days of 100 or greater. The two late-heading entries had the lowest test weights.

Over two years, three experimental lines, LA01110D-150-241 (82.2 bu/acre), AR06146E-1-4 (79.2 bu/acre) and LA01110D-150-625 (78.8 bu/acre) led at Jeanerette with yields well above the mean of 72.3 bu/acre)

Performance of Wheat Varieties Across North Louisiana

Early Maturity North Region Means:

Of the 9 entries tested over two years, AGS 2024 (81.1 bu/acre) and two medium-late checks, AGS 2055 (83.0 bu/acre) and AGS 2038 (80.1 bu/acre) had the highest yields across North Louisiana (Table 6). All had stripe rust scores of 0 (0-9 scale), leaf rust ratings of 0%, and FHB scores in plots below the mean of 3.7 (0-9 scale). In misted, inoculated Fusarium Head blight nurseries, AGS 2024, AGS 2055, and AGS2038 had FHB scores, FDK (Fusarium Damaged Kernels) ratings and DON (Deoxynivalenol) ppm levels greater than the respective means of 5.3 (0-9 scale), 44% and 9ppm.

Over three years, AGS 2024 (70.3 bu/acre) had the highest non-check yield of 8 entries (Table 7). The two checks, AGS 2055 (71.2 bu/acre) and AGS 2038 (70.3 bu/acre) also had yields above 70 bu/acre compared to the mean of 66.0 bu/acre. As occurred over two years, AGS 2024 had FHB scores, FDK ratings and DON levels all greater than the respective means.

FHB reaction type is the observed reaction to the disease based on FDK (Fusarium Damaged Kernels) and DON (Deoxynivalenol) levels. The reaction types are Resistant, Moderately Resistant, Moderately Susceptible, and Susceptible. Reaction type of Early wheat variety trial entries can be found in Table 14.

Alexandria

Test not harvested due to extended heavy rains.

Bossier City

Test not planted due to extended heavy rains.

Winnsboro

The late check AGS 2055 (75.3 bu/acre) followed by two experimental lines, TX15D9597 (71.2 bu/acre), and FLLA10033C-6 (70.7 bu/acre) had the highest yields of 15 entries in the Early maturity wheat performance trial at Winnsboro for 2019 (Table 8). All three had phenotype scores above the mean of 5.7 (0-9 scale). Yields in the test ranged from 75.3 bu/acre to 57.1 bu/acre with a mean of 64.8 bu/acre. Ten entries had leaf rust scores of 0 (0-9 scale). Heading day ranged from 93 to 107 with a mean of 97.

In addition to yield plots, the trial was also planted in an FHB misted and inoculated nursery where optimal conditions for disease development are maintained. In this nursery, AGS 2055, a medium-late check and highest yielding entry in the trial was very susceptible with a FHB score of 8 (0-9 scale), FDK rating of 93%, seed quality score of 1 (0-9 scale) and DON concentration of 22 ppm. Two breeding lines, GA09129-16E55 and TX15D9608 had the best ratings for FHB, along with AGS2040. There were a number of significant correlations between traits in this trial. Yield was positively correlated to phenotype and negatively correlated to FHB. Test weight was positively correlated to seed quality in plots and negatively correlated to FDK (Fusarium damaged kernels) in plots, which means that entries with good quality and a low percentage of damaged kernels also had higher yields as would be expected. Heading day was negatively correlated with FHB in the plots but positively correlated to FHB in the nursery. In the misted nursery all entries were under FHB pressure during flowering whereas in the regular yield plots the earliest lines could be disease escapes. Heading was also positively correlated with relative maturity and FDK in the nursery, but negatively correlated with seed quality.

Out of nine entries, four varieties, AGS 2024, AGS 2055, Delta Grow 3500, and AGS 2038 had the highest yields over two years at Winnsboro, all with yields above 82 bu/acre.

Normal Maturity North Region Means

Yields were good and slightly higher in the North Louisiana 'normal maturity' trial in 2019. Three experimental lines, Progeny Ag PGX 18-2 (76.9 bu/acre), DG WX18416 (76.0 bu/acre), and Agrimaxx Exp1906 (75.6 bu/acre) and two varieties, Armor Velocity (75.3 bu/acre) and Progeny Ag PGS 18-8 (74.7 bu/acre) had the five highest yields of 53 entries compared to the mean of 67.2 bu/acre (Table 9). Test weights ranged from 52.4 lbs/bu to 57.7 lbs/bu with a mean of 55.6 lbs/bu. Stripe and leaf rust pressure was moderate, with rating means of 3% and 2% respectively. FHB scores and FDK ratings were far higher in the misted nursery than in the plots, as expected. All five of the top yielding entries headed later than the mean of day 90.

FDK (Fusarium Damaged Kernels) ranged from a low of 8% (LA12080LDH-72) to a high of 955 (AGS 2055). DON ranged from 2ppm (LA12080LDH-72) to 33ppm (Pioneer 26R41). SY Collins had the lowest FDK and DON of the released varieties and also had good yield and test weight.

Over two years, four varieties, AGS 2055 (85.9 bu/acre), USG 3640 (83.7 bu/acre), Pioneer 26R59 (81.8 bu/acre) and LCS L11713 (81.6 bu/acre) had the four highest yields

in North Louisiana (Table 10). A Louisiana experimental line, LA08080C-31-1 (81.0 bu/acre) ranked fifth compared to the mean of 77.4 bu/acre. With the exception of Pioneer 26R59 and LA08080C-31-1, all five entries had test weights above the mean of 57.9 lbs/bu. In the misted nursery, as expected, FHB scores and FDK ratings were much higher. Sy Collins and the breeding line, AR06146E-1-4 had the best FDK (10%) and DON (3ppm) in the misted disease nursery.

The variety AGS 2055 (76.8 bu/acre) also had the highest yield over three years followed by the experimental line LA01110D-150-241 (74.2 bu/acre) and Progeny Ag Fury (70.0 bu/acre) compared to the mean of 67 bu/acre (Table 11). AGS 2055 and Progeny Ag Fury both had test weights above the mean of 57.2 lbs/bu. Pioneer 26R59, progeny Bullet, and GO Wheat LA754 had the best FDK and DON ratings over three years.

Alexandria

Yields were fair at Alexandria despite plot variability due to bird damage, rainfall before harvest, and wet spots in the field (Table 12). The experimental line DG WX18416 (72.0 bu/acre) had the highest yield, followed by the variety Progeny Ag PGS 18-8 (69.6 bu/acre), the experimental lines Progeny Ag PGX 18-2 (68.5 bu/acre) and Agrimaxx Exp1906 (67.2 bu/acre) and the variety Progeny Ag Turbo (66.7 bu/acre), all well above the mean of 57.1 bu/acre (Table 12). Only two of the top five yielding entries, Progeny Ag PGS 18-8 (56.1 lbs/bu) and Progeny Ag PGX 18-2 (56.7 lbs/bu) had test weights above the mean of 55.6 lbs/bu.

Only Progeny Ag PGX 18-2 (Day 82) headed prior to the mean of day 83. Bird damage ranged from 0 to 7% with a mean of 3%. The five top-yielding entries all had bird damage ratings of 5% or less.

The variety Pioneer 26R59 (84.6 bu/acre), the experimental LA01110D-150-241 (79.8 bu/acre) and a second variety, AGS 2055 (79.6 bu/acre) had the highest yields at Alexandria over two years compared to the mean of 71.5 bu/acre.

Bossier City

Test not planted due to extended heavy rains.

St. Joseph

Test not planted due to extended heavy rains.

Winnsboro

Grain yields at Winnsboro were excellent despite late planting due to rainfall. Two varieties, Armor Velocity (87.1 bu/acre) and AGS 2055 (85.3 bu/acre), and two experimental lines, Progeny Ag PGX 18-2 (85.3 bu/acre) and LA12080LDH-122 (85.1 bu/acre) had the highest yields compared to the mean of 77.5 bu/acre at Winnsboro in 2019 (Table 13). Leaf rust (mean 2%) and stripe rust (mean 3%) pressure was moderate with the top yielding entries all having ratings at or below the means. FHB pressure in the yield plots was high, with FDK ratings ranging from 5 to 70% and a mean of 24%. FDK ratings were very high in the misted inoculated nursery, ranging from 15% to 95% with a mean of 60%. Heading day ranged from 94 days to 112 days with a mean of 104

days. Of the four top yielding entries, only LA12080LDH-122 (day 94) headed before the mean.

Over two years, Pioneer 26R45 (98.1 bu/acre), Dyna-Gro 9811 (96.8 bu/acre), and Sy Viper (95.4 bu/acre) had the highest yields at Winnsboro. All three had stripe rust ratings of 0%, while Pioneer 26R45 and Sy Viper had Leaf rust ratings of 4% and 9%, respectively, both above the mean. Several entries showed good resistance to FHB in the misted and inoculated nursery. SY Collins had 15% FDK and only 4ppm DON. AR06146E-1-e, GO Wheat LA754, AGS 3040, and DynaGro Plantation all had good ratings for FHB. The breeding lines LA12080LDH-72 and LA12080LDH-122 h DON ratings of only 2ppm, very good FDK scores, and also good yields.

FHB reaction type is the observed reaction to the disease based on FDK (Fusarium Damaged Kernels) and DON (Deoxynivalenol) levels. Reaction type of Normal wheat variety trial entries can be found in Table 15.

Performance of Oat Varieties Across Louisiana

The 2018-2019 oat variety trial was lost at all locations due to prevented planting or severe lodging due to very heavy rainfall.

Table 1. Wheat performance trial across South Louisiana for 2019.

	Grain Yield 2019	Test Wt	Head Day	Plant Ht	Lod Score
Brand / variety	bu/a	lbs/bu	of yr	in	0-9
LA09225C-33-3	70.1	57.8	90	29	0.5
LA01110D-150-241	69.0	56.9	87	30	0.0
LA08080C-31-1	68.8	57.0	88	29	0.0
AR06146E-1-4	68.3	57.9	90	33	0.0
GO WHEAT LA754	67.6	57.3	84	29	0.8
DH12SRW056-058	66.2	54.4	95	31	0.0
SY COLLINS	65.5	58.3	88	31	0.0
TXLA14066DH-88	64.1	57.1	77	27	0.0
DYNA-GRO PLANTATION	63.3	56.9	84	29	0.0
AGS 2038	63.3	55.0	91	32	0.0
USG 3640	62.7	57.9	84	29	0.0
LA12080LDH-72	62.6	56.4	86	30	1.0
LA14076LDH-217	62.4	57.8	79	24	0.0
TX15D9579	62.3	55.6	82	27	0.0
TX15D9597	61.9	58.4	82	28	0.0
PIONEER 26R94	61.8	58.2	83	30	0.5
GA 09129-16E55	61.8	58.5	82	29	0.0
GA 071518-16E39	61.6	57.8	81	27	1.5
AGS 2024	61.6	56.7	85	26	0.0
LCS L11713	61.5	55.2	93	29	0.5
PROGENY AG #BERKELY	61.5	53.3	93	29	0.0
LA08281C-P4-3-1	61.0	55.9	81	28	1.5
AGS 3030	60.9	56.8	84	27	0.0
LA01110D-150-625	60.7	57.3	81	29	0.0
DELTA GROW 3500	60.5	57.0	87	29	0.0
AGS 3040	60.4	52.4	91	30	0.0
LA10191C-1	59.9	58.8	83	26	0.0
FLLA10033C-6	59.2	57.2	82	30	0.0
TX15D9608	59.1	57.6	80	26	0.0
AGS 2055	59.0	52.8	96	30	0.0
GA 19436-16LE12	58.7	58.8	87	30	0.0
TXLA14066DH-64	58.4	56.5	78	27	1.0
LA12080LDH-122	57.3	53.8	93	28	0.0
LA13235DH-19	54.0	58.3	81	26	0.0
GA 09377-16LE18	53.2	56.1	85	28	0.0
AGS 3000	52.9	58.5	74	27	0.0
LA13235LDH-70	51.6	58.5	81	29	0.0
USG 3118	51.1	47.9	100	28	0.0
AGS 2040	38.4	57.7	78	26	0.0
AR07133C-19-4	15.6	40.5	97	33	0.0
MEAN	60.4	56.5	85	29	0.2
CV(%)	12	2	2	5	378
LSD (0.10)	9.5	3.1	4	2	NS
Data from Crowley and Jeanerette for 2019.					
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.					
Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.					
NS indicates that variety mean differences were not statistically significant.					

Table 2. Wheat performance trial across South Louisiana for two years, 2018 and 2019.

Brand / variety	Grain Yield bu/a	Test Wt lbs/bu	Head Day of yr	Plant Ht in	Lod Score 0-9	Leaf Rust %	FHB Score 0-9	Pheno type 0-9
AGS 2055	86.1	56.1	96	32	1.0	0	0.8	7.0
DELTA GROW 3500	85.6	59.5	87	31	3.1	0	1.0	6.3
USG 3640	84.0	59.2	84	32	2.8	0	1.3	6.3
AR06146E-1-4	83.6	60.3	90	34	3.1	0	1.0	5.5
LA01110D-150-241	83.1	58.4	87	32	2.2	0	1.0	5.5
GO WHEAT LA754	83.0	59.0	84	32	4.0	0	2.5	5.8
LA08080C-31-1	82.1	58.6	88	31	1.2	0	0.3	5.8
AGS 3040	81.4	55.9	91	33	1.7	0	1.0	6.3
LA09225C-33-3	81.0	58.9	90	31	2.9	0	1.0	6.3
LA01110D-150-625	79.2	59.3	81	32	2.8	0	1.0	5.3
AGS 2024	78.2	58.4	85	29	3.5	0	2.3	6.3
SY COLLINS	77.8	59.5	88	33	2.8	0	1.0	5.0
AGS 2038	77.2	57.4	91	34	3.5	0	1.5	5.8
PIONEER 26R94	77.1	59.9	83	33	3.3	0	1.3	6.0
AGS 3000	62.6	59.9	74	30	3.0	19		4.5
AGS 2040	59.6	59.5	78	30	3.5	0		5.5
MEAN	78.8	58.7	86	32	2.8	1	1.2	5.8
CV(%)	10	2	1	5	36	287	32	13
LSD (0.10)	7.7	1.3	2.9	1.4	1.7	-	-	-
Data from Crowley and Jeanerette for 2018 and 2019, and Baton Rouge for 2018.								
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.								
Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.								
Leaf Rust is percent tissue of upper three leaves affected by leaf rust.								
FHB is a 0-9 scale for FHB symptoms on heads in the yield plots, 0 = none.								
Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.								

Table 3. Wheat performance trial across South Louisiana for three years, 2017 - 2019.

	Grain Yield	Test Wt	Head Day	Plant Ht	Lod Score	Leaf Rust	FHB Score	Pheno type
Brand / variety	bu/a	lbs/bu	of yr	in	0-9	%	0-9	0-9
LA01110D-150-625	75.1	58.0	83	33	2.8	0	0.6	5.3
GO WHEAT LA754	74.7	57.5	83	32	3.5	0	1.3	5.8
LA01110D-150-241	74.4	56.8	87	32	1.9	0	0.3	5.5
DELTA GROW 3500	73.2	57.3	90	31	2.4	0	0.4	6.3
AGS 2024	72.1	56.8	76	29	4.3	0	2.8	6.3
AGS 2038	71.1	56.8	84	34	3.4	0	2.2	5.8
AGS 2055	71.0	52.2	94	32	1.2	0	0.3	7.0
PIONEER 26R94	70.0	58.2	77	33	3.7	0	3.5	6.0
AGS 3000	59.9	58.7	66	30	3.6	10		4.5
AGS 2040	55.5	58.3	75	30	3.9	0	2.8	5.5
MEAN	69.7	57.1	82	31	3.1	1	1.5	5.8
CV(%)	11	2	1	5	28	249	29	12
LSD (0.10)	8.6	2.1	6.2	1.1	1.4	4.2	NS	-
Data from Crowley 2017, 2018 and 2019; Baton Rouge for 2018; and Jeanerette for 2018 and 2019.								
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.								
Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.								
Leaf Rust is percent tissue of upper three leaves affected by leaf rust.								
FHB is a 0-9 sclae for FHB symptoms on heads in the yield plots, 0 = none.								
Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.								
NS indicates that variety mean differences were not statistically significant.								

Table 4. Wheat performance trial at Crowley, LA for 2019.

Brand / variety	Grain Yield		Test	Head	Plant	Lod
	2019	2-yr	Wt	Day	Ht	Score
	bu/a		lbs/bu	of yr	in	0-9
AGS 2055 *	80.2	98.5	51.6	86	35	0.0
DELTA GROW 3500	73.9	94.7	57.8	77	32	0.0
LA09225C-33-3	84.0	94.3	58.1	82	32	0.5
AGS 2024	80.8	92.2	58.3	74	30	0.0
LA08080C-31-1	84.1	91.0	58.6	78	33	0.0
AR06146E-1-4	80.4	87.7	58.6	79	37	0.0
LA01110D-150-241	80.0	86.8	58.8	80	34	0.0
GO WHEAT LA754	79.3	86.3	59.4	74	32	0.8
AGS 3040	70.2	86.1	52.0	81	31	0.0
AGS 2038	72.7	85.6	54.2	82	36	0.0
PIONEER 26R94	76.5	85.2	59.1	73	31	0.5
SY COLLINS	77.6	83.6	59.5	79	35	0.0
LA01110D-150-625	75.5	81.7	59.4	73	32	0.0
USG 3640	77.7	81.6	58.9	73	33	0.0
AGS 3000	61.1	63.4	60.2	65	32	0.0
AGS 2040	44.2	58.0	58.9	69	29	0.0
DH12SRW056-058 *	84.4		51.7	85	37	0.0
GA 071518-16E39	81.4		59.3	72	30	1.5
TX15D9579	79.6		57.9	73	31	0.0
LA12080LDH-72	78.7		58.7	75	33	1.0
TX15D9597	78.7		59.8	74	31	0.0
AGS 3030	78.4		59.1	72	30	0.0
TXLA14066DH-64	77.9		57.6	70	31	1.0
LA08281C-P4-3-1	77.9		58.7	73	31	1.5
LA10191C-1	77.9		60.1	71	30	0.0
GA 09129-16E55	77.0		59.7	71	32	0.0
FLLA10033C-6	76.9		58.7	73	33	0.0
LA14076LDH-217	75.7		58.8	72	28	0.0
TXLA14066DH-88	75.2		58.8	69	32	0.0
LCS L11713	74.8		56.1	85	34	0.5
GA 19436-16LE12	74.4		57.7	79	33	0.0
TX15D9608	72.2		59.8	71	30	0.0
DYNA-GRO PLANTATION	71.6		57.8	73	32	0.0
LA12080LDH-122	69.7		54.9	84	31	0.0
USG 3118 *	69.0		45.4	88	32	0.0
GA 09377-16LE18	68.6		57.6	73	31	0.0
PROGENY AG #BERKELEY *	67.9		52.1	86	33	0.0
LA13235DH-19	62.7		60.0	73	29	0.0
LA13235LDH-70	59.8		59.6	73	31	0.0
AR07133C-19-4	very late			97	38	0.0
MEAN	74.6	85.3	57.5	76	32	0.2
CV(%)	8	6	2	1	5	379
LSD (0.10)	7.0	11.9	1.2	1	2	NS
* Late-maturing variety with low test weight due to high moisture at harvest.						
Data from LSU AgCenter H. Rouse Caffey Rice Research Station. Dustin Harrell, Don Groth, Boyd Padgett, James P. Leonards, Jacob Fluitt, Manoch Kongchum, and Jason Hartman.						
Cultural and Site Information: Crowley silt loam soil. 1.61% OM. 5.99 pH. Planted 11-30-18. 21-24-24-2.7S fertilizer on 11-28-17. 80-0-0 topdress N on 2-6-18. 4.75 oz/A Osprey + 0.9 oz/A Harmony Extra + 1.5 pt/A Prowl + 1.5 pt/A MSO on 1-11-9. Harvested on 5-7-19.						
Comments: This test was harvested with a few entries still not fully dried down because of predicted heavy rainfall over an extended period.						
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.						
Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.						
NS indicates that variety mean differences were not statistically significant.						

Table 5. Wheat performance trial at Jeanerette, LA for 2019.

	Grain Yield		Test	Head	Plant
	2019	2-yr	Wt	Day	Ht
Brand / variety	bu/a		lbs/bu	of yr	in
LA01110D-150-241	58.0	82.2	55.1	95	26
AR06146E-1-4	56.3	79.2	57.3	101	29
LA01110D-150-625	45.8	78.8	55.3	90	26
GO WHEAT LA754	56.0	78.7	55.3	94	26
SY COLLINS	53.3	77.4	57.1	98	27
USG 3640	47.8	75.4	57.0	95	25
DELTA GROW 3500	47.1	75.0	56.1	97	25
AGS 3040	50.5	74.6	52.7	101	29
LA08080C-31-1	53.5	73.6	55.4	99	25
AGS 2055	43.1	72.7	53.7	105	25
AGS 2038	54.0	72.3	55.9	100	28
LA09225C-33-3	56.2	70.9	57.4	99	26
PIONEER 26R94	47.2	65.9	57.3	93	28
AGS 3030	43.5	63.9	54.5	97	24
AGS 2024	42.4	60.2	55.0	97	22
AGS 2040	32.6	55.0	56.5	87	23
DYNA-GRO PLANTATION	55.1		56.1	96	26
PROGENY AG #BERKELEY	55.0		54.6	101	26
TXLA14066DH-88	52.9		55.5	84	22
LA14076LDH-217	49.1		56.8	86	21
LCS L11713	48.3		54.4	102	25
DH12SRW056-058	48.1		57.2	105	26
LA13235DH-19	47.6		57.0	90	22
GA 09129-16E55	46.5		57.2	92	25
LA12080LDH-72	46.5		54.0	97	26
TX15D9608	46.0		55.5	90	22
TX15D9597	45.1		57.1	90	25
TX15D9579	45.0		53.4	90	24
LA12080LDH-122	45.0		52.6	103	25
AGS 3000	44.8		56.8	83	22
LA08281C-P4-3-1	44.1		53.2	88	25
LA13235LDH-70	43.4		57.3	90	28
GA 19436-16LE12	43.1		59.8	96	27
LA10191C-1	41.9		57.6	95	23
GA 071518-16E39	41.8		56.2	90	24
FLLA10033C-6	41.5		55.7	92	27
TXLA14066DH-64	38.8		55.4	86	23
GA 09377-16LE18	37.8		54.6	97	25
USG 3118	33.1		50.5	111	23
AR07133C-19-4	15.6		40.5	late	29
MEAN	46.5	72.3	55.5	95	25
CV(%)	19	13	2	2	5
LSD (0.10)	10.3	11.6	3.9	2	2
Data from LSU AgCenter Iberia Research Station. Gregory Williams.					
Cultural and Site Information: Baldwin Silty Clay Loam. Planted Nov 30, Harvested May 22, 2019. Fertilized 25#N/A as 13-13-13 at planting + 100-0-0 as urea in late February. Planting conditions were less than favourable. Wet conditions prevailed and field was tacky. Seed coverage was also not ideal in clay conditions. Rain expected overnight which may help to cover and germinate seed. Fertilization was not uniform due to malfunction of fertilizer distributor.					
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.					

Table 6. Early maturity wheat performance trial across North Louisiana for two years, 2018 and 2019.

Brand / variety	Grain	Test	Head	Plant	Lod	Stripe	Leaf	Pheno	FHB	FHB	Seed	Misted Nursery			
	Yield	Wt	Day	Ht	Score	Rust	Rust	type	Score	FDK	Qual	FHB	FDK	SDQ	DON
	bu/a	lbs/bu	of yr	in	0-9	0-9	%	0-9	0-9	%	0-9	0-9	%	0-9	ppm
												2yr	2yr	2019	2yr
AGS 2055 *	83.0	57.3	93	35	0.3	0.0	0	6.0	1.5	10	4.5	5.0	71	1.0	20
AGS 2024	81.1	57.7	90	34	0.3	0.0	0	5.6	2.4	45	4.0	6.3	54	2.5	10
AGS 2038 *	80.1	59.0	93	37	0.4	0.0	0	5.9	2.1	20	4.5	6.3	56	1.0	17
DELTA GROW 3500	79.2	59.3	87	32	1.0	0.0	0	6.1	5.9	60	3.0	4.5	39	4.0	6
GO WHEAT LA754	73.1	58.2	86	35	1.2	0.0	4	5.9	4.8	70	3.0	4.9	40	3.5	6
PIONEER 26R94	73.0	58.2	89	36	0.5	0.0	0	5.7	4.4	5	6.0	6.3	46	3.5	10
AGS 3030	70.7	54.7	87	33	0.4	0.0	0	5.1	4.8	70	3.0	5.2	48	3.0	6
AGS 3000	61.8	57.1	81	32	1.4	0.0	43	5.9	3.6	18	5.0	3.8	29	4.0	3
AGS 2040	60.4	57.3	83	34	0.6	0.0	1	5.9	4.1	10	5.0	5.3	13	5.0	2
Mean	73.9	57.7	87.6	34	0.7	0.0	5	5.8	3.7	34	4.2	5.3	44	3.1	9
CV%	12	3	2	6	123		58	10	18	10	7	17	28	38	16
LSD(0.10)	10.3	2.2	3	2.3	0.8	NS	3.1	NS	0.8	9.1	0.8	2.2	23.4	1.7	3.9

* AGS 2038 and AGS 2055 are medium-late checks for cross comparison.

Data from 2018 and 2019 Winnsboro; and 2018: Alexandria and Bossier City.

Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.

Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.

Stripe rust is relative score with 0 = none and 9 = severe infection and dieback.

Leaf Rust is percent tissue of upper three leaves affected by leaf rust.

Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.

FHB score is 0-9 Fusarium symptoms on head from yield plots (non-inoculated) and from a misted and inoculated nursery.

FDK is percent Fusarium Damaged Kernels from yield plots and from a misted and inoculated nursery.

Seed Qual (SDQ) is seed quality, a relative, visual rating of seed plumpness, uniformity, and visible defects (disease, insect damage, etc.), 0 = poor.

DON is Deoxynivalenol toxin concentration from the misted and inoculated nursery.

NS indicates that variety mean difference were not statistically significant.

Table 7. Early maturity wheat performance trial across North Louisiana for three years, 2017 - 2019.

Brand / variety	Grain Yield bu/a	Test Wt lbs/bu	Head Day of yr	Plant Ht in	Lod Score 0-9	Stripe Rust 0-9	Leaf Rust %	Pheno type 0-9	FHB Score 0-9	FHB FDK %	Seed Qual 0-9	Misted Nursery		
												FHB 0-9	FDK %	DON ppm
AGS 2055 *	71.2	56.5	91	37	1.4	0.0	0	6.1	0.8	10	4.5	4.0	65	23.8
AGS 2038 *	70.3	57.9	90	38	1.5	0.0	0	5.8	2.6	20	4.5	4.7	47	18.3
AGS 2024	70.3	56.8	84	35	1.6	0.0	0	5.3	3.2	45	4.0	6.6	58	14.5
DELTA GROW 3500	69.5	58.7	84	34	2.6	0.0	0	6.1	2.8	60	3.0	4.4	33	8.6
GO WHEAT LA754	66.2	57.5	82	36	2.7	0.0	1	5.6	3.8	70	3.0	5.8	54	10.6
PIONEER 26R94	65.7	57.9	84	38	1.9	0.0	3	5.7	3.2	5	6.0	4.8	43	12.3
AGS 3000	57.6	57.1	75	34	2.6	0.0	22	5.5	2.2	18	5.0	3.4	27	6.7
AGS 2040	56.1	57.4	78	35	2.3	0.0	0	5.8	2.9	10	5.0	4.2	12	6.0
Mean	66.0	57.5	84	36	2.1	0.0	3	5.7	2.7	30	4.4	4.7	42	12.6
CV%	13	3	2	5	78	-	97	11	21	13	7	30	27	33
LSD(0.10)	7.5	1.6	3	1.5	0.7	-	8.2	0.5	NS	-	-	NS	22.9	3.8

* AGS 2038 and AGS 2055 are medium-late checks for cross comparison.

Data from 2017, 2018 and 2019 Winnsboro; 2017 Alexandria and St. Joseph; and 2018 Alexandria and Bossier City.

Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.

Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.

Stripe rust is relative score with 0 = none and 9 = severe infection and dieback.

Leaf Rust is percent tissue of upper three leaves affected by leaf rust.

Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.

FHB score is 0-9 Fusarium symptoms on head from yield plots (non-inoculated) and from a misted and inoculated nursery.

FDK is percent Fusarium Damaged Kernels from yield plots and from a misted and inoculated nursery.

Seed Qual is seed quality, a relative, visual rating of seed plumpness, uniformity, and visible defects (disease, insect damage, etc.), 0 = poor.

DON is Deoxynivalenol toxin concentration from a misted and inoculated nursery.

NS indicates that variety mean difference were not statistically significant.

Table 8. Early maturity wheat performance trial at Winnsboro for 2019.

Brand / variety	Grain Yield		Test	Head	Lod	Stripe	Leaf	Pheno	FHB	Seed	FHB	Misted Nursery			
	2019	2-yr	Wt	Day	Score	Rust	Rust	type	Score	Qual	FDKP	FHB	FDK	SDQ	DON
	bu/a		lbs/bu	of yr	0-9	0-9	%	0-9	0-9	0-9	%	0-9	%	0-9	ppm
AGS 2024	69.5	86.5	55.9	104	0.0	0.0	0	6.0	2.4	4.0	45	7.5	68	2.5	6
AGS 2055 *	75.3	86.1	55.0	107	0.3	0.0	0	5.8	1.5	4.5	10	8.0	93	1.0	22
DELTA GROW 3500	67.0	84.6	55.0	94	2.5	0.0	0	6.0	5.9	3.0	60	6.0	50	4.0	3
AGS 2038 *	69.2	82.3	54.3	107	0.0	0.0	0	6.3	2.1	4.5	20	8.5	85	1.0	18
GO WHEAT LA754	63.3	75.7	52.3	95	3.0	0.0	4	6.0	4.8	3.0	70	5.5	48	3.5	4
AGS 2040	65.0	73.8	56.1	93	0.8	0.0	1	6.0	4.1	5.0	10	7.5	10	5.0	1
AGS 3030	57.1	72.1	51.4	95	0.0	0.0	0	5.0	4.8	3.0	70	5.5	53	3.0	2
PIONEER 26R94	57.3	69.4	56.9	103	1.0	0.0	0	5.5	4.4	6.0	5	8.5	58	3.5	3
AGS 3000	58.9	66.8	55.3	93	2.0	0.0	43	6.0	3.6	5.0	18	4.5	40	4.0	2
TX15D9597	71.2		54.5	95	1.3	0.0	4	6.3	4.5	4.5	18	6.5	55	3.0	3
FLLA10033C-6	70.7		55.4	98	0.3	0.5	0	6.3	3.0	5.0	20	5.5	60	3.0	9
GA 09129-16E55	64.3		56.7	94	0.3	0.0	0	5.5	3.4	5.5	8	5.0	20	5.5	2
TX15D9608	63.2		55.3	95	0.0	0.0	1	4.8	4.6	5.0	18	6.5	13	5.0	1
LA10191C-1	62.0		51.9	95	1.8	0.0	0	5.5	3.5	3.5	45	5.5	40	3.5	2
TX15D9579	57.6		53.9	95	1.0	0.0	0	5.0	4.9	4.5	20	8.0	83	1.5	11
Mean	64.8		54.6	97	0.9	0.3	4	5.7	3.8	4.4	29	6.6	52	3.3	6
CV%	9		1	2	116	547	72	13	17	10	17	16	26	30	37
LSD(0.10)	7.2		1.0	3	1.3	NS	3.1	NS	0.8	0.8	9.1	1.9	23.6	1.7	4

* AGS 2038 and AGS 2055 are medium-late checks added to the early trial for cross comparison.

Data from Macon Ridge Research Station at Winnsboro, LA. Steve Harrison, Trey Price, Myra Purvis, Kelly Arceneaux, Allysson Harding, and Katie McCarthy Fontenot.

Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.

Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged

Stripe rust is relative score with 0 = none and 9 = severe infection and dieback.

Leaf Rust is percent tissue of upper three leaves affected by leaf rust.

Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.

FHB score is 0-9 Fusarium symptoms on head from yield plots (FHBp) and from a misted and inoculated nursery (FHB).

Seed Qual is seed quality, a relative, visual rating of seed plumpness, uniformity, and visible defects (disease, insect damage, etc.), 0 = poor.

FDK is percent Fusarium Damaged Kernels from yield plots (FDKP) and from a misted and inoculated nursery (FDK).

DON is Deoxynivalenol toxin concentration from a misted and inoculated nursery.

NS indicates that variety mean difference were not statistically significant.

Pearson Correlation Coefficients, N = 15															
Prob > r under H0: Rho=0															
		TWT	HD	LOD	LFR	STRIPE	PHE	FHB	SQLP	FDKP	FHBN	RMN	FDKN	SDQN	
BUPA		0.24	0.47	-0.23	-0.27	0.29	0.61	-0.57	-0.02	-0.17	0.20	0.06	0.32	-0.32	
		0.39	0.08	0.41	0.33	0.30	0.02	0.03	0.94	0.54	0.47	0.84	0.25	0.24	
TWT			0.21	-0.30	0.06	0.12	0.21	-0.22	0.79	-0.73	0.29	-0.07	-0.17	0.29	
			0.46	0.28	0.82	0.67	0.46	0.43	0.00	0.00	0.29	0.81	0.54	0.30	
HD				-0.45	-0.29	0.00	0.22	-0.72	0.17	-0.23	0.70	0.70	0.71	-0.70	
				0.09	0.30	0.99	0.43	0.00	0.54	0.41	0.00	0.00	0.00	0.00	
LOD					0.36	-0.19	0.26	0.53	-0.42	0.42	-0.38	-0.41	-0.13	0.20	
					0.19	0.49	0.34	0.04	0.12	0.12	0.17	0.13	0.65	0.48	
LFRUST						-0.09	0.19	0.00	0.15	-0.11	-0.45	-0.18	-0.15	0.16	
						0.75	0.50	0.99	0.59	0.69	0.09	0.52	0.59	0.56	
STRIPE							0.30	-0.19	0.18	-0.11	-0.22	-0.12	0.09	-0.05	
							0.28	0.49	0.52	0.70	0.43	0.66	0.74	0.85	
PHE								-0.34	-0.03	-0.04	-0.01	-0.04	0.21	-0.17	
								0.22	0.92	0.90	0.97	0.88	0.45	0.54	
FHB									-0.28	0.38	-0.27	-0.42	-0.42	0.47	
									0.31	0.16	0.33	0.12	0.12	0.08	
SQLP										-0.93	0.28	-0.01	-0.17	0.20	
										<.0001	0.31	0.98	0.55	0.47	
FDKP											-0.38	-0.03	0.04	-0.04	
											0.17	0.91	0.88	0.89	
FHBN												0.49	0.51	-0.56	
												0.06	0.05	0.03	
RMN													0.77	-0.73	
													0.00	0.00	
FDKN														-0.96	
														<.0001	
SDQN															

Table 9. Normal maturity wheat performance trial across North Louisiana for 2019.

Brand / variety	Grain Yield bu/a	Test Wt lbs/bu	Head Day of yr	Plant Ht in	Lod Score 0-9	Stripe Rust %	Leaf Rust %	Pheno type 0-9	FHB Score 0-9	FDK %	Misted FHB Nursery			
											RM	FHB	FDK	DON
											0-9	0-9	%	ppm
PROGENY AG PGX 18-2	76.9	56.7	91	32	2.1	0	0	5.3	4.0	28	5.0	4.5	65	8
DG WX18416	76.0	55.5	95	39	0.4	0	2	4.8	1.8	5	6.5	6.0	70	8
AGRIMAXX EXP1906	75.6	55.1	95	39	1.1	1	0	5.3	1.5	15	6.5	4.0	85	19
ARMOR VELOCITY	75.3	56.0	95	38	0.3	1	2	5.5	1.8	5	6.5	5.0	75	10
PROGENY AG PGS 18-8	74.7	55.7	98	37	0.0	0	4	4.0	2.0	15	6.5	5.5	83	21
LCS L11713	74.3	57.4	90	32	2.4	0	0	5.5	4.3	18	5.0	5.5	43	5
DYNA-GRO 9811	74.3	56.3	94	38	0.6	0	0	5.0	2.0	10	7.0	5.5	80	12
AGS 2055	74.0	55.8	92	39	0.8	3	0	4.8	2.0	5	5.5	9.0	95	16
SY COLLINS	73.6	57.6	85	37	1.0	0	0	5.0	2.0	5	6.5	4.5	15	4
LA09225C-33-3	73.1	57.7	93	38	1.9	0	0	6.0	1.8	10	6.5	8.0	75	18
LA12080LDH-122	72.8	54.2	82	31	2.9	0	0	6.5	8.0	30	4.5	8.0	23	2
NC12-21213	72.2	56.4	91	39	0.6	0	1	5.0	3.3	18	6.0	7.5	78	8
GA 09377-16LE18	72.0	56.3	83	37	0.4	1	0	6.8	4.8	23	6.0	8.5	80	9
PIONEER 26R59	71.2	52.8	97	34	0.4	0	8	4.8	2.0	5	7.0	6.5	78	13
PROGENY AG #TURBO	71.0	56.0	92	37	0.8	0	0	5.3	1.8	10	7.0	6.0	40	9
SY RICHIE	70.6	55.6	87	37	0.5	0	0	5.5	5.0	28	6.5	7.0	40	6
USG 3118	70.2	55.9	90	37	0.3	0	0	5.0	2.5	10	7.0	6.5	58	6
AR06146E-1-4	70.1	57.6	84	38	0.6	0	0	5.5	2.8	5	6.0	4.0	15	3
DYNA-GRO PLANTATION	69.6	56.7	80	33	3.3	19	0	4.8	6.3	38	6.0	8.0	50	3
PROGENY AG #FURY	69.4	54.7	89	37	0.5	10	0	4.3	4.5	50	5.5	8.5	95	14
AGRIMAXX 481	68.8	56.1	81	36	2.4	18	0	4.5	5.8	50	5.5	8.0	38	5
DELTA GROW 1000	68.6	54.7	100	39	0.4	0	0	5.0	0.8	5	7.0	4.5	70	19
NC14-23372	68.4	56.8	92	38	1.0	0	1	5.5	2.8	20	6.5	3.5	58	3
GA 071518-16E39	68.0	56.4	84	35	1.5	4	0	5.5	4.5	38	5.5	9.0	65	4
SY 547	67.1	56.0	93	38	1.8	5	0	4.0	0.8	13	7.0	4.5	73	12
PROGENY AG PGX 18-7	66.8	57.4	96	38	0.3	15	1	5.3	1.0	5	6.5	5.0	65	22
LA08080C-31-1	66.5	53.5	89	38	0.8	0	2	5.3	3.8	58	6.0	6.0	68	3
AR07133C-19-4	66.1	57.4	93	39	0.0	0	0	3.8	1.3	10	7.0	4.0	63	19
LA12080LDH-72	66.0	54.6	86	37	1.6	0	3	6.5	4.3	8	6.0	4.5	8	2
LA01110D-150-241	65.7	53.9	82	37	2.0	3	0	5.8	4.8	55	5.5	7.5	75	4
DYNA-GRO 9701	65.6	55.5	101	40	0.1	0	0	5.5	0.5	5	7.0	5.0	65	22
ARMOR COASTAL	65.6	55.3	89	33	1.4	0	8	4.8	3.5	13	5.0	7.0	55	7
LA14076LDH-217	65.6	56.4	80	32	1.4	0	0	6.0	3.8	23	6.5	8.0	60	10
USG 3640	65.4	55.8	89	38	0.5	15	0	5.3	3.5	40	5.5	8.0	48	4
PROGENY AG PGX16-4	65.2	55.5	89	37	1.4	4	0	4.8	3.8	43	6.0	8.5	70	9
DH12SRW056-058	65.0	57.0	90	38	0.5	0	4	5.8	2.3	5	5.5	4.0	15	4
PROGENY AG #BERKELEY	65.0	55.1	89	37	1.3	0	2	4.8	3.0	33	6.0	5.0	50	4
GO WHEAT LA754	64.7	54.3	79	34	3.1	25	2	5.3	5.0	70	5.0	5.0	55	3
AGS 2038	64.6	55.7	91	40	1.4	0	0	4.8	1.8	15	6.5	8.0	95	25
GA 19436-16LE12	63.2	57.2	90	42	0.6	1	0	5.5	3.0	23	6.5	7.5	35	4
SY VIPER	63.0	57.0	92	38	1.4	0	9	5.0	2.0	5	6.0	5.5	53	10
DYNA-GRO TV8861	62.8	55.5	99	38	0.6	1	20	4.8	1.0	10	6.5	3.5	90	27
LA08281C-P4-3-1	62.7	52.4	79	35	1.5	0	0	5.3	6.8	88	6.0	8.0	83	11
PIONEER 26R45	62.3	53.6	102	38	0.8	0	4	4.8	0.3	5	7.0	5.0	60	11
DG WX19621	61.2	54.6	98	37	0.9	2	1	4.0	1.0	13	7.0	5.0	68	12
PIONEER 26R41	60.8	55.3	99	34	0.4	0	0	6.0	1.0	10	7.0	6.0	83	33
AGS 3040	60.5	55.2	85	37	1.5	21	0	4.8	2.8	28	6.0	7.0	45	3
PROGENY AG #BULLET	60.3	55.4	101	38	0.4	1	0	4.5	0.8	13	7.0	5.0	50	17
LA13235LDH-70	59.9	54.9	78	35	1.9	0	0	5.8	4.8	70	5.0	7.0	45	3
LA13235DH-19	59.1	55.5	81	33	0.5	1	0	6.0	6.3	70	5.0	8.0	35	3
PROGENY AG #BLAZE	58.4	53.2	99	37	0.1	0	12	5.3	0.3	5	7.0	5.5	70	16
LA01110D-150-625	56.9	54.3	78	37	2.9	0	1	4.5	4.0	40	4.0	6.0	45	4
AGRIMAXX 473	56.1	53.9	100	40	0.0	0	0	5.0	1.0	18	7.0	5.5	73	24

Table 9. Normal maturity wheat performance trial across North Louisiana for 2019.

	Grain Yield	Test Wt	Head Day	Plant Ht	Lod Score	Stripe Rust	Leaf Rust	Pheno type	FHB Score	FDK	Misted FHB Nursery			
											RM	FHB	FDK	DON
Brand / variety	bu/a	lbs/bu	of yr	in	0-9	%	%	0-9	0-9	%	0-9	0-9	%	ppm
MEAN	67.2	55.6	90	37	1.1	3	2	5.2	2.9	24	6.1	6	59.7	10
CV%	14	3	3	6	106	177	281	15	23	69	9	14	28	27
LSD(0.10)	8.3	2.1	5	2.5	1.2	5.9	5.5	NS	0.8	28.1	0.9	1.5	28.2	4.8
Data from Macon Ridge Research Station at Winnsboro and Dean Lee Research Station at Alexandria.														
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.														
Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.														
Stripe rust is relative score with 0 = none and 9 = severe infection and dieback.														
Leaf Rust is percent tissue of upper three leaves affected by leaf rust.														
Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.														
FHB is percent Fusarium head symptoms in the field on a scale of 0=none to 9= severe.														
FDK is percent Fusarium Damaged Kernels from a misted and inoculated nursery.														
RM is relative maturity where 0 = extremely early; 3 = early; 5 = average heading date; 7 = late; 9 = did not head.														
DON is Deoxynivalenol toxin concentration from a misted and inoculated nursery.														
NS indicates that variety mean difference were not statistically significant.														

Table 10. Normal maturity wheat performance trial across North Louisiana for two years, 2018 and 2019.

Brand / variety	Grain Yield bu/a	Test Wt lbs/bu	Head Day of yr	Plant Ht in	Lod Score 0-9	Stripe Rust %	Leaf Rust %	Pheno type 0-9	FHB Score 0-9	FDK %	Misted FHB Nursery			
											RM	FHB	FDK	DON
											0-9	0-9	%	ppm
											2yr	2yr		
AGS 2055	85.9	58.0	91	37	0.5	3	0	5.3	2.0	5	5.5	6.1	70	18
USG 3640	83.7	59.7	87	37	0.4	15	0	5.7	3.5	40	5.5	6.1	40	7
PIONEER 26R59	81.8	54.8	93	34	0.4	0	8	5.2	2.0	5	7.0	4.3	48	9
LCS L11713	81.6	59.7	89	34	1.5	0	0	5.6	4.3	18	5.0	4.0	29	7
LA08080C-31-1	81.0	57.6	88	36	0.6	0	2	5.7	3.8	58	6.0	4.0	46	8
SY VIPER	80.1	57.7	90	39	1.1	0	9	5.2	2.0	5	6.0	4.1	33	7
PROGENY AG #FURY	80.0	58.1	88	35	0.4	10	0	5.3	4.5	50	5.5	5.6	61	12
SY COLLINS	80.0	59.1	85	39	0.6	0	0	5.2	2.0	5	6.5	3.1	10	3
USG 3118	78.5	57.6	88	35	0.4	0	0	5.0	2.5	10	7.0	4.5	39	6
PROGENY AG PGX16-4	78.3	58.2	87	37	0.9	4	0	5.5	3.8	43	6.0	6.1	59	13
DYNA-GRO 9811	78.0	58.8	92	37	0.4	0	0	5.6	2.0	10	7.0	3.9	48	10
LA09225C-33-3	77.8	59.1	89	37	1.1	0	0	5.8	1.8	10	6.5	5.0	50	13
DYNA-GRO 9701	77.3	57.5	97	39	0.3	0	0	5.3	0.5	5	7.0	2.8	35	13
PROGENY AG #BERKELEY	77.2	57.7	87	36	0.9	0	2	5.5	3.0	33	6.0	3.9	33	6
LA01110D-150-241	77.2	57.2	83	37	1.1	3	0	5.9	4.8	55	5.5	5.6	59	9
DYNA-GRO TV8861	77.1	57.1	96	36	0.5	1	20	4.9	1.0	10	6.5	2.5	54	17
AGS 3040	76.7	56.7	85	37	1.0	21	0	5.5	2.8	28	6.0	4.8	28	3
AR06146E-1-4	76.2	60.1	85	38	0.4	0	0	6.0	2.8	5	6.0	3.0	10	3
AGS 2038	75.8	58.6	90	40	0.9	0	0	5.1	1.8	15	6.5	6.3	66	21
PIONEER 26R45	75.4	55.6	96	38	0.5	0	4	5.3	0.3	5	7.0	2.8	33	7
PROGENY AG #TURBO	75.2	57.5	90	36	0.6	0	0	5.2	1.8	10	7.0	4.9	46	19
GO WHEAT LA754	74.7	58.0	81	36	1.8	25	2	5.7	5.0	70	5.0	4.4	43	7
DELTA GROW 1000	74.3	57.1	97	38	0.4	0	0	5.0	0.8	5	7.0	2.9	38	12
PIONEER 26R41	73.1	58.0	95	33	0.3	0	0	5.8	1.0	10	7.0	3.6	48	20
PROGENY AG #BULLET	72.6	57.0	98	37	0.4	1	0	4.8	0.8	13	7.0	3.9	29	10
AGRIMAXX 473	71.3	57.1	96	39	0.1	0	0	5.1	1.0	18	7.0	3.4	39	14
LA01110D-150-625	68.0	58.2	81	36	1.7	0	1	5.3	4.0	40	4.0	4.9	39	8
MEAN	77.4	57.9	90	37	0.7	3	2	5.4	2.4	22	6.2	6.1	62	10
CV%	13	2	3	5	135	158	304	13	27	83	8	17	25	29
LSD(0.10)	6.2	1.1	4	1.7	0.6	5.9	5.5	0.6	0.8	28.1	0.9	1.5	28.2	13.5

Data from 2018 and 2019: Alexandria and Winnsboro; and 2018: Bossier City and St. Joseph.

Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.

Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.

Stripe rust is relative score with 0 = none and 9 = severe infection and dieback.

Leaf Rust is percent tissue of upper three leaves affected by leaf rust.

Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy

FHB is percent Fusarium head symptoms in the field on a scale of 0=none to 9= severe.

FDK is percent Fusarium Damaged Kernels from a misted and inoculated nursery.

RM is relative maturity where 0 = extremely early; 3 = early; 5 = average heading date; 7 = late; 9 = did not head.

FHB Misted Nursery Data is two-year means.

FDK Misted Nursery Data is two-year means.

DON is Deoxynivalenol toxin concentration.

Table 11. Normal maturity wheat performance trial across North Louisiana for three years, 2017 - 2019.

Brand / variety	Grain Yield bu/a	Test Wt lbs/bu	Head Day of yr	Plant Ht in	Lod Score 0-9	Stripe Rust %	Leaf Rust %	Pheno type 0-9	FHB Score 0-9	FDK %	FHN MIST NURS		
											FHB	FDK	DON
											0-9	%	ppm
AGS 2055	76.8	57.8	90	37	0.6	2	0	5.6	2.0	20	9.0	79	22
LA01110D-150-241	70.1	56.9	81	37	1.1	2	1	6.0	4.8	35	7.5	63	18
PROGENY AG #FURY	70.0	57.7	87	36	0.5	7	0	5.5	4.5	31	8.5	70	18
AGS 2038	69.7	58.1	88	39	0.9	0	0	5.6	1.8	31	8.0	68	25
GO WHEAT LA754	69.4	57.6	79	36	1.8	17	1	5.8	5.0	37	5.0	46	10
PROGENY AG PGX16-4	68.8	58.0	87	37	0.9	3	1	5.6	3.8	25	8.5	63	16
DYNA-GRO 9811	67.6	58.3	90	37	0.6	0	7	5.5	2.0	13	5.5	59	12
PROGENY AG #TURBO	66.2	57.1	90	35	0.7	0	6	5.1	1.8	9	6.0	25	15
DYNA-GRO 9701	65.9	57.1	97	39	0.4	0	7	4.9	0.5	3	5.0	65	13
LA01110D-150-625	65.2	57.7	78	36	1.6	0	1	5.8	4.0	23	6.0	44	13
DELTA GROW 1000	64.9	56.9	97	38	0.5	0	8	4.8	0.8	4	4.5	48	11
PIONEER 26R59	64.9	54.5	93	33	0.8	0	29	4.7	2.0	8	6.5	46	9
SY VIPER	64.5	57.2	91	38	2.2	0	25	4.9	2.0	4	5.5	39	12
PIONEER 26R41	63.8	57.6	94	33	0.5	0	11	5.4	1.0	8	6.0	65	20
PROGENY AG #BULLET	62.6	56.6	97	38	0.5	1	6	4.9	0.8	7	5.0	38	10
AGRIMAXX 473	60.5	56.8	96	38	0.3	0	9	4.7	1.0	13	5.5	40	14
MEAN	67.0	57.2	89	37	0.9	2	7	5.3	2.3	17	6.4	53	12
CV%	14	2	2	6	111	183	125	11	28	77	19	28	39
LSD(0.10)	7.1	1.0	4	1.5	0.7	NS	13.5	0.8	0.8	32.4	1.5	25.2	12.0

Data from 2017, 2018 and 2019: Alexandria and Winnsboro; and 2018: Bossier City and St. Joseph.

Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.

Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.

Stripe rust is relative score with 0 = none and 9 = severe infection and dieback.

Leaf Rust is percent tissue of upper three leaves affected by leaf rust.

Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.

FHB is percent Fusarium head symptoms in the field on a scale of 0=none to 9=severe.

FDK is percent Fusarium Damaged Kernels.

DON is Deoxynivalenol toxin concentration from a misted and inoculated nursery.

NS indicates that variety mean differences were not statistically significant.

Table 12. Normal maturity wheat performance trial at Alexandria for 2019.

Brand / variety	Grain Yield		Test Wt	Head Day	Plant Ht	Lod Score	Bird Damage
	2019 bu/a	2-year	lbs/bu	of yr	in	0-9	%
PIONEER 26R59	66.6	84.6	54.5	92	34	0.5	1
LA01110D-150-241	57.4	79.8	54.8	74	37	2.3	4
AGS 2055	62.7	79.6	55.8	85	39	1.3	1
USG 3640	51.5	78.4	56.3	81	38	0.8	1
LA08080C-31-1	56.3	77.1	53.5	83	38	1.5	3
LCS L11713	65.8	76.9	57.7	83	32	3.0	3
USG 3118	64.1	75.8	55.6	81	37	0.5	5
GO WHEAT LA754	55.8	73.9	55.2	71	34	2.8	4
SY VIPER	48.5	73.0	56.7	85	38	1.8	4
SY COLLINS	63.2	72.7	56.6	74	37	1.3	3
DYNA-GRO 9811	63.8	72.6	56.6	88	38	1.3	1
PROGENY AG PGX16-4	56.8	72.5	55.4	81	37	1.3	2
AGS 3040	50.5	71.6	54.8	77	37	0.8	5
AR06146E-1-4	59.6	71.3	56.3	77	38	0.8	3
PROGENY AG #FURY	60.0	71.2	55.8	82	37	1.0	3
LA09225C-33-3	61.2	71.0	57.7	83	38	2.5	1
PROGENY AG #BERKELEY	55.9	70.9	55.0	83	37	1.8	0
PROGENY AG #TURBO	66.7	70.4	55.1	84	37	1.5	5
DYNA-GRO TV8861	58.7	69.4	56.4	93	38	0.8	3
DELTA GROW 1000	58.8	67.4	54.5	94	39	0.5	3
AGS 2038	52.5	66.5	55.7	84	40	2.5	5
PIONEER 26R41	47.1	66.3	54.6	93	34	0.8	2
PROGENY AG #BULLET	48.9	63.7	55.4	96	38	0.8	6
PIONEER 26R45	41.7	63.2	51.9	98	38	0.3	6
LA01110D-150-625	43.3	59.4	53.5	70	37	2.5	3
AGRIMAXX 473	44.5	58.4	53.8	96	40	0.0	7
DG WX18416	72.0		55.4	88	39	0.3	1
PROGENY AG PGS 18-8	69.6		56.1	93	37	0.0	1
PROGENY AG PGX 18-2	68.5		56.7	82	32	2.8	0
AGRIMAXX EXP1906	67.2		54.4	88	39	1.8	3
GA 09377-16LE18	65.6		56.4	75	37	0.5	3
ARMOR VELOCITY	63.5		55.7	90	38	0.5	3
GA 071518-16E39	62.4		57.0	76	35	1.0	0
AGRIMAXX 481	61.3		56.3	74	36	1.8	3
LA12080LDH-122	60.4		54.1	76	31	2.3	3
NC12-21213	60.4		55.5	84	39	1.0	3
DYNA-GRO PLANTATION	59.5		57.2	73	33	3.3	4
NC14-23372	59.4		56.2	86	38	2.0	1
SY RICHIE	58.7		56.4	81	37	1.0	2
PROGENY AG PGX 18-7	58.7		56.9	90	38	0.5	3
GA 19436-16LE12	58.5		57.7	83	42	0.8	6
DH12SRW056-058	57.2		56.6	83	38	1.0	5
ARMOR COASTAL	57.1		55.3	82	33	1.5	0
SY 547	56.1		55.5	87	38	2.8	5
AR07133C-19-4	55.6		57.7	82	39	0.0	0
DYNA-GRO 9701	53.8		55.7	93	40	0.3	4
LA14076LDH-217	51.2		56.2	71	32	0.0	1
PROGENY AG #BLAZE	50.4		53.6	93	37	0.0	0
DG WX19621	49.1		54.1	92	37	1.5	0
LA12080LDH-72	48.9		54.2	82	37	0.3	4
LA13235DH-19	48.4		56.1	74	33	0.8	0
LA08281C-P4-3-1	45.9		53.3	70	35	1.0	4
LA13235LDH-70	45.4		54.6	69	35	2.0	6

Table 12. Normal maturity wheat performance trial at Alexandria for 2019.

	Grain Yield		Test	Head	Plant	Lod	Bird
	2019	2-year	Wt	Day	Ht	Score	Damage
Brand / variety	bu/a		lbs/bu	of yr	in	0-9	%
Mean	57.1	71.5	55.6	83	37	1.2	3
CV%	19	19	3	3	6	97	132
LSD(0.10)	12.5	13.7	1.9	3	2.5	1.4	NS
Data from Dean Lee Research Station, Alexandria, LA. Boyd Padgett, Daniel Stephenson, Caitlin deNux, and Darrell Franks.							
Cultural and Site Information: Plots were somewhat variable due to bird damage and wet spots.							
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.							
Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.							
Bird Damage is percent of affected spikelets.							
NS indicates that variety mean difference were not statistically significant.							

Table 13. Normal maturity wheat performance trial at Winnsboro for 2019.

Brand / variety	Grain Yield		Test	Head	Lod	Stripe	Leaf	Pheno	FHB	FDK	Seed	Misted FHB Nursery			
	2019	2-Yr	Wt	Day	Score	Rust	Rust	type	Score		Qual	RM	FHB	FDK	DON
	bu/a		lbs/bu	of yr	0-9	%	%	0-9	0-9	%	0-9	0-9	0-9	%	ppm
PIONEER 26R45	82.8	98.1	56.2	110	1.3	0.0	4	4.8	0.3	5	6.5	7.0	5.0	60	11
DYNA-GRO 9811	84.7	96.8	55.9	107	0.0	0.0	0	5.0	2.0	10	5.5	7.0	5.5	80	12
SY VIPER	77.5	95.4	57.6	107	1.0	0.0	9	5.0	2.0	5	7.0	6.0	5.5	53	10
USG 3640	79.3	95.1	55.2	100	0.3	15.0	0	5.3	3.5	40	4.0	5.5	8.0	48	4
AGS 2055	85.3	94.9	55.9	107	0.3	2.5	0	4.8	2.0	5	6.0	5.5	9.0	95	16
DELTA GROW 1000	78.4	94.2	55.1	112	0.3	0.0	0	5.0	0.8	5	5.5	7.0	4.5	70	19
LA09225C-33-3	84.9	93.9	57.6	107	1.3	0.3	0	6.0	1.8	10	7.0	6.5	8.0	75	18
PROGENY AG #FURY	78.8	93.0	52.5	104	0.0	10.3	0	4.3	4.5	50	4.0	5.5	8.5	95	14
AGRIMAXX 473	71.7	92.9	54.0	110	0.0	0.0	0	5.0	1.0	18	4.5	7.0	5.5	73	24
USG 3118	76.2	92.7	56.6	107	0.0	0.0	0	5.0	2.5	10	6.5	7.0	6.5	58	6
PIONEER 26R59	75.7	92.5	49.5	107	0.3	0.0	8	4.8	2.0	5	6.0	7.0	6.5	78	13
PROGENY AG #BERKELEY	74.0	92.3	55.4	100	0.8	0.0	2	4.8	3.0	33	4.5	6.0	5.0	50	4
LCS L11713	82.9	92.3	57.0	104	1.8	0.0	0	5.5	4.3	18	5.5	5.0	5.5	43	5
SY COLLINS	84.0	92.1	59.7	107	0.8	0.0	0	5.0	2.0	5	7.0	6.5	4.5	15	4
PROGENY AG PGX16-4	73.6	91.6	55.8	104	1.5	4.0	0	4.8	3.8	43	4.5	6.0	8.5	70	9
DYNA-GRO 9701	77.4	91.5	55.1	112	0.0	0.0	0	5.5	0.5	5	5.5	7.0	5.0	65	22
AGS 2038	76.7	89.8	55.9	107	0.3	0.0	0	4.8	1.8	15	5.0	6.5	8.0	95	25
PIONEER 26R41	74.5	89.3	56.7	112	0.0	0.0	0	6.0	1.0	10	5.5	7.0	6.0	83	33
DYNA-GRO TV8861	66.9	89.0	53.8	112	0.5	0.8	20	4.8	1.0	10	5.0	6.5	3.5	90	27
LA08080C-31-1	76.7	88.8	53.5	100	0.0	0.0	2	5.3	3.8	58	4.0	6.0	6.0	68	3
PROGENY AG #BULLET	71.7	88.4	55.2	112	0.0	1.3	0	4.5	0.8	13	5.5	7.0	5.0	50	17
AR06146E-1-4	80.6	87.8	59.6	100	0.5	0.0	0	5.5	2.8	5	7.0	6.0	4.0	15	3
AGS 3040	70.5	85.7	55.9	101	2.3	21.3	0	4.8	2.8	28	4.5	6.0	7.0	45	3
PROGENY AG #TURBO	75.3	85.6	57.9	107	0.0	0.0	0	5.3	1.8	10	7.0	7.0	6.0	40	9
GO WHEAT LA754	73.5	85.4	52.7	95	3.5	25.0	2	5.3	5.0	70	3.5	5.0	5.0	55	3
LA01110D-150-241	73.9	85.4	52.2	98	1.8	2.5	0	5.8	4.8	55	4.0	5.5	7.5	75	4
LA01110D-150-625	70.5	82.0	55.5	95	3.3	0.3	1	4.5	4.0	40	4.0	4.0	6.0	45	4
ARMOR VELOCITY	87.1		56.7	107	0.0	1.3	2	5.5	1.8	5	6.5	6.5	5.0	75	10
PROGENY AG PGX 18-2	85.3		56.7	107	1.5	0.0	0	5.3	4.0	28	5.0	5.0	4.5	65	8
LA12080LDH-122	85.1		54.4	94	3.5	0.0	0	6.5	8.0	30	4.5	4.5	8.0	23	2
AGRIMAXX EXP1906	84.0		56.6	107	0.5	0.8	0	5.3	1.5	15	6.0	6.5	4.0	85	19
NC12-21213	83.9		58.4	104	0.3	0.0	1	5.0	3.3	18	5.5	6.0	7.5	78	8
LA12080LDH-72	83.2		56.4	95	3.0	0.0	3	6.5	4.3	8	7.0	6.0	4.5	8	2
SY RICHIE	82.5		54.1	98	0.0	0.0	0	5.5	5.0	28	5.5	6.5	7.0	40	6
DG WX18416	80.0		55.8	107	0.5	0.0	2	4.8	1.8	5	6.0	6.5	6.0	70	8
LA14076LDH-217	79.9		56.7	98	2.8	0.0	0	6.0	3.8	23	4.0	6.5	8.0	60	10
PROGENY AG PGS 18-8	79.9		55.0	107	0.0	0.0	4	4.0	2.0	15	5.5	6.5	5.5	83	21
DYNA-GRO PLANTATION	79.7		56.0	93	3.3	18.8	0	4.8	6.3	38	5.5	6.0	8.0	50	3
LA08281C-P4-3-1	79.4		50.5	95	2.0	0.0	0	5.3	6.8	88	2.0	6.0	8.0	83	11
GA 09377-16LE18	78.4		55.9	98	0.3	0.8	0	6.8	4.8	23	5.5	6.0	8.5	80	9
SY 547	78.2		56.8	107	0.8	5.0	0	4.0	0.8	13	6.0	7.0	4.5	73	12
PROGENY AG PGX 18-7	77.5		58.3	107	0.0	15.0	1	5.3	1.0	5	7.0	6.5	5.0	65	22
NC14-23372	77.3		58.1	104	0.0	0	1	5.5	2.8	20	6.5	6.5	3.5	58	3
AR07133C-19-4	76.6		56.8	110	0.0	0	0	3.8	1.3	10	6.0	7.0	4.0	63	19
AGRIMAXX 481	76.3		55.5	95	3.0	18	0	4.5	5.8	50	3.5	5.5	8.0	38	5
LA13235LDH-70	74.4		55.5	95	1.8	0	0	5.8	4.8	70	3.5	5.0	7.0	45	3
ARMOR COASTAL	74.1		55.4	104	1.3	0	8	4.8	3.5	13	5.5	5.0	7.0	55	7
GA 071518-16E39	73.6		55.2	100	2.0	4	0	5.5	4.5	38	5.0	5.5	9.0	65	4
DG WX19621	73.2		55.5	110	0.3	2	1	4.0	1.0	13	5.0	7.0	5.0	68	12
DH12SRW056-058	72.9		57.8	104	0.0	0	4	5.8	2.3	5	7.0	5.5	4.0	15	4
LA13235DH-19	69.7		54.6	95	0.3	1	0	6.0	6.3	70	4.0	5.0	8.0	35	3
GA 19436-16LE12	67.8		56.3	104	0.5	1	0	5.5	3.0	23	4.0	6.5	7.5	35	4
PROGENY AG #BLAZE	66.4		51.5	110	0.3	0	12	5.3	0.3	5	4.0	7.0	5.5	70	16
Mean	77.5	91.0	55.6	104	0.9	3	2	5.2	2.9	24	5.2	6.1	6.2	60	10
CV%	9	7	2	3	118	177	281	15	23	69	17	9	14	28	27
LSD(0.10)	8.5	6.4	1.8	5	1.3	5.9	5.5	NS	0.8	28.1	1.5	0.9	1.5	28.2	5

Data from Macon Ridge Research Station at Winnsboro, LA. Steve Harrison, Trey Price, Myra Purvis, Dustin Ezell, Kelly Arceneaux, Allysson Harding, and Katie McCarthy Fontenot.

Table 13. Normal maturity wheat performance trial at Winnsboro for 2019.

Brand / variety	Grain Yield		Test	Head	Lod	Stripe	Leaf	Pheno	FHB	FDK	Seed	Misted FHB Nursery			
	2019	2-Yr	Wt	Day	Score	Rust	Rust	type	Score		Qual	RM	FHB	FDK	DON
	bu/a		lbs/bu	of yr	0-9	%	%	0-9	0-9	%	0-9	0-9	0-9	%	ppm
Cultural and Site Information: The trial was planted on 11/29/18. Gigger-Gilbert silt loam complex. Powerflex 2.0 fl oz/A 1/11/19. 30-0-0-2 (50#N/A) 1/17/19. 30-0-0-2 (50#N/A) 2/25/19. Harvested 5/30/2019. Heavy rainfall during the winter reduced tillering. Heavy rainfall before harvest caused weathering and reduced test weight.															
Bold 'Brand/variety' indicates the entry is commercially available, others are non-released breeding lines.															
Lod Score is lodging score on a scale of 0 = none to 9 = 100% lodged.															
Stripe rust is relative score with 0 = none and 9 = severe infection and dieback.															
Leaf Rust is percent tissue of upper three leaves affected by leaf rust.															
Phenotype is overall visual appeal on a 0 = very ugly to 9 = very attractive plot. It takes into account tillering, head appearance, canopy density, leaf color and health, etc.															
FHB is percent Fusarium head symptoms in the field on a scale of 0=none to 9= severe.															
FDK is percent Fusarium Damaged Kernels from a misted and inoculated nursery.															
Seed Qual is seed quality, a relative, visual rating of seed plumpness, uniformity, and visible defects (disease, insect damage, etc.), 0 = poor.															
RM is relative maturity where 0 = extremely early; 3 = early; 5 = average heading date; 7 = late; 9 = did not head.															
DON is Deoxynivalenol toxin concentration from a misted and inoculated nursery.															
NS indicates that variety mean difference were not statistically significant.															

Pearson Correlation Coefficients, N = 53

Prob > |r| under H0: Rho=0

	BUPA	TWT	LOD	HD	STR	LFR	PHE	FDKP	SDQP	FHB	MISTED NURS		
											FDKN	FHBN	RMN
BUPA		0.34	0.04	-0.03	-0.13	-0.36	0.17	-0.21	0.40	0.11	0.04	0.01	-0.01
		0.01	0.77	0.85	0.34	0.01	0.23	0.12	0.00	0.44	0.75	0.93	0.94
TWT			-0.11	0.17	-0.10	-0.27	0.09	-0.47	0.65	-0.25	-0.36	-0.28	0.08
			0.43	0.23	0.47	0.05	0.54	0.00	<.0001	0.07	0.01	0.04	0.58
LOD				-0.68	0.40	-0.09	0.19	0.45	-0.37	0.63	-0.35	0.27	-0.59
				<.0001	0.00	0.50	0.17	0.00	0.01	<.0001	0.01	0.05	<.0001
HD					-0.34	0.28	-0.39	-0.72	0.47	-0.90	0.43	-0.47	0.69
					0.01	0.04	0.00	<.0001	0.00	<.0001	0.00	0.00	<.0001
STRIPE						-0.14	-0.18	0.35	-0.26	0.26	-0.07	0.21	-0.23
						0.32	0.19	0.01	0.06	0.06	0.64	0.13	0.10
LFRUST							-0.13	-0.27	0.09	-0.29	0.14	-0.31	0.10
							0.35	0.05	0.52	0.04	0.33	0.02	0.48
PHE								0.11	0.03	0.38	-0.31	0.19	-0.24
								0.42	0.84	0.00	0.02	0.17	0.08
FDKP									-0.80	0.75	-0.03	0.46	-0.57
									<.0001	<.0001	0.85	0.00	<.0001
SDQP										-0.52	-0.16	-0.45	0.39
										<.0001	0.24	0.00	0.00
FHB											-0.32	0.56	-0.73
											0.02	<.0001	<.0001
FDKN												0.18	0.31
												0.21	0.02
FHBN													-0.35
													0.01
RMN													

Table 14. Fusarium Headblight Data for Early Wheat Variety Trials.

VARIETY	FHB REACTION TYPE	FHB RATING (0-9)					FDK PERCENT					DON (ppm) *				
		WN 2019	WN 2018	WN 2017	MEA N 2yr	MEA N 3yr	WN 2019	WN 2018	WN 2017	MEA N 2yr	MEA N 3yr	WN 2019	WN 2018	WN 2017	MEA N 2yr	MEA N 3yr*
		Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs		
AGS 2024	S	7.5	5.0	7.2	6.3	6.6	68	40	68	54	58	6	13	24	10	15
AGS 2038	S	8.5	4.0	1.7	6.3	4.7	85	28	28	56	47	18	16	22	17	18
AGS 2040	MR	7.5	3.0	2.2	5.3	4.2	10	15	10	13	12	1	4	13	2	6
AGS 2055	S	8.0	2.0	1.9	5.0	4.0	93	50	53	71	65	22	18	31	20	24
AGS 3000	MR/MS	4.5	3.0	2.6	3.8	3.4	40	18	23	29	27	2	5	13	3	7
AGS 3030	S	5.5	4.0		5.2		53	35		48		2	10		6	
DELTA GROW 3500	MS	6.0	4.5	4.1	4.5	4.4	50	40	23	39	33	2	14	14	6	9
FLLA10033C-6		5.5					60					4				
GA 09129-16E55		5.0					20					2				
GO WHEAT LA754	MS	5.5	3.0	7.5	4.9	5.8	48	28	83	40	54	3	9	20	6	11
LA10191C-1		5.5					40					3				
PIONEER 26R94	S	8.5	4.3	1.8	6.3	4.8	58	33	35	46	43	9	9	18	10	12
TX15D9579		8.0					83					11				
TX15D9597		6.5					55					3				
TX15D9608		6.5					13					1				
MEAN		6.6	3.6	3.6	5.3	4.7	52	31	40	44	42	6	11	19	9	13
CV%		16	21	57	17	30	26	28	34	28	27	37	50	21	16	47
LSD(0.10)		1.9	1.5	NS	2.2	2.5	24	18	26	23	23	4	NS	8	4	6

FHB REACTION TYPE is observed reaction based on FDK and DON for two or more years. Reaction Types are : **Resistant**, **Moderately Resistant**, **Moderately Susceptible**, and **Susceptible**.

FHB rating is a 0-9 score of head symptoms, where a 0 indicates no symptoms and a 9 indicates complete head coverage

FDK is percent Fusarium Damaged Kernels.

DON is parts per million of Deoxynivalenol toxin.



Table 15. Fusarium Headblight Data for Normal Wheat Variety Trials.

VARIETY	FHB REACTION TYPE	FHB RATING (0-9)					FDK PERCENT					DON (ppm) *				
		WN 2019	WN 2018	WN 2017	MEA N 2yr	MEA N 3yr	WN 2019	WN 2018	WN 2017	MEA N 2yr	MEA N 3yr	WN 2019	WN 2018	WN 2017	MEA N 2yr	MEA N 3yr
		Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs	Inoc Nurs
AGRIMAXX 473	MR/MS	5.5	1.3	0.7	3.4	2.5	73	5	8	39	28	24	4	13	14	14
AGRIMAXX 481		8.0					38					5				
AGRIMAXX EXP1906		4.0					85					19				
AGS 2038	S	8.0	4.5	1.0	6.3	4.5	95	38	40	66	58	25	17	32	21	25
AGS 2055	S	9.0	3.3	0.3	6.1	4.2	95	45	63	70	68	16	20	31	18	22
AGS 3040	MR	7.0	2.5		4.8		45	10		28		3	3		3	
AR06146E-1-4	R	4.0	2.0		3.0		15	5		10		3	3		3	
AR07133C-19-4		4.0					63					19				
ARMOR COASTAL		7.0					55					7				
ARMOR VELOCITY		5.0					75					10				
DELTA GROW 1000	MR	4.5	1.3	4.5	2.9	3.4	70	5	5	38	27	19	4	7	12	11
DG WX18416		6.0					70					8				
DG WX19621		5.0					68					12				
DH12SRW056-058		4.0					15					4				
DYNA-GRO 9701	MR/MS	5.0	0.5		2.8		65	5		35		22	4		13	
DYNA-GRO 9811	MS	5.5	2.3	1.3	3.9	3.0	80	15	38	48	44	12	7	18	10	12
DYNA-GRO PLANTATION		8.0					50					3				
DYNA-GRO TV8861	S	3.5	1.5		2.5		90	18		54		27	7		17	
GA 071518-16E39		9.0					65					4				
GA 09377-16LE18		8.5					80					9				
GA 19436-16LE12		7.5					35					4				
GO WHEAT LA754	MR/MS	5.0	3.8	1.7	4.4	3.5	55	30	38	43	41	3	10	17	7	10
LA01110D-150-241	S	7.5	3.8	5.0	5.6	5.4	75	43	50	59	56	4	14	37	9	18
LA01110D-150-625	MR/MS	6.0	3.8	1.5	4.9	3.8	45	33	43	39	40	4	13	21	8	13
LA08080C-31-1	MS	6.0	2.0		4.0		68	25		46		3	13		8	
LA08281C-P4-3-1		8.0					83					11				
LA09225C-33-3	S	8.0	2.0		5.0		75	25		50		18	8		13	
LA12080LDH-122		8.0					23					2				
LA12080LDH-72		4.5					8					2				
LA13235DH-19		8.0					35					3				
LA13235LDH-70		7.0					45					3				
LA14076LDH-217		8.0					60					10				
LCS L11713	MR	5.5	2.5		4.0		43	15		29		5	9		7	
NC12-21213		7.5					78					8				
NC14-23372		3.5					58					3				
PIONEER 26R41	S	6.0	1.3	0.3	3.6	2.5	83	13	30	48	42	33	7	18	20	20
PIONEER 26R45	MR	5.0	0.5		2.8		60	5		33		11	3		7	
PIONEER 26R59	MR	6.5	2.0	2.4	4.3	3.6	78	18	15	48	37	13	6	10	9	9
PROGENY AG #BERKELEY	MR	5.0	2.8		3.9		50	15		33		4	7		6	
PROGENY AG #BLAZE		5.5					70					16			12	
PROGENY AG #BULLET	MR	5.0	2.8	0.1	3.9	2.6	50	8	15	29	24	17	3	12	10	10
PROGENY AG #FURY	S	8.5	2.8	2.8	5.6	4.7	95	28	45	61	56	14	10	31	12	18
PROGENY AG #TURBO	MS	6.0	3.8	2.5	4.9	4.1	40	53	10	46	34	9	29	8	19	15
PROGENY AG PGS 18-8		5.5					83					21				
PROGENY AG PGX 18-2		4.5					65					8				
PROGENY AG PGX 18-7		5.0					65					22				
PROGENY AG PGX16-4	S	8.5	3.8	0.9	6.1	4.4	70	48	55	59	58	9	18	20	13	16
SY 547		4.5					73					12				
SY COLLINS	R	4.5	1.8		3.1		15	5		10		4	3		3	
SY RICHIE		7.0					40					6				
SY VIPER	MR/MS	5.5	2.8	0.6	4.1	2.9	53	13	25	33	30	10	4	20	7	12
USG 3118	MR/MS	6.5	2.5		4.5		58	20		39		6	5		6	
USG 3640	MR/MS	8.0	4.3		6.1		48	33		40		4	11		7	
MEAN		6.2	2.5	1.7	6.1	3.7	60	21	34	62	43	10	9	20	5	15
CV%		14	31	106	17	36	28	32	49	25	29	27	35	47	48	38
LSD(0.10)		1.5	1.3	3.0	1.5	1.6	28	11	23	28	20	5	4.6	14.9	13.5	12.1

FHB REACTION TYPE is observed reaction based on FDK and DON for two or more years. Reaction Types are : Resistant, Moderately Resistant, Moderately Susceptible, and Susceptible.

FHB rating is a 0-9 score of head symptoms, where a 0 indicates no symptoms and a 9 indicates complete head coverage

FDK is percent Fusarium Damaged Kernels.

DON is parts per million of Deoxynivalenol toxin.

Appendix A. Entries in the 2019 Louisiana Agricultural Experiment Station Small Grain Performance Trials.

<u>Brand</u>	<u>Line/Variety</u>	<u>Originating Agency</u>
<u>WHEAT</u>		
AgriMAXX	AgriMAXX 473, 481, EXP 1986.....	AgriMAXX Wheat Company 7167 Highbanks Road Mascoutah, IL 62258
AGS	AGS 2024, 2038, 2040, 2055, 3000, 3030, 3040.....	AGSouth Genetics P.O. Box 398 Albany, GA 31708
AR	All numbered AR lines.....	Arkansas Agric. Experiment Stn. 2301 South University Avenue Little Rock, AR 72204
Armor	Armor Voodoo, Coastal.....	Armor Seed 2532 Alexandria Drive, Suite B Waldenburg, AR 72475
Delta Grow	DG 9701, 9811, TV8861, Plantation, WX19621, WX18416	Delta Grow Seed 220 N W 2nd England, AR 72046
Dyna-Gro	Dyna-Gro 9701, 9811, Savoy, TV8861.....	Dyna-Gro Seed 11 Gin Road Rayville, LA 71269
GA	All numbered GA/UGA lines.....	Georgia Agric. Experiment Stn. Crop & Soil Science - UGA 1109 Experiment St. Griffin, GA 30223
LA	All numbered LA lines.....	Louisiana Agric. Experiment Stn. SPESS - LSU Baton Rouge, LA 70803
LCS	L11713.....	Limagrain Cereal Seeds 7099 Parkbrook Lane Cordova, TN 38018
NC State	All numbered NC lines.....	North Carolina Agric. Expt. Stn. Crop Science Department North Carolina State University Raleigh, NC 27695

Appendix A. Entries in the 2019 Louisiana Agricultural Experiment Station Small Grain Performance Trials.

<u>Brand</u>	<u>Line/Variety</u>	<u>Originating Agency</u>
<u>WHEAT</u>		
Pioneer	26R41, 26R45, 26R59, 26R94.....	Dupont Pioneer 912 River Rd. Marksville, LA 71351
Progeny	Berkeley, Bullet, Blaze, Fury, Turbo..... PGX 16-4, 18-2, 18-7, 18-8	Progeny Ag Products 1529 Hwy. 193 South Wynne, AR 72396
Stratton	GO Wheat LA754.....	Stratton Seed Co. 1530 Hwy 79 South Stuttgart, AR 72160
Syngenta	SY Collins, Viper, 547, 8186.....	Syngenta 14031 Trestle Road Highland, IL 62249
TX	All numbered TX lines.....	Texas AgriLife Research TAMU - Commerce Dept. of Ag Science Commerce, TX 75429
USG	USG 3118, 3329, 3458, 3539.....	UniSouth Genetics, Inc. 3205-C HWY 46 S Dickson, TN 37055
VA	DH12SRW056-058.....	Virginia PI & State University EVAREC 2229 Menokin Road Warsaw, VA 22572

Appendix A. Entries in the 2019 Louisiana Agricultural Experiment Station Small Grain Performance Trials.

<u>Brand</u>	<u>Line/Variety</u>	<u>Originating Agency</u>
<u>OATS</u>		
Angelina	FL0720-R6.....	Angelina Grain Compay 16371 Hwy 15 South Vidalia, LA 71373
FL	All Numbered FL lines.....	North Florida Res. & Education Center 155 Research Road Quincy, FL 32351
LA	All Numbered LA lines.....	Louisiana Agric. Experiment Station SPESS - LSU Baton Rouge, LA 70803
NC State	Brooks.....	North Carolina Agric. Expt. Station Crop Science Department North Carolina State University Raleigh, NC 27695
Plantation	Horizon 306.....	Plantation Seed P.O. Box 398 Newton, GA 39870
Stratton	Horizon 201.....	Stratton Seed Co. 1530 Hwy 79 South Stuttgart, AR 72160
TAMO/TX	All numbered TAMO/TX lines.....	Texas AgriLife Research TAMU - Commerce Dept. of Ag Science Commerce, TX 75429