Performance of Small Grain Varieties in Alabama, 2017-2018

Cullman County 1925

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Performance of Wheat Varieties in Alabama, 2018

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"The mission of the Alabama Variety Testing Program is to provide research-based, unbiased results on the performance of various crop hybrids, cultivars, and varieties to the agricultural community in our state. We are intent on conducting these trials in a manner that will result in maximum biological yield through methods common to the top-producing farms in Alabama. We are committed to providing this information in a rapid, timely manner for its use during the decision-making process. The success of the program rests upon our ability to help Alabama producers provide a safe, dependable source of food and fiber for all families as well as economic sustainability for theirs."

Methods

Planting dates for all trials in 2017-18 are shown in Table 1. Variety treatments were arranged in a randomized complete block experimental design with 3 replications. Fungicide treated seeds were drill planted to attain a population equivalent to local production practices. All tests were fertilized according to soil test recommendations, including 20 lbs/acre N at planting. A top dressing of 70 lbs/acre N was made in late February or early March, just prior to "jointing".

Table 1. Wheat, oat and triticale variety trial location, soil texture, planting date, and harvest date.

Region	Ala. Exp. Station location and soil texture	2017-2018	
		Date planted	Date harvested
North	Sand Mountain Research & Ext. Center Wynnville fine sandy loam	November 28	June 20
	Tennessee Valley Research & Ext. Center Decatur silt loam	November 10	June 7
Central	Black Belt Research & Ext. Center Vaiden clay	October 20	June 7
	Plant Breeding Unit, E.V. Smith Res. Ctr. Cahaba fine sandy loam	November 6	June 12
	Prattville Agricultural Research Unit Lucedale fine sandy loam	November 15	June 6
Southern	Brewton Agricultural Research Unit Benndale fine sandy loam	November 14	June 8
	Gulf Coast Research & Ext. Center Malbis fine sandy loam	December 15	June 6
	Wiregrass Research & Ext. Center Dothan fine sandy loam	November 14	June 5

Wheat trials were managed with foliar fungicides to prevent disease outbreaks. At maturity, grain was harvested using a small plot combine, cleaned, and weighed. Moisture and bushel test weight were also recorded unless otherwise noted.

Tables

**Abbreviations: REC, Research & Extension Center; ARU, Agricultural Research Unit*

2018 Wheat Variety Performance - Yield: Current & Multiple Year Averages

Northern Region

Central Region

Southern Region

Oat and Triticale Variety Performance - Yield

Northern Region

Central Region

Southern Region

Disease Ratings

Table 2. Performance of Wheat Varieties in Alabama - Tennessee Valley REC - Belle Mina, AL			
Planting Date: 11/10/17	**Harvest Date: 6/7/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Dyna Gro 9522	56.4	1	88
Croplan SRW 9606	56.5	2	88
AGS 2038	58.9	3	87
Dyna-Gro 9701	57.6	4	87
Progeny PGX 16-7	57.5	5	87
Progeny PGX 16-1	58.2	6	87
Progeny #Boss	55.6	7	86
Progeny PGX 16-3	56.2	8	86
USG 3895	56.4	9	86
USG 3118	58.7	10	86
FLLA10033C-6	57.4	11	85
Croplan SRW 9415	56.9	12	85
USG 3329	56.7	13	84
USG 3458	55.9	14	84
AGS 2024	58.3	15	84
Progeny #Bullet	56.8	16	83
AgriMAXX 473	57.1	17	83
Croplan SS 8415	57.4	18	83
USG 3536	56.5	19	83
GoWheat LA 754	57.8	20	82
Progeny #Warrior	56.3	21	82
Progeny PGX 17-20	56.9	22	81
Hilliard	57.8	23	81
GA 06147-15LE38	59.3	24	80
AgriMAXX 415	58.4	25	79
Limagrain LCS Ammo	58.9	26	79
Progeny PGX 17-16	57.4	27	79
AGS 2055	57.0	28	79
Dyna-Gro 9811	57.1	29	78
FLLA10191C-13	58.4	30	77
USG 3448	57.3	31	77
GA 08535-15LE29	59.2	32	76
AgriMAXX 480	59.5	33	76
AR06146E-1-4	59.1	35	73
Progeny #Turbo	55.9	36	72
Progeny PGX 16-4	57.2	37	72
Trial mean			**82**
LSD (0.1)			**5**
CV (%)			**8**
Pr>F			**0.0554**

Wheat variety performance over multiple years at Tennessee Valley REC*

	Average Yield (bu/Acre)		
Variety	**2018**	**2017-2018**	**2016-2018**
	1 - year	**2 - year**	**3 - year**
Dyna Gro 9522	88	88	86
AGS 2024	84	88	85
AGS 2038	87	82	82

** Sorted by 3 year average*

Table 3. Performance of Wheat Varieties in Alabama - Sand Mountain REC - Crossville, AL			
Planting Date: 11/28/17	**Harvest Date: 6/20/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
USG 3895	50.7	1	103
USG 3458	50.0	2	100
AgriMAXX 415	51.4	3	100
USG 3329	50.5	4	99
Progeny #Warrior	50.0	5	98
AGS 2024	53.5	6	97
Hilliard	51.5	7	97
Limagrain LCS Ammo	51.6	8	97
Progeny PGX 16-3	50.6	9	96
FLLA10033C-6	52.0	10	96
AR06146E-1-4	54.0	11	96
AGS 2055	49.6	12	95
Progeny PGX 17-16	52.6	13	94
Progeny PGX 16-1	52.0	14	94
Progeny PGX 16-4	52.8	15	93
Dyna-Gro 9811	50.0	16	93
GoWheat LA 754	51.3	17	91
AGS 2038	52.9	19	90
Croplan SRW 9606	50.2	20	90
USG 3118	50.5	21	89
GA 06147-15LE38	52.9	22	89
USG 3536	49.5	23	89
Dyna-Gro 9701	50.0	24	88
GA 08535-15LE29	51.6	25	88
USG 3448	51.4	26	87
Dyna Gro 9522	50.6	27	85
Croplan SRW 9415	49.4	28	83
FLLA10191C-13	54.9	29	83
Progeny #Bullet	50.0	30	83
AgriMAXX 480	53.3	31	83
Progeny #Boss	47.8	32	82
Progeny PGX 16-7	48.8	33	80
Progeny PGX 17-20	51.1	34	79
Croplan SS 8415	50.3	35	79
AgriMAXX 473	49.0	36	76
Progeny #Turbo	51.3	37	76
Trial mean			**90**
LSD (0.1)			**6**
CV (%)			**8**
Pr>F			**0.0001**

Wheat variety performance over multiple years at Sand Mountain REC*			
	Average Yield (bu/acre)		
Variety	**2018**	**2017 - 2018**	**2016 - 2018**
	1 - year	**2 - year**	**3 - year**
AGS 2024	97	101	110
AGS 2038	90	96	104
Dyna Gro 9522	85	99	97

* Sorted by 3 year average

Table 4. Performance of Wheat Varieties in Alabama - Black Belt REC - Marion Junction, AL			
Planting Date: 10/20/17	**Harvest Date: 6/7/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Croplan SRW 9606	55.3	1	72
AgriMAXX 481	56.6	2	70
USG 3118	54.7	3	66
USG 3329	54.3	4	62
USG 3895	55.2	5	62
AGS 2038	55.0	6	62
USG 3448	53.2	7	62
Croplan SRW 9415	54.9	8	61
Dyna-Gro TV 8861	55.1	9	61
Dyna-Gro 9811	55.0	10	59
Croplan SS 8415	56.4	11	59
GoWheat LA 754	54.9	12	58
AR06146E-1-4	56.5	13	57
Hilliard	54.5	14	56
USG 3536	54.8	16	51
Savoy	54.8	17	50
AGS 3000	54.7	18	49
AgriMAXX 473	54.3	19	45
AgriMAXX 480	55.7	20	42
GA 06147-15LE38	56.1	21	37
GA 08535-15LE29	53.9	22	37
FLLA10191C-13	54.0	23	28
USG 3458	53.6	24	27
FLLA10033C-6	52.6	25	26
AGS 2024	51.8	26	20
Trial mean			**51**
LSD (0.1)			**5**
CV (%)			**13**
Pr>F			**0.0001**

Wheat variety performance over multiple years at Black Belt REC*			
	Average Yield (bu/Acre)		
Variety	**2018**	**2017-2018**	**2016-2018**
	1 - year	**2 - year****	**3 - year**
Croplan SS 8415	59	55	-
AGS 2038	62	53	-
USG 3448	62	50	-
USG 3895	62	48	-
USG 3536	51	39	-
USG 3458	27	35	-
AGS 2024	20	30	-

* Averages based on 2017 and 2018 yields. There was no yield data from 2016.

** Sorted by 2 year average.

Table 5. Performance of Wheat Varieties in Alabama - Prattville ARU - Prattville, AL			
Planting Date: 11/15/17	**Harvest Date: 6/6/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
USG 3536	57.0	1	96
AGS 2024	58.3	2	93
GA 08535-15LE29	58.4	3	93
AgriMAXX 481	58.8	4	92
USG 3118	57.7	5	91
USG 3448	55.8	6	90
Dyna-Gro TV 8861	56.8	7	90
Croplan SRW 9415	56.2	8	89
Dyna-Gro 9811	56.9	9	87
Croplan SRW 9606	55.2	10	86
Hilliard	56.7	12	85
USG 3458	56.7	13	82
FLLA10033C-6	58.0	14	82
USG 3329	55.5	15	81
USG 3895	55.4	16	80
Savoy	58.9	17	79
AgriMAXX 480	59.0	18	77
AGS 3000	54.9	19	77
AR06146E-1-4	59.6	20	76
FLLA10191C-13	58.2	21	76
AGS 2038	59.1	22	74
AgriMAXX 473	54.8	23	74
Croplan SS 8415	57.9	24	73
GoWheat LA 754	56.3	25	72
GA 06147-15LE38	57.5	26	70
Trial mean			**83**
LSD (0.1)			**5**
CV (%)			**8**
Pr>F			**0.0001**

Wheat variety performance over multiple years at Prattville Agricultural Research Unit*			
	Average Yield (bu/acre)		
Variety	**2018**	**2017 - 2018**	**2016 - 2018**
	1-year	**2-year**	**3-year**
AGS 2024	93	58	58
AGS 2038	74	50	51

** Sorted by 3 year average*

Table 6. Performance of Wheat Varieties in Alabama - E.V Smith Plant Breeding Unit - Tallassee, AL			
Planting Date: 11/6/17	**Harvest Date: 6/12/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Dyna-Gro 9811	55.5	1	100
AGS 2038	57.9	2	92
USG 3118	56.7	3	91
Croplan SRW 9415	55.3	4	90
GA 08535-15LE29	58.1	5	89
AR06146E-1-4	58.0	6	88
USG 3895	55.1	7	86
USG 3329	54.0	8	85
USG 3458	56.4	9	85
Croplan SS 8415	57.1	10	85
AgriMAXX 481	57.9	12	83
Hilliard	56.7	13	81
USG 3448	55.2	14	81
Croplan SRW 9606	54.9	15	81
USG 3536	54.8	16	80
GA 06147-15LE38	57.3	17	79
AgriMAXX 480	57.4	18	77
AgriMAXX 473	55.5	19	75
AGS 3000	54.6	20	75
Dyna-Gro TV 8861	55.7	21	73
FLLA10033C-6	55.8	22	72
FLLA10191C-13	57.0	23	68
AGS 2024	57.7	24	67
Savoy	57.6	25	65
GoWheat LA 754	56.3	26	58
Trial mean			**80**
LSD (0.1)			**8**
CV (%)			**13**
Pr>F			**0.0023**

Wheat variety performance over multiple years at EV Smith Plant Breeding Unit*

	Average Yield (bu/acre)		
Variety	**2018**	**2017 - 2018**	**2016 - 2018**
	1-year	**2-year**	**3-year**
AGS 2038	92	70	65
AGS 2024	67	58	56

** Sorted by 3-year average*

Table 7. Performance of Wheat Varieties in Alabama - Wiregrass REC - Headland, AL			
Planting Date: 11/14/17	**Harvest Date: 6/5/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
USG 3118	54.2	1	94
Dyna-Gro TV 8861	55.0	2	93
AGS 2024	56.9	3	89
Croplan SRW 9606	50.6	4	89
Dyna-Gro 9811	52.8	5	87
AgriMAXX 481	56.5	6	86
GA 08535-15LE29	56.3	7	85
USG 3458	48.4	8	84
Hilliard	53.0	9	83
USG 3329	50.0	10	81
Croplan SS 8415	55.5	12	80
Croplan SRW 9415	53.2	13	79
USG 3895	53.1	14	79
AGS 2038	57.6	15	78
USG 3448	53.8	16	78
Savoy	54.9	17	77
AR06146E-1-4	54.5	18	76
AgriMAXX 480	56.0	19	73
FLLA10033C-6	56.1	20	70
FLLA10191C-13	55.1	21	68
GA 06147-15LE38	57.0	22	63
AgriMAXX 473	49.0	23	63
AGS 3000	53.4	24	56
GoWheat LA 754	52.9	25	55
USG 3536	50.0	26	52
Trial mean			**77**
LSD (0.1)			**7**
CV (%)			**11**
Pr>F			**0.0001**

Wheat variety performance over multiple years at Wiregrass REC*			
	Average Yield (bu/acre)		
	2018	**2017 - 2018**	**2016 - 2018**
	1-year	**2-year**	**3-year***
AGS 2024	89	71	74
AGS 2038	78	63	70

** Sorted by 3-year average*

Table 8. Performance of Wheat Varieties in Alabama - Brewton ARU - Brewton, AL			
Planting Date: 11/14/17	**Harvest Date: 6/8/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
AGS 2038	-	1	115
GA 08535-15LE29	-	2	111
Hilliard	-	3	107
USG 3118	-	4	107
USG 3536	-	5	105
Dyna-Gro 9811	-	6	103
Croplan SRW 9415	-	7	100
FLLA10033C-6	-	8	94
AR06146E-1-4	-	9	94
USG 3458	-	10	93
AgriMAXX 480	-	11	92
Savoy	-	12	91
USG 3895	-	13	91
AgriMAXX 473	-	14	90
Croplan SS 8415	-	15	90
Croplan SRW 9606	-	16	90
AGS 2033	-	17	89
Dyna-Gro TV 8861	-	18	88
GoWheat LA 754	-	19	88
GA 06147-15LE38	-	21	86
FLLA10191C-13	-	22	86
AgriMAXX 481	-	23	79
USG 3448	-	24	76
USG 3329	-	25	72
AGS 3000	-	26	67
Trial mean			**92**
LSD (0.1)			**7**
CV (%)			**10**
Pr>F			**0.0001**

Wheat variety performance over multiple years at Brewton ARU*		
	Average Yield (bu/acre)	
Variety	**2018**	**2016 & 2018**
	1-year	**2-year**
AGS 2038	115	85
Hilliard	107	73
AGS 2024	88	67
* Sorted by the average of yields from 2016 and 2018. There was no yield data from 2017		

Table 9. Performance of Wheat Varieties in Alabama - Gulf Coast REC - Fairhope, AL			
Planting Date: 12/15/17	**Harvest Date: 6/6/18**		
Wheat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
GA 08535-15LE29	60.7	1	115
USG 3895	60.8	2	108
USG 3118	61.1	3	107
Croplan SS 8415	60.9	4	105
AgriMAXX 481	61.0	5	104
AGS 2038	59.7	6	102
FLLA10191C-13	61.3	8	96
Dyna-Gro 9811	61.1	9	94
AGS 2024	61.0	10	93
GA 06147-15LE38	60.1	11	93
Savoy	57.2	12	92
FLLA10033C-6	60.5	13	92
Hilliard	61.3	14	89
Dyna-Gro TV 8861	60.6	15	89
AR06146E-1-4	61.3	16	86
USG 3458	60.7	17	85
AGS 3000	60.3	18	84
GoWheat LA 754	60.0	19	79
Croplan SRW 9415	61.0	20	72
AgriMAXX 480	61.4	21	72
USG 3448	61.7	22	68
Croplan SRW 9606	61.9	23	68
USG 3329	61.0	24	63
AgriMAXX 473	62.1	25	63
USG 3536	61.1	26	62
Trial mean			**88**
LSD (0.1)			**7**
CV (%)			**9**
Pr>F			**0.0001**

Wheat variety performance over multiple years at Gulf Coast REC*			
	Average Yield (bu/acre)		
Variety	**2018**	**2017 - 2018**	**2016 - 2018**
	1-year	**2-year**	**3-year**
AGS 2038	102	91	83
AGS 2024	93	82	76

**Sorted by 3-year average*

2017 Alabama Oat & Triticale Variety Trial Results

Table 10. Performance of Oat & Triticale Varieties in Alabama - Tennessee Valley REC - Belle Mina, AL			
Planting Date: 11/13/17	**Harvest Date: 6/8/18**		
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Graham	32.8	1	138
Horizon 306	36.4	2	131
Horizon 270	33.9	3	121
LA09045SBS-U4	31.8	4	104
LA09015SBS-U1	30.3	5	98
FL 720	31.2	6	98
LA09030SBS-U3	28.9	7	67
LA09044SBS-U1	29.8	8	65
Trial mean			**103**
LSD (0.1)			**9**
CV (%)			**10**
Pr>F			**0.0001**

Planting Date: 11/10/17	**Harvest Date: 6/7/18**		
Triticale	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
FL 08128	54.9	1	88
FL 01143	48.6	2	85
Trical 342	48.4	3	79
Trical Surge	45.3	4	62
TriCal Merlin Max	43.4	5	44
Trial mean			**72**
LSD (0.1)			**8**
CV (%)			**13**
Pr>F			**0.0018**

Table 11. Performance of Oat & Triticale Varieties in Alabama - Sand Mountain REC - Crossville, AL			
Planting Date: 11/28/17	**Harvest Date: 6/20/18**		
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Horizon 306	31.5	1	215
Graham	31.3	2	206
Horizon 270	32.1	3	192
LA09030SBS-U3	31.1	4	180
LA09045SBS-U4	29.9	5	167
FL 720	31.0	6	152
LA09044SBS-U1	30.1	7	149
LA09015SBS-U1	33.7	8	135
Trial mean			**175**
LSD (0.1)			**13**
CV (%)			**9**
Pr>F			**0.0002**

Planting Date: 11/10/17	**Harvest Date: 6/7/18**		
Triticale	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
FL 08128	50.3	1	95
Trical Surge	41.5	2	91
Trical 342	42.6	3	87
FL 01143	43.9	4	87
TriCal Merlin Max	40.7	5	59
Trial mean			**84**
LSD (0.1)			**4**
CV (%)			**6**
Pr>F			**0.0002**

Table 12. Performance of Oat Varieties in Alabama - Black Belt REC - Marion Junction, AL			
Planting Date: 10/20/17		**Harvest Date: 6/7/18**	
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Graham	33.9	1	116
LA09044SBS-U1	30.0	2	92
Horizon 270	32.0	3	92
Horizon 306	34.5	4	88
LA09045SBS-U4	30.2	5	88
FL 720	33.5	6	86
LA09030SBS-U3	29.2	7	84
LA09015SBS-U1	30.3	8	77
Trial Mean			**90**
LSD (0.1)			**9**
CV (%)			**12**
Pr>F			**0.0333**

Table 13. Performance of Oat Varieties in Alabama - Prattville ARU - Prattville, AL			
Planting Date: 11/16/17	**Harvest Date: 6/7/18**		
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Graham	36.8	1	87
Horizon 270	32.6	2	77
FL 720	34.9	3	74
LA09015SBS-U1	35.5	4	64
Horizon 306	37.4	5	62
LA09044SBS-U1	32.0	6	60
LA09030SBS-U3	30.8	7	59
LA09045SBS-U4	34.5	8	54
Trial mean			**67**
LSD (0.1)			**9**
CV (%)			**17**
Pr>F			**0.0511**

Table 14. Performance of Oat Varieties in Alabama - E.V. Smith - Plant Breeding Unit - Tallassee, AL			
Planting Date: 11/6/17	**Harvest Date: 6/12/18**		
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
LA09044SBS-U1	31.0	1	103
Horizon 306	36.7	2	92
LA09030SBS-U3	30.1	3	91
Graham	34.4	4	84
LA09015SBS-U1	31.8	5	78
FL 720	34.6	6	78
Horizon 270	33.9	7	72
LA09045SBS-U4	33.6	8	67
Trial mean			**83**
LSD (0.1)			**18**
CV (%)			**27**
Pr>F			**0.5797**

Table 15. Performance of Oat Varieties in Alabama - Wiregrass REC - Headland, AL			
Planting Date: 11/14/17	**Harvest Date: 6/5/18**		
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Horizon 270	34.5	1	112
FL 720	36.6	2	104
LA09030SBS-U3	31.1	3	104
LA09015SBS-U1	33.1	4	104
LA09044SBS-U1	32.1	5	98
Graham	36.3	6	92
Horizon 306	36.0	7	88
LA09045SBS-U4	33.4	8	85
Trial mean			**98**
LSD (0.1)			**10**
CV (%)			**13**
Pr>F			**0.2079**

Table 16. Performance of Oat Varieties in Alabama - Brewton ARU - Brewton, AL			
Planting Date: 11/14/17	**Harvest Date: 6/8/18**		
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
Graham	-	1	145
LA09015SBS-U1	-	2	137
LA09030SBS-U3	-	3	123
Horizon 270	-	4	122
Horizon 306	-	5	116
LA09044SBS-U1	-	6	110
LA09045SBS-U4	-	7	104
FL 720	-	8	88
Trial Mean			**118**
LSD (0.1)			**22**
CV (%)			**23**
Pr>F			**0.3041**

Table 17. Performance of Oat Varieties in Alabama - Gulf Coast REC - Fairhope, AL			
Planting Date: 12/18/17	**Harvest Date: 6/6/18**		
Oat	**Test Weight**	**Yield**	**Grain Yield**
	(lbs/bu)	**(rank)**	**(bu/Acre)**
LA09015SBS-U1	-	1	165
LA09044SBS-U1	-	2	163
Graham	-	3	157
LA09030SBS-U3	-	4	156
Horizon 270	-	5	145
LA09045SBS-U4	-	6	140
Horizon 306	-	7	129
FL 720	-	8	85
Trial mean			**143**
LSD (0.1)			**18**
CV (%)			**16**
Pr>F			**0.0106**

Disease Notes on Wheat Variety Trials, 2018

Data Explanation

Disease ratings for the 2017-2018 variety trials for wheat, oat and triticale are summarized by location in Tables 18 through 20. Diseases were rated by K.L. Bowen, Professor of Plant Pathology, with assistance from graduate students Chris Gorman and Matthew Stinson. Rust diseases were rated on a severity scale ranging from 0 to 100, indicating the proportion of the flag leaves that were affected across the plot. All other diseases are rated on a scale of 0 to 9, where 0 indicates no disease, 4-5 reflects about half of the plants are moderately affected, and 9 = severe disease affecting all plants in plot. Diseases were rated as close to the soft dough stage as could be scheduled, late April to early May.

Discussion

Wheat variety trials at Gulf Coast REC (GCREC, in Fairhope), Brewton Agricultural Research Unit (BARU), Prattville Agricultural Research Unit (PARU) and Tennessee Valley REC (TVREC, in Belle Mina) were rated in the spring of 2018.

Barley/cereal yellow dwarf was seen at moderate intensity at TVREC and take-all was seen in some plots. Stripe rust were not found at any location. Cultivars with low disease levels at TVREC included 'Progeny PGX 16-1', 'Progeny #Boss', 'Limagrain LCS Ammo', and 'AR06146E-1-4' (Table 18).

At southern sites, leaf rust and glume blotch were considerably lower in 2018 than in 2017, while leaf blotch and scab were comparable to the preceding year. Fungicides had been applied to wheat variety trials at most locations and did a good job at minimizing foliar diseases.

No measurable disease was seen at Prattville. Low levels of leaf blotch and glume blotch, as well as scab (Fusarium head blight) were found on some varieties at all other locations. Chlorotic leaf stippling, indicative of Soilborne wheat mosaic, was noted at several plots at GCREC. Low levels of leaf rust were seen at GCREC and BARU. Trace amounts of powdery mildew, but not consistently on any one variety, were seen at BARU (Table 19).

Oat and triticale variety trials were also rated. On oat, at all sites, trace to low levels of Helminthosporium leaf spot were found. Crown rust was noted only in one plot of 'FL 720' at GCREC. Barley yellow dwarf (BYD) was noted on oat at BARU. Because disease levels were so low, no tables on oat diseases are provided.

Only low to trace levels of diseases were noted on triticale at TVREC. Among triticale cultivars, 'Trical 342' had notably higher scab and BYD than other cultivars; 'TriCal Merlin Max' was notably disease free (Table 20).

In all tables, the P-value indicates the level of statistical significance of differences among cultivars; the LSD is Least Significant Difference or the numerical difference that separates one cultivar from another.

Table 18. Disease ratings on wheat varieties at Tennessee Valley Research and Extension Center

Rated May 14, 2018. Leaf rust severity is on a scale of 0 to 100% of flag leaf; other diseases rated 0 to 10, where 5 = ~ 50% of plants in plot are wholly affected.

Cultivar	Leaf Blotch	Glume Blotch	Barley yellow	Scab
AgriMAXX 415	0.83	0.17	1.00	0.34
AgriMAXX 473	1.17	0.67	0	0.50
AgriMAXX 480	3.00	0.17	2.00	1.67
AGS 2024	1.50	0.17	0	1.17
AGS 2038	0.17	0.17	2.17	0.17
AGS 2055	2.67	0	0	1.17
AR06146E-1-4	2.17	0	0.17	0.17
Croplan SRW 9415	0.17	0.33	1.50	1.67
Croplan SRW 9606	0.50	0.50	0.33	0.50
Croplan SS 8415	3.00	0.17	0.67	1.67
Dyna Gro 9522	0.67	0	1.17	0
Dyna-Gro 9701	0.77	0.50	0	0
Dyna-Gro 9811	0.67	0.34	3.00	1.00
FLLA10033C-6	0.67	0.50	0.17	1.00
FLLA10191C-13	1.00	0.17	1.00	1.33
GA 06147-15LE38	2.00	0	0	0.67
GA 08535-15LE29	0.50	0.34	0	0.51
GoWheat LA 754	0.67	0.17	0.34	2.23
Hilliard	1.67	0.50	0.34	0.83
Limagrain LCS Ammo	1.33	0.50	0	0.17
Progeny #Boss	0.33	0.17	3.17	0
Progeny #Bullet	1.00	0.84	0	0
Progeny #Turbo	0.33	0.84	1.50	0
Progeny #Warrior	0	0.67	0.67	0.67
Progeny PGX 16-1	0.34	0.50	0.01	1.67
Progeny PGX 16-3	0.50	1.33	5.00	0.03
Progeny PGX 16-4	0.67	0.17	1.33	1.50
Progeny PGX 16-7	1.67	0.33	0.17	0.83
Progeny PGX 17-16	1.17	0.67	3.83	0
Progeny PGX 17-20	1.17	0.67	1.17	0
USG 3118	0.83	1.50	0	1.33
USG 3329	0	0.84	5.50	0
USG 3448	0.17	1.83	2.00	0
USG 3458	1.17	0.17	0.67	0.34
USG 3536	0.67	0.67	0	0
USG 3895	0	0	2.17	2.67
P =	< 0.0001	0.0015	<0.0001	<0.0001
LSD =	1.30	0.79	1.70	1.22

Table 19. Disease ratings on wheat varieties at Gulf Coast Research & Extension Center and Brewton Agricultural Unit

Rated Apr 17-18, 2018. Leaf rust severity is on a scale of 0 to 100% of flag leaf affected; other diseases rated 0 to 10, where 5 = ~ 50% of plants in plot are wholly affected.

Cultivar	Leaf Rust	Leaf Blotch	Glume Blotch	Scab
AgriMAXX 473	0	0	0	0
AgriMAXX 480	0	0	0	0.50
AgriMAXX 481	0.01	0.56	0	0.16
AGS 2024	0.33	0.34	0.17	1.08
AGS 2038	0	0.50	0.33	0.24
AGS 3000	0.17	1.33	1.58	1.42
AR06146E-1-4	0	0.50	0.34	0
Croplan SRW 9415	0	0	0	0
Croplan SRW 9606	1.17	0	0	0
Croplan SS 8415	2.17	0.67	0.34	0
Dyna-Gro 9811	0	0	0.25	0
Dyna-Gro TV 8861	2.67	0	0	0
FLLA10033C-6	0.34	0.75	0.42	0.25
FLLA10191C-13	0	0.59	0.25	0.33
GA 06147-15LE38	0.17	0.67	0	0
GA 08535-15LE29	0	0.50	0.17	0.17
GoWheat LA 754	0	1.09	0	0.58
Hilliard	0	0	0.17	0
Savoy	0	1.25	0.42	1.25
USG 3118	1.00	0.40	0	0
USG 3329	0.17	0	0	0
USG 3448	0	0.17	0.17	0
USG 3458	0	0	0	0
USG 3536	0	0	0.17	0
USG 3895	0.17	0	0	0
P =	0.257	<0.0001	<0.0001	<0.0001
LSD =	1.76	0.59	0.40	0.52

Table 20. Disease ratings on triticale varieties at Tennessee Valley Research and Extension Center

May 14, 2018. Leaf rust severity is on a scale of 0 to 100% of flag leaf; other diseases rated 0 to 10, where 0 = no disease, 5 = ~ 50% of plants in plot are wholly affected, and 10 = all plants wholly affected.

Cultivar	Leaf Blotch	Glume Blotch	Scab
Trical 342	1.67	0.01	1.17
Trical Surge	1.07	0	0
FL 01143	1.17	.001	0.17
FL 08128	1.17	0	0.34
TriCal Merlin Max	.01	0	0
P =	0.299	0.219	0.053
LSD =	1.65	0.01	1.00

2017-2018 Grain Sources

Wheat

Cultivar:	Source:
AGS 2024, AGS 2038	AGSouth Genetics
AGS 2055, AGS 3000	Albany, Georgia
AgriMAXX 415, AgrMAXX 473, AgrMAXX 480	AgriMAXX Wheat Company
AgriMAXX 481	Mascoutah, Illinois
DynaGro 9522, DynaGro 9701, DynaGro 9811	Crop Production Services/DynaGro Seed
DynaGro Savoy, DynaGro TV8861	Bloomville, Ohio
Croplan SRW 8415, Croplan SRW 9606	Croplan by Winfield
Croplan SRW9415	Shoreview, Minnesota
Limagrain LCS Ammo	Limagrain Cereal Seeds
	Cordova, Tennessee
#Boss, #Bullet, #Turbo, #Warrior	Progeny Ag Products
PGX 16-1*, PGX 16-3*, PGX 16-4*	Wynne, Arkansas
PGX 167-5*, PGX 17-16*, PGX 17-20*	
GoWheat LA754 (previously Terral LA 754)	Stratton Seed
	Stuttgart, Arkansas
USG 3448, USG 3458, USG 3536, USG 3895	UniSouth Genetics, Inc.
USG 3118, USG 3329	Dickson, Tennessee
AR0614E-1-4*	University of Arkansas
	Fayetteville, Arkansas
GA 061471-15E38*, GA 08535-15E29*	University of Georgia
	Griffin, Georgia
Hilliard	Virginia Crop Improvement Assn.
	Warsaw, Virginia

Oats

Cultivar:	
Horizon 270, Horizon 306	Plantation Seed Conditioners, Inc.
Horizon 720	Newton, Georgia
Graham	South Carolina Crop Improvement Assn.
	Clemson, South Carolina

Triticale

Trical 342, Trical Surge, TriCal Merlin Max	Northern Seed, LLC
FL 1143*, FL 08128*	Union, Kentucky
*** Experimental line; not yet commercially**	

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