



# Cereal Rye Variety Trial 2021

## PRELIMINARY RESULTS

TABLE 1. Origin, characteristics and seeding rate of cereal rye varieties trialed in 2021

VARIETY	ORIGIN <sup>a</sup>	YEAR RELEASED	PVP <sup>b</sup>	TYPE <sup>d</sup>	WINTER HARDINESS <sup>e</sup>	PLANT HEIGHT <sup>f</sup>	STRAW STRENGTH <sup>g</sup>	ERGOT RESISTANCE <sup>h</sup>	MATURITY	SEEDING RATE (lb/ac) <sup>i</sup>
Bono	KWS	2013	N/A <sup>c</sup>	Hybrid	2	1	1	1	Late	80
Brasetto	KWS	2007	N/A <sup>c</sup>	Hybrid	3	2	1	1	Late	94
Danko	Danko Hodowla Roślin	1976	None	OPV	1	5	1	3	Medium	95
Elbon	OK	1956	None	OPV	6	8	9	9	Early	55
Hazlet	SeCan	2006	None	OPV	2	7	6	1	Medium	86
ND Dylan	ND	2016	Pending	OPV	2	8	8	2	Medium	69
ND Gardner	ND	2019	Pending	OPV	3	9	9	3	Early	38
Serafino	KWS	2017	N/A <sup>c</sup>	Hybrid	2	2	1	1	Late	69
Spooner	WI	1992	None	OPV	5	9	6	4	Early	66

<sup>a</sup> Origin: OK – Oklahoma State University; ND – North Dakota State University; WI – University of Wisconsin

<sup>b</sup> PVP = Plant Variety Protection. The PVP Act provides a certificate to the developer of a variety granting exclusive rights for reproducing and marketing the seed.

<sup>c</sup> Hybrids from KWS are protected from propagation by license agreements entered into with KWS upon seed purchase.

<sup>d</sup> OPV = Open Pollinated Variety.

<sup>e</sup> 1 = shortest; 9 = tallest. Ratings are 2018-2020 averages from the University of Minnesota.

<sup>f</sup> 1 = most hardy; 9 = least hardy. Ratings are 2018-2020 averages from the University of Minnesota.

<sup>g</sup> 1 = strongest; 9 = weakest. Ratings are 2018-2020 averages from the University of Minnesota.

<sup>h</sup> 1 = most resistant; 9 = least resistant. Ratings are 2018-2020 averages from the University of Minnesota.

<sup>i</sup> Calculated from seed lot weights from each seed source to achieve target population of 23 seeds/ft<sup>2</sup>.

## ISU NORTHERN RESEARCH FARM, KANAWHA

Previous crop: Soybeans  
 Replications: 3  
 Harvested plot size: 5 ft x 60 ft  
 Fertilizer applied: 28 lb N/ac and 147 lb P/ac on November 3, 2020  
 36 lb N/ac and 192 lb Gypsum/ac on April 6, 2021  
 Planting date: October 7, 2020  
 Row spacing: 7.5 in.  
 Seeding rate: 23 seeds/ft<sup>2</sup> – see **Table 1** for pounds per acre of each variety to reach target population  
 Seeding depth: 1.25 in.  
 Harvest date: July 19, 2021

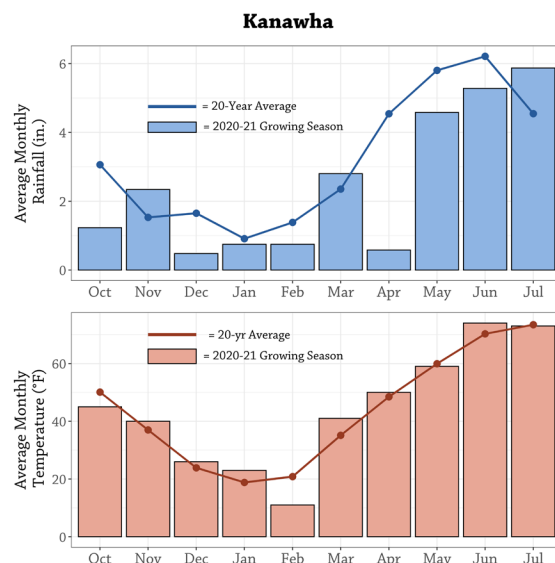


TABLE 2. Results for the 2021 Cereal Rye Variety Trial at Kanawha in north-central Iowa.

VARIETY	YIELD (bu/ac)				YIELD (% of site avg.) 2021	TEST WEIGHT (lb/bu) 2021	PLANT HEIGHT AT HARVEST (in.) 2021	LODGING (%) 2021
	2021	2020	2019	3-yr				
Bono	74	67	77	73	135	55	44	5
Brasetto	76	65	70	70	139	53	45	5
Danko	51	--	--	--	93	53	49	5
Elbon	33	32	25	30	59	53	53	15
Hazlet	62	47	45	51	112	52	50	8
ND Dylan	41	39	40	40	74	52	55	18
ND Gardner	40	--	--	--	74	52	56	15
Serafino	73	64	--	69	133	54	46	5
Spooner	44	38	--	41	80	53	55	10
LSD (90%)	16	--	--	--	--	2	4	5
MEAN	55	--	--	--	--	53	50	10

By response variable, if the difference between any two entries is greater than the least significant difference (LSD) the entries are considered statistically different with 90% confidence.

## ISU NORTHEAST RESEARCH FARM, NASHUA

Previous crop: Soybeans  
 Replications: 3  
 Harvested plot size: 8 ft x 50 ft  
 Fertilizer applied: 60 lb P/ac and 267 lb K/ac on October 21, 2020  
 30 lb N/ac on March 3, 2021  
 Planting date: October 9, 2020 with no-till drill followed by cultipacker  
 Row spacing: 7.5 in.  
 Seeding rate: 23 seeds/ft<sup>2</sup> – see **Table 1** for pounds per acre of each variety to reach target population  
 Seeding depth: 1.25 in.  
 Harvest date: July 13, 2021

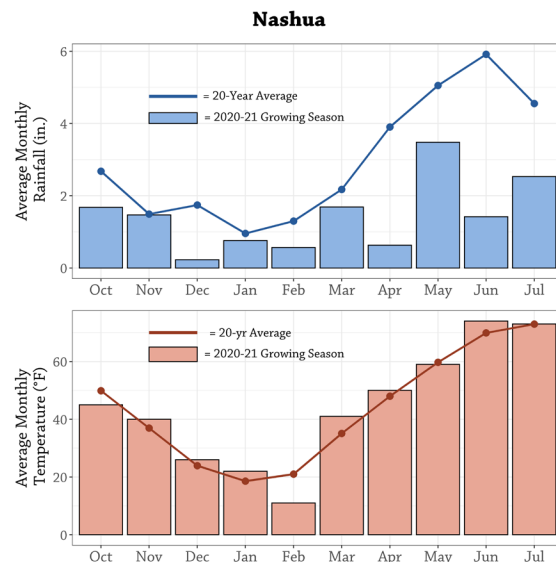


TABLE 3. Results for the 2021 Cereal Rye Variety Trial at Nashua in northeast Iowa.

VARIETY	YIELD (bu/ac)				YIELD (% of site avg.) 2021	TEST WEIGHT (lb/bu) 2021	STRAW YIELD (ton/ac) 2021	PLANT HEIGHT AT HARVEST (in.) 2021
	2021	2020	2019	3-yr				
Bono	111	60	62	78	133	54	2.3	43
Brasetto	115	54	57	75	138	53	2.6	45
Danko	86	--	--	--	103	54	1.9	48
Elbon	60	32	32	41	71	54	2.3	50
Hazlet	79	46	43	56	95	54	2.6	50
ND Dylan	58	44	43	48	70	53	2.8	51
ND Gardner	68	--	--	--	82	53	2.7	51
Serafino	117	59	--	88	140	54	3.0	45
Spooner	56	41	--	49	67	53	2.5	52
LSD (90%)	36	--	--	--	--	1	0.2	6
MEAN	83	--	--	--	--	54	2.5	48

By response variable, if the difference between any two entries is greater than the least significant difference (LSD) the entries are considered statistically different with 90% confidence.

## ISU AG ENGINEERING AND AGRONOMY FARM, BOONE

Previous crop: Soybeans  
 Replications: 3  
 Harvested plot size: 5 ft x 60 ft  
 Fertilizer applied: 30 lb N/ac, 100 lb P/ac, 25 lb S/ac on April 3, 2021  
 Planting date: October 7, 2020  
 Row spacing: 7.5 in.  
 Seeding rate: 23 seeds/ft<sup>2</sup> – see **Table 1** for pounds per acre of each variety to reach target population  
 Seeding depth: 1.25 in.  
 Harvest date: July 22, 2021

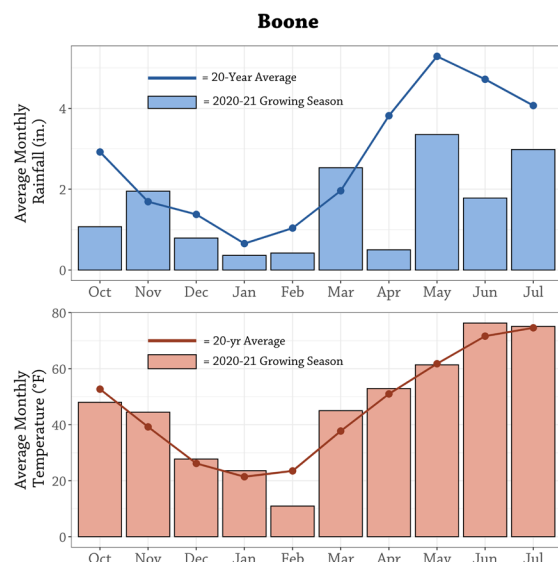


TABLE 4. Results for the 2021 Cereal Rye Variety Trial at Boone in central Iowa.

VARIETY	YIELD (bu/ac)	YIELD (% of site avg.)	TEST WEIGHT (lb/bu)	PLANT HEIGHT AT HARVEST (in.)	LODGING (%)
Bono	82	141	55	41	3
Brasetto	74	128	55	42	3
Danko	63	108	56	48	2
Elbon	32	54	54	53	15
Hazlet	59	102	55	52	3
ND Dylan	42	73	54	54	20
ND Gardner	40	69	54	54	15
Serafino	79	136	56	44	3
Spooner	51	87	55	54	7
LSD(90%)	16	--	1	3	16
MEAN	58	--	55	49	8

By response variable, if the difference between any two entries is greater than the least significant difference (LSD) the entries are considered statistically different with 90% confidence.

## ISU SOUTHWEST RESEARCH FARM, GREENFIELD

Previous crop: Soybeans  
 Replications: 3  
 Harvested plot size: 5 ft x 56 ft  
 Fertilizer applied: 14 lb N/ac on April 7, 2021  
 37 lb N/ac, 175 lb P/ac and 164 lb K/ac on April 15, 2021  
 Planting date: October 7, 2020  
 Row spacing: 7.5 in.  
 Seeding rate: 23 seeds/ft<sup>2</sup> – see **Table 1** for pounds per acre of each variety to reach target population  
 Seeding depth: 1.25 in.  
 Harvest date: July 28, 2021

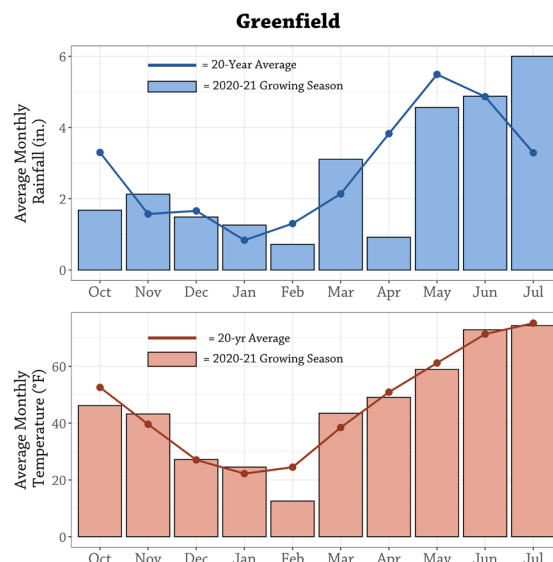


TABLE 5. Results for the 2021 Cereal Rye Variety Trial at Greenfield in southwest Iowa.

VARIETY	YIELD (bu/ac)	YIELD (% of site avg.)	TEST WEIGHT (lb/bu)	PLANT HEIGHT AT HARVEST (in.)	LODGING (%)
Bono	90	139	56	46	5
Brasetto	91	139	55	45	5
Danko	73	112	54	49	7
Elbon	45	69	53	54	65
Hazlet	60	92	52	50	25
ND Dylan	49	76	52	56	87
ND Gardner	41	64	53	55	82
Serafino	88	135	55	47	13
Spooner	49	75	53	55	62
LSD(90%)	19	--	1	5	34
MEAN	65	--	54	51	39

By response variable, if the difference between any two entries is greater than the least significant difference (LSD) the entries are considered statistically different with 90% confidence.



### PFI COOPERATORS' PROGRAM

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If you are interested in conducting an on-farm trial contact Stefan Gailans @ 515-232-5661 or stefan@practicalfarmers.org.