

PRELIMINARY PERFORMANCE OF SMALL GRAIN FORAGES IN ALABAMA, 2020-2021

DEPT. SERIES NO. CSES2021: SMALL GRAIN FORAGES
HENRY G. JORDAN JR., VARIETY TESTING MANAGER
CROP, SOIL & ENVIRONMENTAL SCIENCES
AUBURN UNIVERSITY, AUBURN AL
APRIL 26, 2021

THESE TRIALS ARE CONDUCTED THROUGH A COLLABORATION WITH AUBURN UNIVERSITY AND THE UNIVERSITY OF GEORGIA.

MISSION

The mission of the Auburn University 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 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.

HOW TO INTERPRET RESULTS

The purpose of the variety trial data is to determine whether differences are due to genetic performance. These differences cannot be measured absolutely due to environmental field conditions (rainfall, temperatures, soil fertility, soil type, disease, insects, etc.). Yields may differ between plots of the same entry. This variation is accounted for using experimental design and statistics.

The least significant difference (LSD) is used to determine whether the observed differences between entries are real or are caused by random variation. When using the LSD, two entries may have numerically different values but the values are not statistically different. When two entries are compared and the observed difference is larger than the LSD, the entries are considered statistically different. An alpha level of 0.10 is used, meaning that the differences observed are expected to be real 90% of the time.

The coefficient of variation (CV) is a measure used to compare the amount of random variation within a data set. The lower the CV, the more precise the data set. The model r-square value (0.0-1.0) represents the amount of variation accounted for by the statistical model. As the value increases, the better the variation in the dataset is explained by the model.

Each table is organized in a manner that it is easy to read. The data is sorted from highest yielding to lowest. The bolded values are not statistically different from the highest yielding value.

A dark line in the table visually represents the test average. Any value above the line is equal to or greater than the test average. The numeric value for the test average is at the bottom of the tables.

Test results do not imply recommendation or endorsement by the Auburn University Variety Testing Program.



ACKNOWLEDGEMENTS

DR. PAUL PATTERSON, DEAN AND DIRECTOR
ALABAMA AGRICULTURAL EXPERIMENT STATION

DR. HENRY FADAMIRO, ASSOCIATE DEAN FOR RESEARCH &
ASSOCIATE DIRECTOR, ALABAMA AGRICULTURAL EXPERIMENT STATION

GREG PATE, DIRECTOR OF RESEARCH OPERATIONS FOR OUTLYING UNITS
ALABAMA AGRICULTURAL EXPERIMENT STATION

DR. JOHN BEASLEY, DEPT. HEAD
CROP, SOIL & ENVIRONMENTAL SCIENCES

DR. LEANNE DILLARD, ASSISTANT PROFESSOR AND FORAGE EXTENSION SPECIALIST
CROP, SOIL, & ENVIRONMENTAL SCIENCES AND ANIMAL SCIENCES

DR. DANIEL MAILHOT, DIRECTOR OF VARIETY TESTING
UNIVERSITY OF GEORGIA

TABLE OF CONTENTS

TRIAL MANAGEMENT

CHILTON RESEARCH AND EXTENSION CENTER
CLANTON, AL

WHEAT

OAT

RYE

TRITICALE

WEBSITE

Mathew Price, Director

WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL

WHEAT

DUAL PURPOSE WHEAT

OAT

RYE

TRITICALE

RYE COVER CROP

WEBSITE

Chris Parker, Associate Director

2019-2020 PERFORMANCE OF SMALL GRAIN VARIETIES IN ALABAMA
“LAST YEAR’S DATA”

TRIAL MANAGEMENT

Yields are calculated on a dry matter basis. A subsample, taken from each plot, is oven-dried and used to calculate percent dry matter.

TABLE 1 - LOCATION SPECIFIC INFORMATION

Research Center	Chilton	Wiregrass
Location	Clanton	Headland
Plant Date	October 19	October 21
Harvest 1	January 20	January 29
Harvest 2	February 26	March 22
Harvest 3	April 5	NA
Harvest Cover Crop	NA	
Wheat Grain Harvest	NA	
Tillage		Conventional
Pre-plant Fertilizer		
In Season Fertilizer		
Herbicides		
Insecticides		
Fungicides		
Test Conducted By		B. Johnson C. Parker E. Richards H. McDaniel J. Greene J. Mullen K. Hodges M. Davis S. Phillips

[Table of Contents](#)

WHEAT FORAGE
CHILTON RESEARCH AND EXTENSION CENTER
CLANTON, AL

TABLE 2 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/20/2021	Harvest 2 2/26/2021	Harvest 3 4/5/2021	Season Total
GA10268-17LE16	178	548	3597	4323
GA10407-17E8	161	482	3492	4136
GA131246LDH-18E35	151	786	3145	4082
NF101	0	345	3617	3961
NF97117	444	440	3050	3934
SSI30-06	88	392	3313	3793
NF00108	66	503	3215	3785
GA11656-17E11	100	513	3014	3627
ON1366277	20	282	2975	3394
GA10127-18E26	57	447	2821	3324
Go Wild Feral Forage	0	289	2986	3274
ON13P016	0	419	2752	3054
Average	105	454	3165	3724
LSD @ 10% level	132	232	N.S.	N.S.
CV	146	49	21	23
Model R-square	0.63	0.47	0.25	0.24

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

OAT FORAGE
CHILTON RESEARCH AND EXTENSION CENTER
CLANTON, AL

TABLE 3 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/20/2021	Harvest 2 2/26/2021	Harvest 3 4/5/2021	Season Total
LA 99016	168	440	3233	3841
FL12034-10	118	467	3253	3838
FLLA09015SBS-U1	762	796	2200	3757
Legend 567	913	863	1821	3597
FLLA09044SBS-U1	770	831	1941	3542
FL11017-7	143	311	3063	3517
Gerard 224	109	392	2999	3500
OR0367-20	105	282	2845	3233
FL BO 10	908	656	1592	3156
FL BO 1	764	543	1518	2825
Average	476	558	2447	3481
LSD @ 10% level	239	175	565	N.S.
CV	85	45	32	18
Model R-square	0.83	0.77	0.76	0.44

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

RYE FORAGE
CHILTON RESEARCH AND EXTENSION CENTER
CLANTON, AL

TABLE 1 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/20/2021	Harvest 2 2/26/2021	Harvest 3 4/5/2021	Season Total
Elbon	199	399	4421	5019
NF99362	532	1228	3055	4815
NF95319B	302	649	3803	4754
Bates RS4	690	993	2989	4673
NF97325	281	894	3492	4667
Swift Elbon	531	1091	2706	4328
Kelly Grazer III	508	948	2834	4291
Wrens Abruzzi	609	1181	2435	4224
FL 405	952	943	2305	4200
FL 406	728	741	2527	3996
Average	533	907	3057	4497
LSD @ 10% level	N.S.	359	1036	N.S.
CV	78	41	32	16
Model R-square	0.26	0.55	0.46	0.43

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

TRITICALE FORAGE
CHILTON RESEARCH AND EXTENSION CENTER
CLANTON, AL

TABLE 5 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/20/2021	Harvest 2 2/26/2021	Harvest 3 4/5/2021	Season Total
342	667	1307	2357	4331
FL 08128	553	1024	2426	4003
APB226	794	873	2150	3817
Surge	439	746	2544	3730
APB298	774	635	2062	3471
1143	784	942	1587	3313
APB308	847	566	1839	3252
APB133	674	602	1882	3157
APB001	890	474	1635	2999
APB269	807	574	1577	2958
Average	723	774	2006	3503
LSD @ 10% level	212	158	410	429
CV	31	35	24	16
Model R-square	0.57	0.84	0.64	0.72

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

WHEAT FORAGE
WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL

TABLE 6 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/29/2021	Harvest 2 2/22/2021	Season Total
GA131246LDH-18E35	923	2848	3771
GA10407-17E8	848	2880	3728
GA10268-17LE16	607	3105	3713
GA10127-18E26	462	2860	3322
GA11656-17E11	488	2812	3300
NF97117	899	2311	3210
ON13P016	378	2563	2941
GA Gore	346	2308	2654
SSI30-06	780	1510	2290
NF101	236	1590	1825
NF00108	485	1117	1603
ON1366277	218	1034	1252
Average	556	2245	2801
LSD @ 10% level	281	712	766
CV	75	40	38
Model R-square	0.77	0.69	0.74

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

DUAL PURPOSE WHEAT
WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL

TABLE 7 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/29/2021	Harvest 2 2/22/2021	Season Total Forage (pounds per acre)	Season Total Grain (bushels/acre)
GA10407-17E8	1688	2159	3847	
GA10268-17LE16	1301	2265	3566	
SY 547	1062	1776	2838	
GA11656-17E11	868	1841	2709	
Go Wild Feral Forage	570	1825	2395	
SY Viper	851	1400	2251	
SSI30-06	581	1408	1988	
SY Richie	468	1487	1814	
GA Gore	471	1303	1774	
Average	873	1718	2576	
LSD @ 10% level	492	504	708	
CV	61	29	34	
Model R-square	0.60	0.52	0.70	

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

OAT FORAGE
WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL

TABLE 8 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/29/2021	Harvest 2 2/22/2021	Season Total
FL11017-7	1644	2301	3945
FL12034-10	1507	1996	3503
OR0367-20	1384	1959	3343
TX15OCS6142	1919	1329	3248
Gerard 224	1544	1592	3136
LA 99016	1335	1715	3049
TX16OCS7015	1230	1588	2817
FLLA09015SBS-U1	1080	1512	2592
FLLA09044SBS-U1	1199	1087	2286
Legend 567	1261	861	2121
FL BO 10	1081	758	1838
FL BO 1	844	782	1626
Average	1336	1457	2792
LSD @ 10% level	430	483	683
CV	32	41	30
Model R-square	0.51	0.68	0.68

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

RYE FORAGE
WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL

TABLE 9 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

Variety	Harvest 1 1/29/2021	Harvest 2 2/22/2021	Season Total
Swift Elbon	1382	2649	4031
NF95319B	1381	2540	3921
Bates RS4	1281	2620	3902
NF99362	1030	2687	3717
NF97325	1002	2687	3690
Kelly Grazer III	1415	2253	3669
FL 406	1720	1867	3586
Wrens Abruzzi	961	2500	3462
FL 405	1894	1377	3271
Elbon	792	2198	2990
Average	1286	2338	3624
LSD @ 10% level	454	565	N.S.
CV	38	25	15
Model R-square	0.59	0.55	0.40

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)

TRITICALE FORAGE
WIREGRASS RESEARCH AND EXTENSION CENTER
HEADLAND, AL

TABLE 10 - DRY MATTER YIELD BY HARVEST TIMING (LB/ACRE)

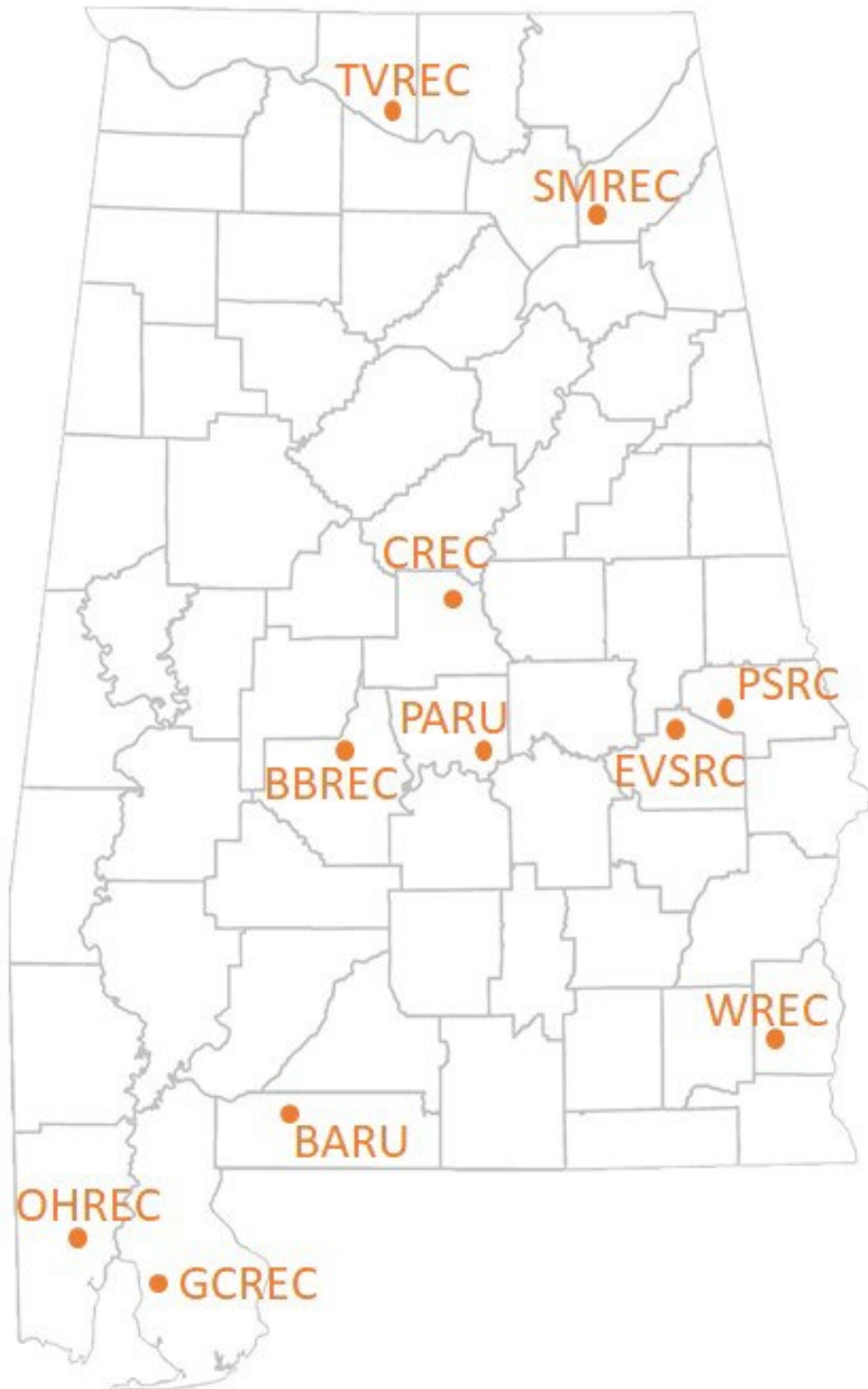
Variety	Harvest 1 1/29/2021	Harvest 2 2/22/2021	Season Total
APB269	2319	1220	3539
Surge	1548	1924	3471
APB001	2441	857	3298
APB226	1853	1432	3285
APB298	2090	1178	3268
APB133	2102	894	2996
APB308	1777	1171	2949
1143	1798	1137	2935
342	1441	1340	2781
FL 08128	1076	1458	2535
Average	1845	1261	3106
LSD @ 10% level	347	311	501
CV	26	30	16
Model R-square	0.74	0.68	0.5

Bolded yields are NOT statistically different from the highest yielding entry.

Bolded line in table indicates test average.

N.S. –differences are statistically non-significant.

[Table of Contents](#)



CONTACT

HENRY JORDAN, VARIETY TESTING MANAGER,
CROP, SOIL & ENVIRONMENTAL SCIENCES
201 FUNCHESS HALL, AUBURN UNIVERSITY, 36849
MOBILE 770-468-0478 • HENRYJ@AUBURN.EDU
[AUBURN UNIVERSITY VARIETY TESTING WEBSITE](#)