

2021 Kentucky Small Grain VARIETY PERFORMANCE TRIAL

B. Bruening, P. Shine, S. Swanson, J. Connelley, G. Olson, and D. Van Sanford, Plant and Soil Sciences

www.uky.edu/ag/WheatVarietyTrial

The 2021 soft red winter wheat growing season ended with Kentucky farmers harvesting approximately 370,000 acres of the 530,000 acres planted, for a total production of 28.5 million bushels of grain. An average yield of 77 bushels per acre was estimated by NASS (Table 1). The acreage not harvested for grain was primarily used for forage production and cover cropping.

The objective of the Kentucky small grain variety performance trial is to evaluate varieties of wheat, oat, barley, triticale, and cereal rye that are commercially available or may soon be available to Kentucky farmers. New varieties are continually being developed by agricultural experiment stations and commercial firms. Annual evaluation of small grain varieties provide farmers, seed producers, and other agricultural workers with current information to help them select the varieties best adapted to their locality and individual requirements.

Seven wheat performance trials were conducted in six of the seven agroclimatic regions of Kentucky (Table 2). Agricultural areas within each region are considered to have similar soil types and climatic conditions. Barley, oat, triticale, cereal rye and spelt varietal performance was evaluated at one location. In addition, wheat trials for varietal differences in forage yield and straw yield were conducted at one location.

Experimental Methods

A total of 84 wheat entries were evaluated under either conventional or no-till cultural practices. No-till trials were grown at three locations, and conventional trials were grown at four locations. The experimental design was a randomized complete block. The trials had four replications per entry, and the data presented are the average response from the four replications.

The plots were planted with specially built multi-row conventional and no-till cone seeders. Conventional trial plots consisted of six rows to form a plot 4 feet wide and 15 feet long, which was later trimmed to 12 feet in length. No-till plots consisted of seven rows to form a plot 5 feet wide and 25 feet long, which was later trimmed to 20 feet in length. Plots were harvested with a small-plot combine. The preceding crop for all trials was corn.

Trials were conducted using intensive management practices. Typical herbicide applications included a spring application for broadleaf control and a fall preplanting burn-down (no-till trials only) application. Fungicides were applied in the spring

on all but two (disease rating) trials. An insecticide for aphid control was typically applied in the fall and spring. Nitrogen was applied in a February/March split application at a rate of approximately 30/60 pounds per acre (conventional trials) or 40/70 pounds per acre (no-till).

The forage trial was planted using conventional tillage and was harvested using a small plot forage combine at the milk stage. Straw yield was measured using a small plot forage combine following grain harvest in the Bluegrass region trial.

Table 1. Wheat Acreage Harvested and Yields (bu/ac) in Kentucky, 2019-21.*

2021		2020		2019	
Harvested	Yield	Harvested	Yield	Harvested	Yield
370,000	77	340,000	63	330,000	76

*June 10, 2021, National Agricultural Statistics Service.

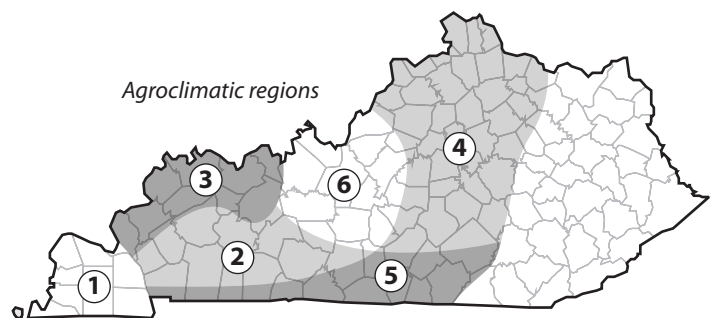


Table 2. Agroclimatic Regions of Kentucky Small Grain Variety Trials.

Region	Location	Cooperator	Crop Tested
1	Purchase	Fulton Co. Henry Sanger	No-till wheat
2	Western Coal Field	Caldwell Co. UK Research and Education Ctr.	Wheat*, barley
3	Ohio Valley	Webster Co. Bruce and Jeremy Benson	No-till wheat
4	Bluegrass	Fayette Co. Kentucky Ag. Exp. Station	Wheat*, small grains
5	Southern Tier	Logan Co. Halcomb Farm	Wheat*
		Christian Co. Brandon Hunt	No-till wheat
6	North Central	Woodford Co. UK Woodford Farm Shannon Rudd	Wheat*

* Conventional tillage.

Characteristics Evaluated

Grain yields were calculated from the weight of grain from each plot and reported in bushels per acre (bu/ac) based on 60-pound, 56-pound, 48-pound, and 32-pound standard bushel weights for wheat, cereal rye, barley, and oats, respectively, at 13.5 percent moisture content. Trial weights (lb/bu) were determined using a HarvestMaster Classic GrainGage and adjusted to 13.5 percent moisture. Lodging was reported as the percentage of plant lodging at maturity; winter survival was reported as the percentage of survival after spring green-up. Winter survival was 100 percent for all trials. Plant height was measured in inches from the soil surface to the top of the grain head. Heading dates were reported as the day an estimated 50 percent of the heads had extended above the flag leaf collar. Disease ratings: Leaf rust and powdery mildew were rated at the Woodford Co. trial. Forage and straw yields are expressed as dry matter in tons per acre. Winter cover crop ground cover/biomass values were measured using the Canopeo app at the Lexington wheat trial on Jan. 22, 2021.

Results and Interpretation

Since genetic expression of a variety is greatly influenced by environmental conditions, it is best to have several years' data at multiple locations from which to draw conclusions. Performance of a variety trialed for only one year should not be compared with a multi-year average of another variety because it is possible that results in one of the other years were extremely good or poor and thus not comparable. 2020 data was not included because of widespread freeze damage across the state in that year.

The yield of a variety is relative and should be compared with the yields of the other varieties in the same experiment and at the same location or within the same analysis across locations. Small differences in yield of only a few bushels per acre between two varieties from an individual trial should not be interpreted to indicate the superiority of one variety over another. However, if one variety consistently out yields another over a period of several years, the chances are that the differences are real. LSD (least significant difference) values are listed at the bottom of table columns to indicate whether differences are statistically significant.

Lodging data are difficult to interpret. A high-yielding variety should not necessarily be downgraded because of a high percentage of lodging for a given year at a given location. Local weather conditions, such as wind and rain, may cause a variety to lodge much more than it normally does. Variety trials normally have a greater degree of lodging than do farmer fields. It also should be emphasized that a variety reported to be 50 percent lodged does not imply that only 50 percent of the grain

could be harvested. With good equipment, most of the grain can often be saved.

Kentucky's climate and soils are well-suited for the production of high-quality soft red winter wheat. No single variety has all the desirable characteristics, but each has certain advantages. Yield potential, straw strength and yield, height, heading date, grain quality, cover cropping potential, disease resistance, and forage potential are all important in choosing a variety.

Winter barley is less winter-hardy than winter wheat but more hardy than winter oats. The degree of winter-hardiness, straw strength, and maturity are important characteristics when choosing a variety. Barley (hulless, malting, and traditional hulled) variety performance data is presented in table 14. Cereal rye, triticale, oat and spelt variety performance data are presented in tables 15, 16, 17, and 18 respectively.

Trial Conditions

Average temperature and precipitation in October favored timely planting of the wheat variety trials. The 2021 Kentucky small grain variety trials were planted from October 14 to October 23. November brought warmer temperatures which favored fall growth. December and January had normal temperatures and below average precipitation. February had well below normal temperatures and below normal precipitation, March brought above average temperatures and precipitation which boosted plant growth and development, April had below normal temperatures and precipitation, which slowed reproductive development. May had periods of high and low temperatures and precipitation. The first half of June was warm and dry which favored wheat maturity and dry-down. Periods of cool and wet or dry conditions persisted throughout the 2nd half of June, which resulted in a relatively timely harvest period.

Acknowledgments

Thanks to the following individuals for their support and assistance with this project: Kentucky Small Grain Growers Association, Siemer Milling Inc., the Halcomb family, Brandon Hunt, Henry Sanger, Ben Rudy, Robert Rouse, Bruce and Jeremy Benson, Vicki Shadrick, Scott Peek, Shannon Rudd, Matt Peak, Cam Kenimer, Curt Judy, Dennis Egli, Bobby Orange, Michael Carter, Shawn Wood, Jackie Harper, and the UK Wheat Science Group.

Contact

Bill Bruening
425 Plant Science Building
University of Kentucky
Lexington, KY 40546-0312
(859) 218-0802
bruening@uky.edu

Wheat Varieties Tested in 2021

AgriMAXX Wheat Co.

AgriMAXX 454
AgriMAXX 485
AgriMAXX 492
AgriMAXX 498
AgriMAXX 503
AgriMAXX 505
AgriMAXX 513
AgriMAXX 514
AgriMAXX 516
AgriMAXX EXP 2009

GrowPro Genetics

AgriPro 100
AgriPro 547
AgriPro 576
AgriPro Richie
AgriPro SREXP0117
AgriPro SREXP0119
AgriPro Viper

CORTEVA Agriscience

Pioneer variety 26R10
Pioneer variety 26R36
Pioneer variety 26R41
Pioneer variety 26R45
Pioneer variety 26R59

Dyna-Gro Seed

Dyna-Gro 9002
Dyna-Gro 9120
Dyna-Gro 9151
Dyna-Gro 9172
Dyna-Gro 9692
Dyna-Gro 9941
Dyna-Gro WX20734
Dyna-Gro WX20738
Dyna-Gro WX21741

Growmark Seed

GROWMARK FS 600
GROWMARK FS 601
GROWMARK FS 616
GROWMARK FS 623
GROWMARK FS 624
GROWMARK FS WX21B

Kentucky American Seeds, Inc.

KAS 19X24
KAS 20X16
KAS 20X29
KAS 20X47
KAS ADAMS

Kentucky Foundation Seed Project

KY06C-1178-16-10-3-34
X11-0039-1-17-5***
X11-0120-12-4-3
X11-0130-13-2-3
X11-0170-52-3-3
X11-0357-24-13-5***
X11-0374-104-13-5**
X12-3010-4-4-1
X12-3051-53-17-3
X12-920-39-9-5

Kentucky Small Grain Growers Association

PEMBROKE 2016
PEMBROKE 2021

KWS Seeds

KWS291
KWS338
KWS340
KWS375

LOCAL SEED

LOCAL LW2068
LOCAL LW2148
LOCAL LW2169
LOCAL LW2848

Michigan State University

MI16R0720
MI16R0898
MI16R0906

List of Tables

Table 3.	Wheat Variety Trial—State Summary
Table 4.	Wheat Variety Forage/Cover Crop Trial
Table 5.	Wheat Variety Straw Trial
Table 6.	Wheat Variety Disease Ratings
Table 7.	Wheat Variety Trial—Purchase Region
Table 8.	Wheat Variety Trial—Western Coal Field Region
Table 9.	Wheat Variety Trial—Ohio Valley Region
Table 10.	Wheat Variety Trial—Bluegrass Region
Table 11.	Wheat Variety Trial—Southern Tier Region A
Table 12.	Wheat Variety Trial—Southern Tier Region B
Table 13.	Wheat Variety Trial—North Central Region
Table 14.	Barley Variety Trial
Table 15.	Cereal Rye Variety Trial
Table 16.	Triticale Variety Trial
Table 17.	Oat Variety Trial
Table 18.	Spelt Variety Trial

Progeny AG Products

PROGENY #BLAZE
PROGENY #BULLET
PROGENY PGX 18-7

Stratton Seed

Go Wheat 4059S
Go Wild Feral Forage
Go Wheat 2058
Go Wheat 2059

University of Missouri

Bess
Truman

UniSouth Genetics

USG 3118
USG 3316
USG 3329
USG 3352
USG 3472
USG 3562

Virginia Tech

13VTK429-3
AC-2-17-5-5
Liberty 5658
VA 17W-74

Table 3. 2021 Kentucky Wheat Variety Trial—State Summary.¹

Variety	Yield (bu/a)		Test Wt. (lb/bu) 2021	Height (in) 2021	Heading Date > April 1 2021
	2021	2019 & 2021 ²			
Dyna-Gro WX21741	85.7		60.8	37	31
X11-0039-1-17-5***	85.2		59.2	35	31
X11-0120-12-4-3	84.9		59.0	35	33
MI16R0720	84.4		56.1	35	31
USG 3352	84.1		59.6	36	32
Dyna-Gro WX20738	83.5		60.2	37	31
KAS 20X16	83.2		58.6	34	32
MI16R0906	82.3		57.7	34	32
KAS 20X29	82.2		60.9	37	32
Dyna-Gro 9941	82.1	90.2	57.9	35	32
PEMBROKE 2021	81.5	88.8	61.2	35	31
AgriMAXX 454	81.2	89.7	59.8	36	32
Liberty 5658	80.9	86.9	60.5	36	30
GROWMARK FS 601	80.9		57.9	35	32
AgriMAXX 503	80.6		59.9	37	33
GoWheat 2059	80.5	86.3	58.4	33	31
Dyna-Gro 9692	80.4		60.1	36	32
GROWMARK FS 623	80.4		59.7	37	33
PROGENY #BLAZE	80.1	87.2	59.5	36	31
AgriPro 100	80.1	88.9	56.6	34	33
GROWMARK FS 600	80.1		62.1	36	32
AgriMAXX 505	80.0		62.1	36	32
USG 3329	80.0	87.3	59.2	36	32
Dyna-Gro 9002	79.9	88.8	59.3	37	32
Dyna-Gro 9120	79.8		61.4	35	31
Pioneer variety 26R10	79.7	89.3	59.8	35	32
X12-3010-4-4-1	79.5		60.0	38	33
KAS ADAMS	79.5		62.2	36	32
Dyna-Gro 9151	79.5	90.2	62.1	36	32
GROWMARK FS 624	79.4		60.8	37	32
USG 3472	79.4		59.3	35	32
X12-3051-53-17-3	79.2		58.1	33	33
Dyna-Gro WX20734	79.1		59.8	34	34
AgriMAXX 514	79.0		58.2	35	32
VA 17W-74	78.6		61.3	35	30
X11-0170-52-3-3	78.4		58.4	35	32
PROGENY #BULLET	78.0	87.4	59.5	37	32
Dyna-Gro 9172	78.0		59.2	35	32
KAS 20X47	78.0		60.1	36	34
KY06C-1178-16-10-3-34	77.8	87.6	60.4	38	32
KWS291	77.7		59.3	35	34
LOCAL LW2848	77.7	86.1	59.8	37	32
AgriMAXX 513	77.6		60.9	35	31
GROWMARK FS 616	77.6		60.3	36	32

continued

Table 3. (continued)

Variety	Yield (bu/a)		Test Wt. (lb/bu) 2021	Height (in) 2021	Heading Date > April 1 2021
	2021	2019 & 2021 ²			
Pioneer variety 26R45	77.5	87.6	58.1	36	32
GoWheat 2058	77.3	88.5	59.9	31	31
LOCAL LW2169	77.3		59.8	34	32
AgriPro 547	77.2	85.0	59.3	38	31
AgriMAXX EXP 2009	77.2		58.4	36	31
LOCAL LW2148	77.1		59.6	36	32
X12-920-39-9-5	77.0		60.9	34	32
Pioneer variety 26R41	76.9	86.3	60.2	33	32
USG 3562	76.8		60.6	36	32
AgriPro SREXP0117	76.7		58.4	32	31
Pioneer variety 26R59	76.4	89.4	58.5	32	31
LOCAL LW2068	76.3		58.5	35	32
GROWMARK FS WX21B	75.8		59.2	35	32
AgriPro Viper	75.8	85.5	61.0	39	31
13VTK429-3	75.7		61.8	36	32
KWS338	75.5		59.6	35	32
AgriPro Richie	75.5		59.5	34	30
Go Wheat 4059S	75.3	83.9	60.6	34	33
KWS340	75.0		60.6	34	33
PEMBROKE 2016	74.9	84.8	60.0	34	31
USG 3118	74.8		60.0	33	30
Pioneer variety 26R36	74.7	87.2	60.5	36	32
AgriMAXX 498	74.7		59.0	37	33
AgriMAXX 516	74.3		59.3	34	32
X11-0357-24-13-5***	74.2		62.9	34	34
PROGENY PGX18-7	74.1		60.2	35	32
USG 3316	73.9	86.9	59.9	35	32
Go Wild Feral Forage	73.7		59.2	42	34
AgriMAXX 485	73.5	83.6	60.5	34	33
MI16R0898	73.3		59.3	37	33
AgriMAXX 492	73.2	84.9	60.9	35	30
AgriPro 576	72.8		58.8	36	35
AgriPro SREXP0119	71.6		59.2	32	31
X11-0374-104-13-5**	71.3		60.1	36	30
Truman	70.1	79.7	59.1	41	37
AC-2-17-5-5	69.8		60.8	33	32
Bess	69.5	77.5	60.4	39	32
KAS 19X24	66.9		60.9	34	32
X11-0130-13-2-3	66.7		60.2	36	33
KWS375	65.3		61.0	34	34
Average	77.4	86.6	59.8	35	32
C.V.	9.9	9.2			
LSD (0.10)	5.2	6.7			

¹ Summary of six tests (Caldwell, Logan, Christian, Fulton, Webster, Woodford counties).

² 2020 data not included due to statewide freeze damage.

Table 4. 2021 Kentucky Wheat Variety Forage/Cover Crop Trial.

Variety	Dry Matter Yield (tons/acre)	Cover Crop ¹ Canopy (%)	Head Type
AgriMAXX 492	3.86	25	Bearded
13VTK429-3	3.80	26	Bearded
KAS 20X29	3.76	8	Bearded
Go Wild Feral Forage	3.48	20	Smooth
X11-0120-12-4-3	3.42	31	Smooth
KAS 20X47	3.40	20	Bearded
AgriMAXX 498	3.36	18	Smooth
Dyna-Gro 9692	3.32	17	Bearded
USG 3329	3.30	17	Bearded
X12-3051-53-17-3	3.27	27	Smooth
AgriMAXX 454	3.25	18	Bearded
GoWheat 2059	3.24	22	Smooth
MI16R0898	3.20	17	Tip-Awned
Liberty 5658	3.18	31	Bearded
GROWMARK FS 600	3.17	20	Bearded
Bess	3.17	22	Smooth
KAS 20X16	3.17	15	Bearded
USG 3352	3.14	16	Bearded
Dyna-Gro WX21741	3.13	10	Bearded
USG 3316	3.12	20	Bearded
PEMBROKE 2016	3.11	22	Bearded
X12-920-39-9-5	3.11	29	Bearded
PEMBROKE 2021	3.10	24	Smooth
X11-0130-13-2-3	3.10	35	Smooth
X11-0357-24-13-5***	3.08	25	Smooth
Dyna-Gro WX20734	3.08	13	Bearded
Dyna-Gro WX20738	3.07	16	Bearded
AgriMAXX 505	3.04	17	Bearded
LOCAL LW2169	3.04	19	Bearded
GROWMARK FS 623	3.04	16	Smooth
KAS ADAMS	3.02	17	Bearded
KWS340	3.02	19	Smooth
AgriPro 576	3.02	21	Bearded
AC-2-17-5-5	2.99	30	Smooth
Truman	2.99	21	Smooth
Dyna-Gro 9120	2.99	16	Bearded
X12-3010-4-4-1	2.97	26	Smooth
Pioneer variety 26R10	2.97	15	Bearded
GROWMARK FS 616	2.97	20	Bearded
Pioneer variety 26R59	2.97	13	Smooth
KY06C-1178-16-10-3-34	2.96	30	Bearded
Dyna-Gro 9172	2.95	16	Bearded
PROGENY #BLAZE	2.94	15	Bearded
Dyna-Gro 9151	2.94	19	Bearded
KAS 19X24	2.93	13	Bearded
X11-0170-52-3-3	2.90	31	Smooth

continued

Table 4. (continued)

Variety	Dry Matter Yield (tons/acre)	Cover Crop ¹ Canopy (%)	Head Type
GROWMARK FS 624	2.90	25	Smooth
GROWMARK FS WX21B	2.88	16	Bearded
AgriMAXX EXP 2009	2.88	26	Bearded
X11-0039-1-17-5***	2.88	31	Smooth
AgriMAXX 485	2.86	14	Smooth
Pioneer variety 26R41	2.86	16	Bearded
MI16R0906	2.85	23	Tip-Awned
Dyna-Gro 9941	2.84	16	Bearded
Dyna-Gro 9002	2.83	12	Bearded
GROWMARK FS 601	2.82	19	Bearded
Go Wheat 4059S	2.82	12	Smooth
AgriMAXX 514	2.80	23	Bearded
KWS375	2.79	26	Bearded
X11-0374-104-13-5**	2.78	30	Tip-Awned
VA 17W-74	2.78	25	Smooth
AgriPro Viper	2.76	13	Smooth
Pioneer variety 26R36	2.73	21	Bearded
AgriPro 547	2.72	11	Smooth
PROGENY #BULLET	2.72	16	Bearded
AgriMAXX 513	2.72	15	Bearded
AgriPro Richie	2.69	13	Smooth
KWS338	2.68	26	Smooth
AgriPro SREXP0117	2.67	10	Smooth
Pioneer variety 26R45	2.62	14	Smooth
LOCAL LW2068	2.58	19	Bearded
AgriMAXX 516	2.57	15	Bearded
AgriMAXX 503	2.57	16	Smooth
LOCAL LW2148	2.51	19	Smooth
USG 3118	2.48	28	Tip-Awned
KWS291	2.46	28	Tip-Awned
PROGENY PGX18-7	2.43	11	Bearded
LOCAL LW2848	2.42	20	Bearded
USG 3562	2.31	17	Bearded
USG 3472	2.30	13	Bearded
GoWheat 2058	2.23	10	Bearded
AgriPro 100	2.06	18	Smooth
MI16R0720	2.03	15	Smooth
AgriPro SREXP0119	1.96	14	Smooth
Average	2.91	19	
C.V.	17.00	18	
LSD (0.10)	0.82	6	

¹ Winter cover crop/grazing biomass estimate (% canopy coverage using Canopeo): measured: 1-22-2021.

Location: Bluegrass Region (Fayette County).

Planting date: 10-23-2020, conventional tillage.

Dry matter yield harvest date at milk stage: 5-14-2021.

Table 5. 2021 Kentucky Wheat Variety Straw Trial.

Variety	DM Yield ¹ (tons/acre)	
	2021	2019 & 2021
Truman	3.17	2.52
KY06C-1178-16-10-3-34	3.06	2.32
AgriPro Viper	2.88	1.98
MI16R0898	2.81	
Dyna-Gro WX21741	2.75	
AgriMAXX 514	2.68	
AgriMAXX EXP 2009	2.68	
Pioneer variety 26R36	2.61	1.94
USG 3352	2.59	
AgriPro 576	2.57	
KWS338	2.54	
Dyna-Gro 9692	2.52	
Dyna-Gro 9120	2.43	
AgriMAXX 492	2.39	1.75
AgriMAXX 513	2.39	
AgriMAXX 454	2.38	1.72
AgriMAXX 505	2.38	
GROWMARK FS 616	2.36	
X12-920-39-9-5	2.34	
AgriMAXX 498	2.33	
GROWMARK FS 600	2.28	
Dyna-Gro WX20738	2.24	
LOCAL LW2848	2.24	1.67
GROWMARK FS 624	2.23	
13VTK429-3	2.22	
USG 3316	2.19	1.67
KWS375	2.18	
KAS 20X29	2.17	
Bess	2.16	1.65
KAS 20X16	2.15	
AgriPro Richie	2.14	
Dyna-Gro 9151	2.13	1.67
X11-0039-1-17-5***	2.11	
X11-0374-104-13-5**	2.07	
KAS ADAMS	2.05	
LOCAL LW2169	2.02	
Pioneer variety 26R10	2.02	1.57
AgriMAXX 516	2.01	
X11-0130-13-2-3	2.00	
X12-3051-53-17-3	2.00	
AgriPro 547	1.99	1.77
KAS 20X47	1.99	
PEMBROKE 2021	1.98	1.49
PROGENY #BULLET	1.98	1.52
LOCAL LW2068	1.97	

continued

Table 5. (continued)

Variety	DM Yield ¹ (tons/acre)	
	2021	2019 & 2021
Go Wild Feral Forage	1.96	
X11-0357-24-13-5***	1.96	
PROGENY PGX18-7	1.95	
AgriMAXX 503	1.93	
Dyna-Gro 9172	1.93	
Dyna-Gro 9941	1.93	1.55
X11-0170-52-3-3	1.93	
AgriMAXX 485	1.89	1.40
KWS291	1.86	
LOCAL LW2148	1.86	
MI16R0906	1.86	
AgriPro 100	1.85	1.33
Go Wheat 4059S	1.84	1.35
X11-0120-12-4-3	1.84	
GROWMARK FS 601	1.82	
USG 3329	1.82	1.35
USG 3472	1.82	
PROGENY #BLAZE	1.78	1.35
X12-3010-4-4-1	1.78	
GROWMARK FS WX21B	1.74	
GoWheat 2058	1.74	1.32
GoWheat 2059	1.74	1.23
KAS 19X24	1.72	
MI16R0720	1.72	
Liberty 5658	1.71	1.37
USG 3562	1.71	
GROWMARK FS 623	1.70	
Pioneer variety 26R45	1.58	1.33
Dyna-Gro WX20734	1.54	
Pioneer variety 26R41	1.53	1.16
PEMBROKE 2016	1.50	1.22
VA 17W-74	1.45	
USG 3118	1.41	
KWS340	1.39	
Dyna-Gro 9002	1.36	1.29
AgriPro SREXP0119	1.26	
Pioneer variety 26R59	1.22	1.08
AgriPro SREXP0117	1.19	
AC-2-17-5-5	0.86	
Average	2.02	1.56
C.V.	26.8	23.7
LSD (0.10)	0.9	0.5

¹ Dry Matter straw yield following grain harvest.

Location: Bluegrass Region (Fayette County).

Planting date: 10-23-2020, conventional tillage.

Harvest date: 6-24-2021.

Table 6. 2021 Kentucky Wheat Variety Disease Ratings.

Variety	Leaf Rust	Powdery Mildew
13VTK429-3	2.0	1.0
AC-2-17-5-5	2.0	1.5
AgriMAXX 454	4.5	7.3
AgriMAXX 485	2.5	3.0
AgriMAXX 492	2.0	1.5
AgriMAXX 498	3.3	3.5
AgriMAXX 503	2.3	4.0
AgriMAXX 505	3.8	3.5
AgriMAXX 513	2.8	2.0
AgriMAXX 514	2.8	3.8
AgriMAXX 516	2.0	3.8
AgriMAXX EXP 2009	1.3	3.8
AgriPro 100	2.0	4.0
AgriPro 547	2.5	1.3
AgriPro 576	2.3	4.8
AgriPro Richie	1.5	3.8
AgriPro SREXP0117	4.0	1.8
AgriPro SREXP0119	3.0	1.3
AgriPro Viper	2.8	3.0
Bess	4.0	3.8
Dyna-Gro 9002	3.3	6.3
Dyna-Gro 9120	1.5	2.0
Dyna-Gro 9151	3.8	3.5
Dyna-Gro 9172	2.3	5.0
Dyna-Gro 9692	5.3	7.8
Dyna-Gro 9941	3.3	4.5
Dyna-Gro WX20734	2.0	1.8
Dyna-Gro WX20738	1.5	3.0
Dyna-Gro WX21741	2.5	1.5
Go Wheat 4059S	2.5	3.0
Go Wild Feral Forage	6.0	1.0
GoWheat 2058	2.0	3.5
GoWheat 2059	2.5	3.3
GROWMARK FS 600	3.5	3.5
GROWMARK FS 601	3.3	4.5
GROWMARK FS 616	2.8	2.5
GROWMARK FS 623	2.3	4.5
GROWMARK FS 624	2.8	6.8
GROWMARK FS WX21B	3.0	4.0
KAS 19X24	2.5	2.0
KAS 20X16	2.0	1.8
KAS 20X29	2.0	2.5
KAS 20X47	3.5	2.3

continued

Table 6. (continued)

Variety	Leaf Rust	Powdery Mildew
KAS ADAMS	3.5	3.0
KWS291	2.3	1.3
KWS338	2.8	2.3
KWS340	2.5	3.5
KWS375	2.5	2.3
KY06C-1178-16-10-3-34	2.8	2.3
Liberty 5658	1.8	2.8
LOCAL LW2068	5.3	2.5
LOCAL LW2148	2.0	5.3
LOCAL LW2169	1.5	4.8
LOCAL LW2848	2.0	2.0
MI16R0720	5.5	3.0
MI16R0898	5.8	2.3
MI16R0906	7.0	3.5
PEMBROKE 2016	2.8	3.3
PEMBROKE 2021	2.8	4.0
Pioneer variety 26R10	5.0	6.3
Pioneer variety 26R36	1.5	7.8
Pioneer variety 26R41	2.0	3.0
Pioneer variety 26R45	3.0	4.0
Pioneer variety 26R59	2.8	5.0
PROGENY #BLAZE	2.3	3.8
PROGENY #BULLET	2.3	2.3
PROGENY PGX18-7	3.5	3.5
Truman	3.8	2.3
USG 3118	1.8	1.3
USG 3316	4.3	5.5
USG 3329	3.0	4.5
USG 3352	2.0	3.8
USG 3472	2.3	5.5
USG 3562	2.3	3.0
VA 17W-74	1.0	1.3
X11-0039-1-17-5***	5.0	1.8
X11-0120-12-4-3	2.8	3.8
X11-0130-13-2-3	2.0	4.5
X11-0170-52-3-3	2.0	5.8
X11-0357-24-13-5***	3.0	4.8
X11-0374-104-13-5**	1.8	5.0
X12-3010-4-4-1	1.8	1.0
X12-3051-53-17-3	2.8	1.0
X12-920-39-9-5	1.5	3.5
Average	2.8	3.4

Disease Rating scale: 1 = resistant; 9 = susceptible.
Disease rated at Woodford County variety trial.

**Table 7. 2021 Kentucky Wheat Variety Trial—
Purchase Region.**

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
MI16R0720	98.8	56.1	37	28
MI16R0906	96.0	57.5	35	29
Dyna-Gro 9172	94.9	59.9	38	29
PEMBROKE 2021	94.9	60.5	39	28
Dyna-Gro 9692	94.6	59.6	38	29
Dyna-Gro 9151	94.2	63.4	39	29
KWS291	93.9	60.0	37	30
KAS ADAMS	93.6	63.4	39	29
AgriMAXX 505	93.0	62.9	39	29
Pioneer variety 26R59	92.5	59.1	34	28
AgriMAXX 503	92.5	59.5	38	30
GROWMARK FS 623	92.3	59.7	38	30
USG 3352	92.2	59.9	38	29
AgriMAXX 514	92.2	58.7	36	29
X11-0120-12-4-3	90.9	59.9	36	29
PROGENY #BLAZE	90.7	59.8	38	29
X12-3051-53-17-3	90.7	59.3	36	29
AgriPro 100	90.6	57.1	35	29
GROWMARK FS 600	90.1	62.7	39	29
Dyna-Gro WX21741	90.0	61.3	38	29
AgriMAXX 454	89.8	59.3	38	29
GROWMARK FS 601	89.7	58.3	37	29
AgriMAXX EXP 2009	89.4	57.2	38	29
X11-0039-1-17-5***	89.4	59.4	35	29
AgriMAXX 498	89.0	59.4	38	29
GROWMARK FS 624	88.4	61.3	38	29
AgriPro Viper	88.0	60.6	41	28
Liberty 5658	87.8	61.2	39	28
USG 3472	87.5	59.6	36	29
AgriPro 547	87.2	58.9	40	28
GoWheat 2059	86.9	58.7	36	28
X11-0170-52-3-3	86.9	57.6	37	30
Pioneer variety 26R36	86.8	59.8	38	29
GROWMARK FS WX21B	86.7	59.5	36	29
KWS338	86.3	59.4	38	29
LOCAL LW2169	86.2	60.1	37	29
Pioneer variety 26R10	86.0	60.0	37	29
KAS 20X29	85.3	62.0	39	29
KAS 20X16	85.3	58.6	35	29
USG 3329	85.2	60.2	37	29
AgriMAXX 516	85.0	59.3	37	29
Pioneer variety 26R45	84.0	57.9	38	28
Dyna-Gro 9120	83.8	61.4	35	28

continued

Table 7. (continued)

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
Dyna-Gro 9941	83.3	58.1	36	29
Go Wild Feral Forage	83.1	59.0	43	30
AgriMAXX 513	83.0	60.6	37	29
LOCAL LW2148	82.6	59.6	39	29
Dyna-Gro WX20734	82.6	59.9	35	31
KY06C-1178-16-10-3-34	82.5	59.8	38	29
USG 3316	82.5	59.4	37	29
13VTK429-3	82.4	62.9	38	29
AgriPro 576	82.0	59.7	37	32
Dyna-Gro 9002	81.9	59.0	36	29
PEMBROKE 2016	81.9	60.2	37	29
AgriPro SREXP0117	81.6	58.0	36	28
MI16R0898	81.3	59.0	39	30
PROGENY PGX18-7	81.3	59.9	39	29
Pioneer variety 26R41	81.2	60.9	35	28
GROWMARK FS 616	81.1	59.0	38	29
USG 3562	80.9	60.0	38	29
PROGENY #BULLET	80.8	59.5	38	29
KAS 20X47	80.5	59.9	36	30
X12-3010-4-4-1	80.3	60.1	39	29
Dyna-Gro WX20738	79.9	60.7	37	29
Truman	79.9	59.0	42	35
USG 3118	79.7	61.5	35	28
LOCAL LW2068	79.6	58.0	36	30
Go Wheat 4059S	79.1	60.9	35	29
LOCAL LW2848	78.9	59.7	38	29
AgriMAXX 492	78.8	60.6	36	28
X12-920-39-9-5	78.6	61.4	37	29
Bess	78.3	60.1	42	29
VA 17W-74	77.5	60.8	37	28
X11-0357-24-13-5***	77.3	63.4	35	30
GoWheat 2058	76.6	60.4	32	29
KWS340	76.3	59.6	35	30
X11-0130-13-2-3	76.2	59.5	37	30
AgriMAXX 485	74.9	60.7	35	29
AgriPro SREXP0119	74.7	60.0	35	28
X11-0374-104-13-5**	74.6	60.3	38	28
AgriPro Richie	72.3	58.9	36	28
KWS375	70.7	62.0	35	30
AC-2-17-5-5	68.5	60.8	35	29
KAS 19X24	66.2	60.7	36	29
Average	84.5	59.9	37	29
C.V.	8.8			
LSD (0.10)	12.3			

Location: Fulton County.

Lodging: 0%.

Planting date: 10-14-2020, no-till.

Harvest date: 6-15-2021.

**Table 8. 2021 Kentucky Wheat Variety Trial—
Western Coal Field Region.**

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
X12-920-39-9-5	92.6	61.8	37	31
Dyna-Gro WX21741	92.1	61.4	39	31
MI16R0720	91.3	57.2	38	31
Dyna-Gro WX20738	90.6	61.1	40	30
MI16R0906	90.5	59.5	38	32
AgriMAXX 503	90.1	60.6	39	32
GROWMARK FS 623	89.9	60.6	40	32
Dyna-Gro 9941	89.4	59.3	37	31
Liberty 5658	88.9	61.3	38	29
AgriPro SREXP0117	88.2	59.4	34	31
X11-0039-1-17-5***	88.1	60.2	36	31
LOCAL LW2848	88.0	60.7	40	31
PEMBROKE 2021	87.9	61.6	37	30
USG 3329	87.6	59.6	38	31
LOCAL LW2148	87.2	60.3	38	32
X11-0120-12-4-3	87.2	59.3	37	33
X12-3051-53-17-3	86.9	59.0	34	33
USG 3352	86.9	59.9	39	32
PROGENY #BULLET	86.4	60.0	40	31
GoWheat 2058	86.0	60.6	33	31
Dyna-Gro 9002	85.9	59.2	38	31
KAS ADAMS	85.8	62.6	38	31
AgriMAXX 485	85.6	61.1	38	33
X12-3010-4-4-1	85.4	59.8	40	33
GROWMARK FS 616	85.4	61.6	39	32
GoWheat 2059	85.0	60.4	35	31
AgriPro Richie	85.0	61.3	36	29
Go Wheat 4059S	85.0	61.1	37	32
KAS 20X29	84.8	60.8	39	31
USG 3118	84.8	59.2	34	30
GROWMARK FS 600	84.7	62.2	38	31
LOCAL LW2068	84.5	59.5	37	31
KAS 20X47	83.9	62.2	39	35
KWS340	83.8	61.2	37	33
GROWMARK FS 624	83.8	62.0	39	32
Dyna-Gro WX20734	83.6	60.9	37	34
AgriMAXX 505	83.2	62.3	38	31
Dyna-Gro 9151	82.8	62.9	38	32
KAS 20X16	82.7	59.9	35	31
GROWMARK FS 601	82.6	58.9	37	31
Pioneer variety 26R45	82.4	59.5	38	31
Dyna-Gro 9120	82.1	61.6	37	30
AgriMAXX 492	82.0	61.8	38	30
AgriPro 100	81.9	57.4	35	33

continued

Table 8. (continued)

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
AgriPro 547	81.8	59.5	39	30
AgriPro 576	81.7	59.3	40	35
Pioneer variety 26R10	81.5	60.3	38	32
KWS291	81.5	59.0	38	34
AgriPro Viper	81.3	61.0	41	30
USG 3562	81.2	61.0	38	32
MI16R0898	81.0	60.6	40	33
PROGENY #BLAZE	80.9	59.7	38	31
Dyna-Gro 9692	80.5	60.9	37	32
VA 17W-74	80.4	61.7	36	28
Pioneer variety 26R41	80.3	60.5	36	31
PEMBROKE 2016	80.2	61.2	37	30
X11-0170-52-3-3	80.1	58.0	39	31
13VTK429-3	79.9	61.9	37	31
KWS338	79.9	60.9	37	31
AgriMAXX 514	79.7	58.0	37	31
AgriMAXX EXP 2009	79.5	59.2	38	30
USG 3316	79.3	60.6	38	32
AgriMAXX 513	79.3	62.4	38	30
AgriPro SREXP0119	79.2	59.4	33	30
KY06C-1178-16-10-3-34	79.1	60.6	40	31
AgriMAXX 516	78.9	60.0	36	31
Dyna-Gro 9172	78.1	59.9	36	32
AgriMAXX 454	77.4	60.4	37	32
AgriMAXX 498	77.3	59.0	40	32
PROGENY PGX18-7	77.1	60.8	38	31
Pioneer variety 26R36	76.6	61.1	37	32
GROWMARK FS WX21B	76.5	60.3	38	31
Bess	76.1	61.1	41	31
Pioneer variety 26R59	76.0	59.0	34	31
LOCAL LW2169	76.0	60.4	36	32
USG 3472	76.0	61.2	36	32
Go Wild Feral Forage	74.7	60.0	44	34
X11-0357-24-13-5***	74.3	63.7	36	34
X11-0374-104-13-5**	71.9	61.5	38	29
X11-0130-13-2-3	71.8	60.6	37	32
AC-2-17-5-5	70.3	62.3	34	31
KAS 19X24	70.2	62.4	37	31
KWS375	69.8	61.5	37	33
Truman	69.2	60.4	44	38
Average	82.1	60.5	37	31
C.V.	9.3			
LSD (0.10)	12.7			

Location: Caldwell County (Princeton, KY).

Planting date: 10-17-2020, no-till.

Harvest date: 6-16-2021.

**Table 9. 2021 Kentucky Wheat Variety Trial—
Ohio Valley Region.**

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
X11-0039-1-17-5***	102.0	59.3	36	34
GROWMARK FS 623	99.3	59.8	39	35
PROGENY #BLAZE	99.3	58.6	37	33
X11-0120-12-4-3	98.8	58.4	35	36
AgriMAXX 503	98.6	60.3	39	35
KAS 20X29	98.4	60.5	38	34
LOCAL LW2148	97.3	59.9	37	34
PEMBROKE 2021	97.2	61.3	35	34
KAS 20X16	96.5	57.9	34	35
AgriMAXX 513	95.6	60.3	37	32
AgriMAXX 454	95.5	59.6	37	35
Dyna-Gro WX20738	95.1	60.2	39	34
Dyna-Gro WX21741	94.9	60.0	37	34
AgriPro 100	94.5	56.0	35	35
GROWMARK FS 624	94.4	60.8	39	35
VA 17W-74	94.0	60.9	35	32
Dyna-Gro 9692	93.8	60.2	36	34
USG 3329	92.9	58.2	37	34
USG 3472	92.8	58.5	35	35
Dyna-Gro 9120	92.4	61.9	36	32
X12-3051-53-17-3	92.2	55.6	34	35
KWS338	92.1	59.0	36	34
GROWMARK FS 600	92.0	61.5	37	35
GoWheat 2058	91.9	60.0	32	34
KWS291	91.9	59.6	35	37
GoWheat 2059	91.7	58.1	34	33
Dyna-Gro WX20734	91.2	59.1	33	36
GROWMARK FS 601	91.1	57.6	35	34
Pioneer variety 26R10	90.6	60.0	35	35
MI16R0720	89.7	56.6	33	33
KY06C-1178-16-10-3-34	89.7	60.8	39	35
LOCAL LW2068	89.6	58.7	36	35
KAS 20X47	89.2	59.8	36	36
X11-0374-104-13-5**	89.1	60.2	38	33
Dyna-Gro 9941	89.1	57.0	35	34
Pioneer variety 26R45	89.0	57.2	36	34
13VTK429-3	88.7	61.7	38	34
GROWMARK FS WX21B	88.3	59.2	36	35
X11-0170-52-3-3	88.0	58.8	35	35
Dyna-Gro 9002	88.0	59.6	38	34
USG 3562	87.3	60.7	38	36
KAS ADAMS	87.2	62.0	37	35
KWS340	87.1	61.1	34	37
Pioneer variety 26R41	86.8	60.8	35	34

continued

Table 9. (continued)

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
AgriMAXX 505	86.8	61.7	36	35
X12-3010-4-4-1	86.8	59.3	39	36
Dyna-Gro 9172	86.7	59.1	35	35
X11-0357-24-13-5***	86.7	61.9	35	37
AgriPro Viper	86.5	61.2	39	34
Go Wheat 4059S	86.5	60.2	35	36
Pioneer variety 26R59	85.7	57.3	33	35
Dyna-Gro 9151	85.6	61.5	36	35
LOCAL LW2169	85.5	59.3	35	35
MI16R0898	85.5	58.7	38	36
AgriMAXX 514	85.4	57.9	35	35
Go Wild Feral Forage	85.4	59.4	42	36
USG 3352	85.4	60.0	38	35
AgriPro 547	85.3	59.1	40	33
PROGENY #BULLET	84.9	59.0	38	36
USG 3316	84.6	59.9	36	35
LOCAL LW2848	84.6	58.8	38	36
MI16R0906	84.5	57.4	33	35
PEMBROKE 2016	84.3	60.0	34	32
X12-920-39-9-5	83.5	61.3	34	34
Pioneer variety 26R36	83.2	61.0	36	35
AC-2-17-5-5	83.0	60.0	35	35
AgriMAXX 485	82.6	59.9	35	36
USG 3118	82.5	59.7	33	31
AgriMAXX EXP 2009	82.4	59.2	36	34
GROWMARK FS 616	82.4	60.4	37	36
Bess	80.8	59.7	38	34
AgriMAXX 498	80.5	58.4	36	37
AgriPro Richie	80.0	59.8	35	31
KAS 19X24	79.5	60.8	36	35
X11-0130-13-2-3	79.1	60.8	36	36
AgriPro SREXP0119	79.1	58.3	32	32
AgriPro 576	78.8	57.5	36	37
AgriMAXX 516	77.5	58.8	34	35
Liberty 5658	77.4	60.9	36	33
Truman	76.7	58.6	41	39
AgriPro SREXP0117	76.0	57.9	31	33
AgriMAXX 492	75.6	61.4	36	32
PROGENY PGX18-7	72.5	60.1	35	35
KWS375	71.6	60.5	34	38
Average	87.7	59.6	36	35
C.V.	9.6			
LSD (0.10)	14.0			

Location: Webster County.

Lodging: 0%.

Planting date: 10-15-2020, no-till.

Harvest date: 6-23-2021.

**Table 10. 2021 Kentucky Wheat Variety Trial—
Bluegrass Region.**

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
GROWMARK FS 624	75.6	58.8	36	38
AgriMAXX 498	73.4	56.6	36	38
AgriMAXX 516	72.4	57.0	34	37
USG 3352	72.3	57.3	35	38
GROWMARK FS 600	72.3	58.7	35	37
GROWMARK FS WX21B	71.4	56.3	33	37
MI16R0906	71.2	55.6	32	37
X11-0374-104-13-5**	70.7	57.0	34	36
MI16R0898	70.0	57.8	36	38
X11-0120-12-4-3	70.0	57.5	31	38
AgriMAXX 505	69.7	58.5	35	37
KAS 20X16	69.4	56.0	33	37
PEMBROKE 2021	69.2	58.7	33	37
KAS ADAMS	69.1	58.7	35	37
X11-0039-1-17-5***	68.5	57.0	31	37
Dyna-Gro WX20734	68.1	57.4	33	39
GROWMARK FS 616	67.8	58.5	36	37
KWS338	67.5	58.5	33	37
Pioneer variety 26R36	67.5	59.1	34	37
Dyna-Gro 9172	67.3	57.0	34	37
KY06C-1178-16-10-3-34	67.0	58.9	36	36
AgriMAXX 454	66.9	57.0	34	38
Go Wheat 4059S	66.7	57.7	34	39
VA 17W-74	66.6	58.2	32	36
X11-0170-52-3-3	66.4	56.5	33	38
Dyna-Gro 9692	66.2	57.1	34	38
13VTK429-3	65.9	60.2	35	38
AgriMAXX 513	65.8	57.9	33	36
Dyna-Gro 9151	65.8	58.9	35	37
Liberty 5658	65.6	58.8	34	36
Dyna-Gro 9002	65.3	56.8	34	37
AgriPro 100	65.0	52.2	32	38
AgriMAXX EXP 2009	64.5	56.3	35	36
Dyna-Gro 9120	63.9	58.8	34	36
GoWheat 2059	63.8	54.9	31	37
AgriMAXX 485	63.8	57.9	33	38
AgriPro 547	63.8	56.7	35	37
GROWMARK FS 601	63.7	54.0	33	36
X12-3010-4-4-1	63.7	55.7	35	39
X12-920-39-9-5	63.5	57.5	32	37
AgriMAXX 514	63.4	57.1	33	37
LOCAL LW2169	63.4	56.5	33	37
Dyna-Gro WX21741	62.7	58.6	34	36
USG 3316	62.7	57.2	33	37
Pioneer variety 26R10	62.6	57.3	32	37

continued

Table 10. (continued)

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
AgriMAXX 492	62.6	57.6	34	36
KWS291	62.2	57.7	33	39
Bess	62.0	58.1	35	37
KAS 20X29	61.7	58.0	34	37
KAS 20X47	61.1	56.0	35	39
Dyna-Gro WX20738	61.0	57.0	34	37
GoWheat 2058	60.9	57.1	31	37
USG 3329	60.9	57.0	32	36
AgriPro 576	60.8	57.5	34	40
Dyna-Gro 9941	60.5	54.7	33	36
Pioneer variety 26R41	60.4	58.1	31	38
AgriMAXX 503	60.0	57.0	35	37
PROGENY #BLAZE	60.0	56.9	34	36
X11-0130-13-2-3	59.8	60.3	33	38
PROGENY #BULLET	59.8	57.3	35	37
KWS375	59.5	59.1	34	38
AgriPro Viper	58.7	60.2	37	36
X11-0357-24-13-5***	58.5	60.1	32	40
AgriPro Richie	58.3	56.5	32	36
MI16R0720	58.2	53.5	31	36
KWS340	58.1	59.6	32	38
USG 3472	57.9	56.4	32	37
LOCAL LW2848	57.8	57.4	35	37
X12-3051-53-17-3	57.4	54.4	31	39
Truman	57.3	59.2	36	42
GROWMARK FS 623	57.3	56.3	34	37
PROGENY PGX18-7	57.2	58.4	33	37
LOCAL LW2148	57.1	57.0	35	38
AC-2-17-5-5	55.8	57.3	31	37
AgriPro SREXP0117	55.5	55.8	30	37
USG 3562	54.8	57.9	34	37
PEMBROKE 2016	54.4	56.6	32	36
USG 3118	54.0	58.4	29	36
LOCAL LW2068	52.3	55.7	32	37
Pioneer variety 26R59	51.9	54.9	27	37
Go Wild Feral Forage	51.7	57.8	37	39
AgriPro SREXP0119	51.5	55.4	30	37
KAS 19X24	47.4	54.8	31	37
Pioneer variety 26R45	46.2	54.2	33	37
Average	62.7	57.2	33	37
C.V.	13.8			
LSD (0.10)	14.4			

Location: Fayette County (Lexington, KY).

Lodging: 0%.

Planting date: 10-23-2020, conventional tillage.

Harvest date: 6-24-2021.

NOTE: Data highly variable—Not recommended for variety selection.

**Table 11. 2021 Kentucky Wheat Variety Trial—
Southern Tier Region A.**

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
Pioneer variety 26R45	79.0	59.9	38	30
Go Wild Feral Forage	78.6	59.8	44	30
VA 17W-74	76.8	62.7	37	28
Dyna-Gro WX20738	76.8	61.4	37	29
KAS 20X16	76.4	59.6	35	30
Liberty 5658	76.2	61.5	39	28
USG 3352	75.5	60.0	38	30
LOCAL LW2848	74.9	60.9	38	30
PROGENY #BULLET	74.7	60.5	38	30
AgriPro 547	73.6	60.1	39	29
AgriPro Richie	72.7	59.9	35	28
Dyna-Gro 9941	72.6	58.3	35	30
MI16R0720	71.7	57.5	36	28
KAS 20X47	71.0	61.2	38	33
X11-0120-12-4-3	70.9	59.6	37	30
Pioneer variety 26R41	70.9	61.3	35	30
Dyna-Gro WX21741	70.5	61.1	38	30
X12-3051-53-17-3	70.3	60.4	34	30
GoWheat 2059	70.1	59.9	34	29
Pioneer variety 26R10	69.7	60.4	35	29
KAS 20X29	69.6	62.0	38	30
MI16R0906	69.6	58.1	35	30
AgriMAXX 503	68.7	61.0	38	30
PEMBROKE 2021	68.7	62.6	36	29
X12-3010-4-4-1	68.4	61.3	39	30
Pioneer variety 26R59	68.2	60.3	34	29
GROWMARK FS 601	68.0	58.1	35	23
Dyna-Gro 9002	67.8	59.9	38	29
AgriPro 100	67.5	57.3	34	29
X11-0170-52-3-3	67.4	60.1	35	30
X11-0039-1-17-5***	67.4	60.1	36	29
PROGENY #BLAZE	66.9	60.4	36	30
GROWMARK FS 623	66.7	60.3	38	30
X11-0357-24-13-5***	66.6	63.5	34	32
AgriMAXX EXP 2009	66.5	59.9	38	29
AgriMAXX 454	66.5	61.5	37	30
KWS338	66.5	61.0	37	30
GROWMARK FS 600	66.2	63.6	36	30
AgriMAXX 505	66.2	63.4	36	30
Dyna-Gro 9151	66.2	63.2	37	30
KAS ADAMS	66.0	63.8	37	30
KWS291	65.8	60.2	36	31
Dyna-Gro 9692	65.5	61.4	37	30
GROWMARK FS 616	65.5	60.6	36	30

continued

Table 11. (continued)

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
USG 3329	65.0	60.4	38	30
AgriPro SREXP0117	65.0	60.1	34	29
USG 3562	64.6	60.8	36	30
GoWheat 2058	64.6	61.4	32	29
PEMBROKE 2016	64.1	60.5	36	29
AgriMAXX 513	64.0	61.6	35	29
LOCAL LW2148	63.8	60.7	37	30
GROWMARK FS WX21B	63.8	59.9	34	30
USG 3472	63.6	59.3	35	30
GROWMARK FS 624	63.5	61.8	37	30
Truman	63.5	60.3	43	35
AgriMAXX 498	63.5	60.4	39	30
LOCAL LW2169	63.1	60.5	36	30
LOCAL LW2068	62.9	58.2	35	29
PROGENY PGX18-7	62.6	60.2	34	29
13VTK429-3	62.5	62.2	37	30
X12-920-39-9-5	62.4	61.5	36	30
AgriMAXX 492	61.8	61.1	35	28
Bess	61.7	61.6	40	29
AgriMAXX 514	61.5	58.9	36	30
Dyna-Gro WX20734	61.2	59.8	35	32
AgriMAXX 485	61.1	61.8	34	30
Go Wheat 4059S	61.0	61.7	34	30
KY06C-1178-16-10-3-34	61.0	61.2	38	29
AgriPro SREXP0119	60.7	60.5	34	29
AgriPro 576	60.4	59.4	36	32
Dyna-Gro 9172	60.3	59.8	35	30
KWS340	60.1	61.9	35	30
USG 3118	60.0	61.2	36	28
KAS 19X24	59.9	61.6	34	30
USG 3316	59.5	61.0	37	30
AgriMAXX 516	59.0	60.3	34	30
KWS375	58.8	61.8	35	31
Dyna-Gro 9120	58.5	61.9	35	29
AC-2-17-5-5	57.7	62.4	34	30
AgriPro Viper	57.1	61.2	38	29
MI16R0898	56.7	58.9	37	30
X11-0374-104-13-5**	53.2	59.9	36	28
X11-0130-13-2-3	51.3	62.4	39	30
Pioneer variety 26R36	50.7	60.1	37	30
Average	65.7	60.7	36	30
C.V.	11.4			
LSD (0.10)	12.4			

Location: Logan County.

Lodging: 0%.

Planting date: 10-15-2020, conventional tillage.

Harvest date: 6-17-2021.

**Table 12. 2021 Kentucky Wheat Variety Trial—
Southern Tier Region B.**

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
Dyna-Gro 9002	88.8	59.7	39	30
Dyna-Gro 9941	82.9	58.7	35	30
USG 3352	82.4	60.1	36	30
Dyna-Gro WX21741	81.8	61.3	36	30
Dyna-Gro 9120	81.6	61.7	35	29
Dyna-Gro WX20734	81.5	60.2	35	32
X12-3010-4-4-1	81.2	60.4	38	32
Pioneer variety 26R36	80.6	61.1	38	30
AgriMAXX 454	79.1	59.8	35	30
KAS 20X16	77.9	59.0	34	30
USG 3472	77.7	59.3	36	31
GROWMARK FS 601	77.5	58.6	35	30
Dyna-Gro 9692	77.2	60.1	36	30
Pioneer variety 26R10	76.7	59.0	36	30
USG 3562	76.7	61.3	37	30
AgriPro SREXP0117	75.6	58.9	32	29
AgriMAXX 514	75.5	58.0	34	30
Liberty 5658	75.4	60.6	36	28
X11-0120-12-4-3	75.3	58.7	35	31
GoWheat 2058	74.8	59.0	32	29
PROGENY #BULLET	74.4	60.4	37	30
GROWMARK FS 624	74.3	59.5	37	30
PROGENY #BLAZE	74.1	60.2	37	29
AgriMAXX 516	74.0	59.6	35	30
AgriMAXX 505	74.0	63.0	35	30
Dyna-Gro WX20738	74.0	59.3	36	29
KAS 20X47	73.8	59.6	35	33
MI16R0906	73.4	57.4	34	31
PROGENY PGX18-7	73.3	59.6	35	29
LOCAL LW2848	73.1	60.7	37	30
LOCAL LW2169	72.5	60.0	34	30
USG 3329	72.5	59.9	36	29
KAS 20X29	72.4	60.2	37	30
X11-0039-1-17-5***	72.4	59.4	34	29
Dyna-Gro 9151	72.2	62.2	35	30
AgriMAXX 513	72.1	61.2	35	30
Dyna-Gro 9172	71.9	59.9	35	30
GROWMARK FS 600	71.8	62.9	35	30
Go Wheat 4059S	71.7	60.6	35	31
KAS ADAMS	71.4	62.3	35	30
KY06C-1178-16-10-3-34	71.1	60.2	38	30
USG 3316	71.0	60.4	35	31
Pioneer variety 26R41	70.5	59.9	33	30
USG 3118	70.4	59.3	33	28

continued

Table 12. (continued)

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
GoWheat 2059	69.9	58.6	33	29
AgriMAXX EXP 2009	69.9	59.1	35	29
KWS291	69.8	57.4	35	33
GROWMARK FS 616	69.8	61.2	36	31
AgriPro Richie	69.5	59.7	35	28
LOCAL LW2068	69.2	59.4	35	30
13VTK429-3	68.8	61.6	36	30
MI16R0720	68.8	55.5	35	29
X11-0170-52-3-3	68.8	59.2	34	30
AgriMAXX 485	68.7	60.8	35	31
X12-3051-53-17-3	68.5	58.6	32	32
AgriPro SREXP0119	68.4	59.9	32	29
AgriPro 100	68.3	57.3	35	31
AgriPro 547	68.3	58.7	39	29
KWS340	66.8	59.8	35	32
AgriPro Viper	66.8	60.1	38	29
AC-2-17-5-5	66.4	59.6	32	31
X11-0357-24-13-5***	66.2	63.3	34	33
Pioneer variety 26R45	66.1	58.7	36	30
Truman	65.9	57.0	42	36
PEMBROKE 2021	65.0	61.1	34	29
PEMBROKE 2016	65.0	60.7	34	30
AgriPro 576	65.0	58.5	36	34
AgriMAXX 503	64.3	60.2	37	31
GROWMARK FS 623	64.1	59.3	37	31
LOCAL LW2148	63.5	59.1	37	31
GROWMARK FS WX21B	63.3	59.0	34	30
AgriMAXX 498	63.1	57.7	36	31
MI16R0898	62.0	59.4	37	32
X11-0374-104-13-5**	61.9	60.8	35	28
AgriMAXX 492	61.6	61.1	35	29
X12-920-39-9-5	61.5	61.4	33	30
KWS375	61.4	60.6	35	32
Pioneer variety 26R59	61.2	58.3	31	30
KAS 19X24	60.5	61.1	34	30
Go Wild Feral Forage	60.1	58.1	42	33
VA 17W-74	59.2	61.2	34	27
KWS338	55.7	58.4	34	30
X11-0130-13-2-3	51.6	57.4	35	31
Bess	49.1	60.1	40	30
Average	70.3	59.8	35	30
C.V.	10.9			
LSD (0.10)	12.7			

Location: Christian County.

Lodging: 0%.

Planting date: 10-16-2020, no-till.

Harvest date: 6-16-2021.

**Table 13. 2021 Kentucky Wheat Variety Trial—
North Central Region.**

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
X11-0039-1-17-5***	91.9	57.1	34	37
X11-0120-12-4-3	86.1	58.3	33	38
MI16R0720	85.9	53.8	33	36
Dyna-Gro WX20738	84.9	58.8	35	36
Dyna-Gro WX21741	84.6	59.8	35	36
VA 17W-74	83.9	60.6	34	36
X12-920-39-9-5	83.3	57.7	32	37
KY06C-1178-16-10-3-34	83.2	60.1	36	36
KAS 20X29	82.7	59.9	35	36
USG 3352	81.9	57.6	35	38
GROWMARK FS 616	81.3	58.8	36	37
Dyna-Gro 9120	80.5	60.2	34	36
KAS 20X16	80.5	56.5	33	38
LOCAL LW2169	80.3	58.3	33	37
Liberty 5658	80.0	57.8	34	36
AgriMAXX 492	79.8	59.7	35	36
MI16R0906	79.7	56.0	33	37
GoWheat 2059	79.6	54.6	31	37
AgriMAXX 514	79.6	57.6	33	37
X11-0170-52-3-3	79.3	56.6	34	37
USG 3472	78.9	57.5	33	37
AgriMAXX 454	78.7	58.2	35	37
PROGENY PGX18-7	77.9	60.4	33	37
AgriPro 100	77.8	54.5	32	38
X11-0374-104-13-5**	77.1	57.9	34	35
AgriMAXX 505	76.9	59.0	34	37
USG 3329	76.8	56.9	33	37
GROWMARK FS 601	76.6	55.8	33	36
GROWMARK FS WX21B	76.3	57.4	33	37
Dyna-Gro 9151	76.0	59.2	34	37
Dyna-Gro 9172	75.9	56.8	34	37
KWS340	75.6	60.2	32	38
GROWMARK FS 600	75.6	59.7	34	37
PEMBROKE 2021	75.4	60.0	32	36
AgriMAXX EXP 2009	75.2	55.8	35	36
X12-3010-4-4-1	75.2	59.1	35	38
Dyna-Gro 9941	75.0	55.8	33	36
AgriPro Viper	74.9	62.0	37	36
AgriMAXX 498	74.8	58.7	35	38
Dyna-Gro WX20734	74.7	58.8	33	39
Pioneer variety 26R59	74.6	57.2	31	36
PEMBROKE 2016	74.0	57.6	32	36
X11-0357-24-13-5***	74.0	61.8	33	40
AgriPro SREXP0117	73.8	56.1	31	37

continued

Table 13. (continued)

Variety	Yield (bu/a)	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
Pioneer variety 26R10	73.4	58.9	32	37
AgriPro Richie	73.1	57.5	33	36
KAS ADAMS	73.1	59.2	34	37
AC-2-17-5-5	73.1	59.5	31	38
MI16R0898	73.0	59.4	35	39
KWS338	72.6	59.1	31	37
GROWMARK FS 624	72.2	59.2	35	37
13VTK429-3	72.1	60.5	33	38
Pioneer variety 26R41	71.9	57.7	30	37
LOCAL LW2068	71.8	57.3	32	37
AgriMAXX 513	71.8	59.2	33	36
USG 3118	71.5	59.0	30	36
AgriMAXX 516	71.5	57.9	32	37
Dyna-Gro 9692	71.1	58.7	35	37
Bess	70.7	59.5	37	37
Pioneer variety 26R36	70.3	59.6	34	37
X11-0130-13-2-3	70.3	60.3	34	39
GROWMARK FS 623	70.1	58.4	35	38
GoWheat 2058	69.9	57.8	29	37
USG 3562	69.8	59.8	34	38
AgriMAXX 503	69.5	58.1	35	38
KAS 20X47	69.4	58.0	33	39
AgriPro 576	68.9	58.6	34	40
Go Wheat 4059S	68.8	58.9	32	38
PROGENY #BLAZE	68.7	58.3	33	36
AgriMAXX 485	68.5	58.8	32	38
LOCAL LW2148	67.8	57.9	34	38
AgriPro SREXP0119	67.7	56.9	30	37
AgriPro 547	67.1	59.2	34	36
PROGENY #BULLET	67.0	57.5	34	37
X12-3051-53-17-3	66.8	55.4	31	39
Dyna-Gro 9002	66.8	58.1	34	38
LOCAL LW2848	66.6	57.8	34	37
USG 3316	66.6	58.4	32	38
Truman	65.3	59.0	38	42
KAS 19X24	64.9	58.6	32	37
Pioneer variety 26R45	64.8	55.2	34	37
KWS291	63.5	59.8	32	39
Go Wild Feral Forage	60.1	58.9	39	40
KWS375	59.3	59.3	32	39
Average	74.2	58.3	33	37
C.V.	10.1			
LSD (0.10)	12.4			

Location: Woodford County.

Lodging: 0%.

Planting date: 10-22-2020, conventional tillage.

Harvest date: 6-24-2021.

Table 14. 2021 Kentucky Barley Variety Trial.

Variety	Yield (bu/a) ¹	Test Wt. (lb/bu)	Height (in)	Heading Date > April 1
Thoroughbred	103.4	44.4	36	24
Secretariat	94.6	44.7	30	24
KWS Scala	80.4	42.4	34	26
Hirondella	75.9	42.8	34	28
KWS Somerset	73.3	45.7	35	28
KWS Joyau	70.4	41.3	34	26
Nomini	67.5	40.4	38	22
FLAVIA	64.3	44.3	31	29
KWS Faro	63.3	41.2	35	28
Amaze10 ²	62.3	57.1	38	26
VA168BFHB-268NA	58.9	41.3	39	22
LCS Violetta	57.6	43.0	31	26
LCS Calypso	56.1	42.9	38	28
KWS Donau	47.7	40.9	33	28
VA16M-84	44.7	45.7	41	26
VA15H-73 2R	28.6	40.2	37	26
Avalon	26.5	29.7	34	25
Average	63.3	42.8	35	26

¹ 48-lb standard bushel weight.

² Hullless barley (60-lb std bushel weight).

Location: Caldwell County, (UKREC-Princeton, KY).

Lodging: 0%.

Planting date: 10-17-2020, no-till.

Harvest date: 6-16-2021.

Freeze damage was observed in some barley plots.

Table 15. 2021 Kentucky Cereal Rye Variety Trial.

Variety	Yield (bu/a) ¹	Test Wt. (lb/bu)	Lodging (%)	Height (in)	Heading Date > April 1	Cover Crop ² Canopy (%)
KWS SH5 ³	103.9	53.2	4	53	27	54
KWS SH6 ³	102.9	52.5	1	52	28	57
KWS Serafino ³	92.9	54.2	0	55	36	43
KWS Bono ³	85.4	55.0	0	54	36	35
KWS Receptor ³	83.5	54.0	1	53	35	43
KWS SH3 ³	82.8	53.0	0	47	28	56
KWS SH4 ³	81.7	54.1	1	50	27	59
Aventino	47.0	53.9	0	59	36	37
Aroostook	42.2	52.2	12	58	16	39
Guardian	45.3	52.9	17	67	36	34
Spooner	44.3	55.7	12	67	31	32
Average	73.8	53.7	4	56	31	44

¹ 56-lb standard bushel weight.

² Winter cover crop/grazing biomass estimate (% canopy coverage using Canopeo): measured: 1-22-2021.

³ Hybrid Cereal Rye

Location: Fayette Co. (Lexington, KY)

Planting date: 10-23-2020, conventional tillage

Harvest date: 6-29-2021

Table 16. 2021 Kentucky Triticale Variety Trial.

Variety	Yield (bu/a) ¹	Test Wt. (lb/bu)	Height (in)	Heading Date > May 1	Cover Crop ² Canopy (%)
SS1414	46.0	50.2	44	2	22
Trical Surge	43.5	45.1	52	7	30
Trical Gunner	38.2	45.5	57	9	47
Trical Thor	36.7	47.4	59	10	41
Trical Flex 719	36.4	40.2	63	8	33
LAX Nitrous	35.9	41.6	52	9	21
Trical Exp 20T02	34.6	40.1	47	5	36
SY TF813	33.5	41.0	61	10	12
Trical Gainer 154	32.6	50.1	45	1	11
Arcia	32.6	44.1	44	1	28
Trical Merlin Max	24.3	37.7	46	8	51
Average	35.8	43.9	52	6	30

¹ 60-lb standard bushel weight.

² Winter Cover Crop / Grazing biomass estimate (% Canopy coverage using Canopeo): measured: 1-22-2021.

Location: Fayette Co. (Lexington, KY); Lodging = 0%.

Planting date: 10-23-2020; Conventional tillage; Harvest date: 6-25-2021.

Table 17. 2021 Kentucky Oat Variety Trial.

Variety	Yield (bu/a) ¹	Test Wt. (lb/bu)	Height (in)	Heading Date > May 1
PST WOB 19-9-9	99.1	34.9	39	18
NC12-3578	95.8	38.0	35	9
NC12-3447	95.6	36.0	38	8
Gerard 224	94.1	36.0	35	8
GRAHAM	90.3	35.3	33	9
NC12-3922	85.0	36.8	35	7
Gerard 229	78.2	36.4	33	9
SCLA 0100214	77.2	35.0	31	9
NC17-6440	74.1	36.4	37	9
SCOP 86-4	69.6	36.0	39	8
SS 76-50	67.5	35.2	35	8
NC09-4274N ²	40.2	28.9	35	9
Average	80.5	35.4	35	9

¹ 32-lb standard bushel weight.

² Hullless Oat

Winter Survival: 100%

Location: Fayette County (Lexington, KY).

Lodging: 0%.

Planting date: 10-23-2020, conventional tillage.

Harvest date: 6-25-2021.

Table 18. 2021 Kentucky Spelt Variety Trial.

Variety	Yield (bu/a) ¹			Height (in)	Heading Date > May 1
	2021	2020-21	2019-21	2021	2021
Sungold	79.5	90.1	82.9	47	20
Zollernperle	72.3	74.3	74.8	46	23
Mavrick	60.8	70.6	76.4	50	17
Comet	60.1	66.1	66.6	39	16
Sammy	60.0	67.4	67.1	44	16
Zollernspelz	52.4	64.3	54.6	42	26
Sonic	46.8	67.1	61.6	52	25
Average	61.7	71.4	69.1	46	20

¹ 40-lb standard bushel weight.

Location: Fayette County (Lexington, KY).

Lodging: 0%.

Planting date: 10-23-2020, conventional tillage.

Harvest date: 6-29-2021.

