

COLORADO

Trial Highlights -

Location: Great Plains Research Station at Akron, CO

This location is non-irrigated, dry land.
Harvest Date: June 20, 2021

**Due to extreme drought last fall with very little growth potential, the decision was made not to plant in Fall 2021 for 2022 harvest.

2021 Grain Trial - Akron, CO

Variety	Grain Type	Bushel/ Acre 2021
KWS Bono	Hybrid Rye	107.7
KWS Serafino	Hybrid Rye	96.8
KWS Tayo	Hybrid Rye	92.6
Presto	Triticale	83.9
Gainer 154	Triticale	73.8
Langin	Winter Wheat	73.6
Thor	Triticale	72.4
Flex 719	Triticale	60.4
Pika	Triticale	48.8

Trial Highlights -

Location: Aberdeen, ID
Irrigated

This location was planted adjacent to the Winter wheat trials and had the tremendous yield and in most cases out yielded the winter wheats. Elevation: 4405 ft.

Soil Type: DeA Declo loam, 0-2% slopes

Previous Crop: Green Manure Oats

Planting Date: September 27, 2021

Harvest Dates: August 18, 2022

IDAHO

2021-2022 University of Idaho - Grain Trial

Variety	Grain Type	Bushel/ Acre 2021	Bushel/ Acre 2022
KWS Tayo	Hybrid Rye	126.0	202.0
KWS Serafino	Hybrid Rye	135.0	201.0
KWS Receptor	Hybrid Rye	137.0	189.0
KWS Bono	Hybrid Rye	141.0	-
LCS Jet	Winter Wheat	130.0	165.0
SY Ovation	Winter Wheat	147.0	155.0

2021 - 2022 Champaign, IL - KWS Grain Trial

Variety	Grain Type	Bushel/ Acre 2021	Bushel/ Acre 2022
KWS Serafino	Hybrid Rye	112.0	111.0
KWS Receptor	Hybrid Rye	110.0	109.0
KWS Bono	Hybrid Rye	114.0	104.0
KWS Tayo	Hybrid Rye	125.0	91.0
Hazlet	Rye	-	83.0

ILLINOIS

Trial Highlights -

Location: Champaign, IL - KWS Trial Plots

Planting date: October 19, 2021

Harvest date: July 1, 2022

35 N+P, K applied on October 16, 2021, 90lbs of N applied on March 5, 2022, 25lbs of N applied on April 26, 2022.



IOWA

2020 - 2022 Practical Farmers Trials - ISU Farms

Variety	Grain Type	2020 IA Averages	2021 IA Averages	Kanawha 2022	Nashua 2022	Boone 2022	Greenfield 2022	2022 Averages
		Bushel/Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre
KWS Tayo	Hybrid Rye	-	-	133.0	95.0	86.0	116.0	107.50
KWS Bono	Hybrid Rye	63.50	89.25	149.0	84.0	74.0	111.0	104.50
KWS Serafino	Hybrid Rye	50.50	89.25	147.0	85.0	72.0	113.0	104.25
KWS Receptor	Hybrid Rye	-	-	135.0	89.0	82.0	-	102.00
Danko	Rye	-	68.25	100.0	64.0	59.0	83.0	76.50
Elbon	Rye	32.00	42.50	118.0	50.0	50.0	87.0	76.25
Aroostook	Rye	28.00	-	93.0	56.0	57.0	79.0	71.25
Hazlet	Rye	46.50	65.00	91.0	65.0	41.0	63.0	65.00
Gardner	Rye	-	47.25	78.0	57.0	57.0	67.0	64.75
Spooner	Rye	-	50.00	84.0	59.0	46.0	65.0	63.50
Dylan	Rye	41.50	47.50	89.0	62.0	34.0	55.0	60.00

Trial Highlights -

These trials were conducted by the Practical Farmers of Iowa group.

2022: All locations had good weather and yields.

Kanawha location was at the ISU Northern Research Farm.
 The Nashua site was located on the ISU Northeast Research Farm
 ISU Ag Engineering and Agronomy Farm was the home for the Boone, IA location.
 Lastly, the Greenfield, IA location was the Southwest Research Farm,

2020 average includes: Kanawha and Nashua locations.
 2021 average includes: Kanawha, Nashua, Boone and Greenfield locations.

KENTUCKY

2020 - 2022 University of Kentucky - Grain Trial

Variety	Grain Type	Bushel/ Acre	Bushel/ Acre	Bushel/ Acre
		2020	2021	2022
AgriMAXX454	Wheat	12.0	67.0	86.0
KWS Receptor	Hybrid Rye	-	84.0	85.0
KWS Tayo	Hybrid Rye	85.0	-	82.0
KWS Bono	Hybrid Rye	87.0	85.0	76.0
KWS Serafino	Hybrid Rye	85.0	93.0	76.0
Spooner	Rye	-	-	51.0
Aroostook	Rye	-	42.0	-

Trial Highlights -

Location: Lexington, KY - Fayette Co.
 Plant date: October 24, 2021
 Harvest Date: June 27, 2022

Conventional tillage

2022: This location experienced a hard spring freeze that resulted in head damage, yield loss and lodging which lowered the overall yield from previous years.

Applied 0.5 ton/A of lime, and 100# of potash/A, and 150# of diammonium phosphate/A. 30/60 lb split application typically around March 1st/April 1st. Total 90 lb.

MARYLAND

Trial Highlights -

Location: Maryland

This site had severe storms in June and July with 50 mph winds and in two instances had over 2 inches of rain in less than 30 minutes.

2021 University of Maryland - Grain Trial

Variety	Bushel/ Acre
KWS Tayo	125.0
KWS Bono	120.0
KWS Serafino	119.0

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MICHIGAN

2022 Michigan State - Grain Trial

Variety	Mason	SVREC
	Bushel/ Acre	Bushel/ Acre
KWS Receptor	120.0	105.0
KWS Serafino	119.0	115.0
KWS Tayo	117.0	120.0

Trial Highlights -

Location: Michigan

Mason: Planting date: September 19, 2021

Seeding rate: 800,000 seeds per acre

Harvest date: July 10, 2022

Starter Fertilizer: 350# 10-19-18 7.7% S (35#N, 66.5#P, 63#K, 27#S).

Spring Fertilizer: 128.25# Urea, 83.3# AMS (80#N, 20#S)

SVREC: Planting date: September 20, 2021

Harvest date: July 10, 2022

Seeding rate: 800,000 seeds per acre

Starter Fertilizer: 250# 13-13-21, 5%S, 1%B, 5%Mn, 9%Zn (32.5#N, 32.5#P, 52.5#K, 12.5#B, 2.5#B, 12.5# Mn, 2.25#Zn.

Spring Fertilizer: 157.6# Urea, 83.3# AMS (90#N, 20#S)

MINNESOTA

2020 - 2022 University of MN - Grain Trial

Variety	Grain Type	2020 MN	2021 MN	Becker,	Crookston,	LeCenter,	Roseau,	2022 Average
		Averages	Averages	MN 2022	MN 2022	MN 2022	MN 2022	
		Bushel/ Acre	Bushel/ Acre	Bushel/ Acre	Bushel/ Acre	Bushel/ Acre	Bushel/Acre	Bushel/ Acre
KWS Serafino	Hybrid Rye	95.0	123.4	109.0	112.0	121.0	128.0	117.5
KWS Tayo	Hybrid Rye	93.0	117.6	125.0	85.0	136.0	121.0	116.8
KWS Receptor	Hybrid Rye	-	127.8	100.0	90.0	130.0	130.0	112.5
Hazlet	Rye	52.75	90.6	77.0	84.0	85.0	103.0	87.3
Dylan	Rye	56.75	83.4	66.0	96.0	75.0	94.0	82.8
Danko	Rye	57.75	93.0	90.0	61.0	88.0	87.0	81.5
Spooner	Rye	50.25	69.0	76.0	65.0	82.0	96.0	79.8
Gardner	Rye	54.75	71.8	74.0	66.0	77.0	88.0	76.3
Rymin	Rye	46.75	83.0	61.0	58.0	79.0	85.0	70.8
Elbon	Rye	41.75	56.2	59.0	58.0	69.0	62.0	62.0

Trial Highlights -

2020 average includes these locations: Crookston, Lamberton, LeCenter, Roseau.

2021 average includes these locations: Becker, Crookston, Lamberton, LeCenter, Roseau.

NEBRASKA

2021 - 2022 University of NE - Grain Trial

Variety	Grain Type	2021 NE Average	Lincoln, NE 2022
		Bushel/Acre	Bushel/Acre
KWS Receptor	Hybrid Rye	129.3	130.0
KWS Serafino	Hybrid Rye	124.2	129.0
KWS Tayo	Hybrid Rye	126.8	110.0
KWS Bono	Hybrid Rye	122.3	-
Hazlet	Rye	87.9	-
Ruth	Wheat	62.5	83.0

Trial Highlights -

Location: Lincoln, NE

Planting Date: September 24, 2021

Harvest Date: July 5, 2022

Fertility: 80 lbs/a N using liquid 32% preplant; 80 lbs/a N in mid-April

Herbicide/Fungicides: 2 pts Prowl H2O and 1 pt 2,4-D in mid-April

Soil Type: Kennebec silt loam

Planting Info: Drilled at 1.5" deep into disked oat stubble with double disk no-till drill on 9" centers

Overall good yields but moderate test weights.

2021 average includes Sidney and Lincoln locations

NEW YORK

2020 - 2022 Cornell - Grain Trial

Variety	Grain Type	2020 NY Averages	2021 NY Averages	Caldwell 2022	Snyder 2022	2022 Average
		Bushel/Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre
KWS Receptor	Hybrid Rye	-	85.0	149.0	115.0	132.0
KWS Tayo	Hybrid Rye	109.8	88.5	151.0	103.0	127.0
KWS Serafino	Hybrid Rye	99.8	84.3	139.0	107.0	123.0
Danko	Rye	73.3	60.8	109.0	90.0	99.5
Hazlet	Rye	65.0	50.5	107.0	82.0	94.5
Erie	Wheat	70.8	48.3	48.0	73.0	60.5

Trial Highlights -

Pre-Plant- 200 lbs of 10:10:10 to give 20 lbs N. Top Dress UAN30 w/2.5% S applied at a rate to give 60lbs N and 5.5lbs S per acre. Some water and winter injury on plots.

Caldwell: Plant date of Oct. 1, 2021, top dress on April 14, 2022, Herbicide applied on May 5, 2022, Harvested on July 19, 2022.

Snyder: Plant date on Oct. 8, 2021, top dress on April 14, 2022, herbicide applied on May 5, 2022, Harvested on July 20, 2022.

2020 average includes the locations: Ketola, Monroe, Seneca, and Snyder.

2021 averages includes the locations: Ketola, Monroe, Seneca, and Snyder.

NORTH CAROLINA

Trial Highlights -

Location: North Carolina

Piedmont: Grain production at this location was excellent across the board with yields above 80 bushels for all varieties.

White Hat: Serafino and Tayo did not get adequate vernalization temperatures in 2022 due to a mild winter. Tayo harvest moisture was still high time of harvest from delayed maturity due to the vernalization issue which impacted yield negatively.

2022 North Carolina - Grain Trial

Variety	Piedmont	White Hat
	Bushel/Acre	Bushel/Acre
KWS Serafino	93.0	60.0
KWS Tayo	95.0	47.0

NORTH DAKOTA

2022 North Dakota University - Grain Trial

Variety	Grain Type	Hettinger	Langdon	Minot	Average
		Bushel/Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre
KWS Receptor	Hybrid Rye	123.0	129.0	114.0	122.0
KWS Tayo	Hybrid Rye	128.0	129.0	106.0	121.0
KWS Serafino	Hybrid Rye	117.0	123.0	101.0	113.7
Hazlet	Rye	98.0	107.0	88.0	97.7
Danko	Rye	90.0	98.0	78.0	88.7
Dylan	Rye	82.0	93.0	86.0	87.0
Rymin	Rye	79.0	89.0	71.0	79.7
Spooner	Rye	76.0	70.0	72.0	72.7
Aroostook	Rye	66.0	69.0	62.0	65.7

Trial Highlights -

Location: North Dakota

Minot, Langdon and Hettinger had very good growing conditions this year showing the great potential in these areas of North Dakota

Minot - Planting Date September 14, 2021
Harvest date August 8, 2022
Soil test: 107 lbs/A N (0-24"), 19 ppm P, 430 ppm K, 24.8 lbs/A Cl, 6.0 pH, 2.6% OM.
Applied 50 lbs/A 11-52-0 in-furrow and 100 lbs/A 46-0-0 in a mid-row band at planting.

Langdon: Planting Date: September 10, 2021
Harvest Date: August 11, 2022
Previous Crop: Wheat
Fall soil test 2021- NPK 65-24-335
Broadcast 60 lbs/a N as Urea – Oct 21, 2021
Broadcast 60 lbs/a N as Urea – May 26, 2022

Hettinger: Planting Date: September 14, 2021
Harvest Date: August 2, 2022
Previous Crop: Cover Crop Mix
30 lb/ac 11-52-0 with seed at planting.
200 lb/ac (92 lb/ac N) urea applied in early April.

PENNSYLVANIA

2022 PA - Grain Trial

Variety	Grain Type	Bushel/Acre
KWS Receptor	Hybrid Rye	103.0
KWS Tayo	Hybrid Rye	102.0
KWS Serafino	Hybrid Rye	97.0
Surge	Triticale	79.0
Gunner	Triticale	58.0
Aroostook	Rye	57.0
Thor	Triticale	54.0

Trial Highlights -

Location: Rock Spring, PA

2022 was the first year planting a combination of species. Centre County hybrid rye/triticale/rye tillered very well in the fall and early winter. The winter was mild and there were very little spring green up impacts from freezing. There was timely rainfall in the spring. Weed pressure was very minimal. There was little to no lodging in plots. Overall, for the first year of this trial, the results were very good and provides a good comparison between the species.

Planting Date: October 15, 2021. Harvested: July 15, 2022. Fall fertilizer - 200 lbs 10-20-20 on September 30, 2022. Spring N fertilizer: 30% UAN, 60lbs/ac + stabilizer on April 2, 2022.

SOUTH DAKOTA

2020-2022 South Dakota State University Grain Trial - Southeast Research Farm

Variety	Grain Type	Average SD 2020	Average SD 2021	Artesian 2022	Beresford 2022	Tyndall 2022	2022 Average
		Bushel/ Acre	Bushel/ Acre	Bushel/ Acre	Bushel/Acre	Bushel/Acre	Bushel/Acre
KWS Receptor	Hybrid Rye	-	54.8	74.0	83.0	83.0	80.0
KWS Bono	Hybrid Rye	89.0	58.2	71.0	77.0	83.0	77.0
KWS Tayo	Hybrid Rye	125.0	58.4	69.0	80.0	78.0	75.7
KWS Serafino	Hybrid Rye	113.0	53.7	63.0	75.0	73.0	70.3
Hazlet	Rye	77.0	43.8	44.0	61.0	53.0	52.7
Elbon	Rye	50.0	33.5	50.0	54.0	46.0	50.0
Rymin	Rye	68.0	39.9	40.0	52.0	50.0	47.3
Overland	Winter Wheat	-	27.4	52.0	49.0	34.0	45.0

Trial Highlights -

2020 Average is from Beresford.

2021 Average is from the following locations: Artesian, Kimball, Beresford Site 1 & 2, Tyndall and Lennox.

Inputs: N = 110 lb/ac; S = 15 lb/ac; P&K as per soil test;

Hybrid lines were seeded at 800,000 seeds/ac and OP rye lines and Triticale at 1.2 million seeds/ac. Seeding Depth = 1" ;

Yields were lower than expected because of the very hot and dry weather that occurred from the middle of June and lasted until the end of July with little or no precipitation.

All About Hybrid Rye



The 2022 crop year highlighted the strengths of KWS Hybrid Rye:

- Very high yield potential
- Very strong winter hardiness and standability
- Lower crop inputs needed
 - Less fertilizer due to better nutrient efficiency
 - Less or no herbicide due to strong competition to weeds (allelopathy)
 - Less or no fungicide due to very strong disease tolerance
- Improved drought tolerance (25% less water use than wheat or barley)
- Crop rotation benefits, increasing yields in subsequent corn & soybeans
- Very low ergot- PollenPLUS® technology

WISCONSIN

Trial Highlights -

Location: Arlington, WI
Plant date: September 28, 2021
Harvest Date: July 30, 2022

Excellent growing conditions. Nitrogen
30 lbs on September 29, 2021, 55 lbs at
spring green up.

2020 - 2022 University of Wisconsin - Grain Trial

Variety	Grain Type	Bushel/ Acre	Bushel/ Acre	Bushel/ Acre	Average
		2020	2021	2022	Bushel/Acre
KWS Tayo	Hybrid Rye	132.0	118.6	110.0	120.2
KWS Serafino	Hybrid Rye	126.0	120.9	106.0	117.6
KWS Bono	Hybrid Rye	126.0	115.1	109.0	116.7
KWS Receptor	Hybrid Rye	-	114.0	110.0	112.0
P25R74	WWheat	98.0	106.7	96.0	100.2
Hazlet	Rye	79.0	-	83.0	81.0
Spooner	Rye	66.0	73.5	-	69.8

Want to learn more about Hybrid Rye?

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