



2020 South Dakota Oat Variety Trial Results Volga

Jonathan Kleinjan | SDSU Extension Crop Production Associate
Kevin Kirby | Agricultural Research Manager
Shawn Hawks | Agricultural Research Manager

Cooperator: SDSU Volga Research Farm, Jack Ingemansen, manager
Location: 44.302299°, -96.921058°
Soil Type: Kranzburg-Brookings silty clay loams, 0-2% slopes
Previous crop: soybeans
Tillage: minimum-till
Row spacing: 8"
Seeding Rate: 1.2 million PLS/acre
Fertilizer:
 -Starter: 80 lb/acre 30-10-10
 -Other: none
Herbicide:
 -Burndown: none
 -Post: 1.5 pt/acre Bronate Advanced
Fungicide: 7 oz/acre Stratego applied at Feekes 8.0 (flag leaf emerged) on the fungicide-treated plots
Date seeded: 4/21/2020
Date harvested: 7/30/2020
Notes: Trial was affected by crown rust and heat during flowering. Response to fungicide is reported in Table 2.

Table 1. 2020 oat variety performance trial results (average of 4 replications) at Volga, SD. Entries are sorted by overall 3-year yield. Varieties yielding in the top 1/3 of the trial are shaded light blue.

Variety	Height (in)	Lodging* (1-5)	Test Wt (lbs)	2018 (bu/a)	2019 (bu/a)	2020 (bu/a)	2-year (bu/a)	3-year (bu/a)
Warrior	35.0	1.0	31.6	67.8	61.6	108.7	85.2	79.4
Rushmore	36.3	2.0	33.2	64.4	56.5	115.8	86.2	78.9
Deon	37.8	3.5	30.9	74.0	48.1	93.9	71.0	72.0
CS Camden	34.3	2.8	25.7	79.7	38.0	93.8	65.9	70.5
Saddle	33.0	1.0	31.0	53.7	38.9	102.0	70.5	64.9
Goliath	47.5	5.0	29.5	70.2	23.8	70.8	47.3	54.9
Antigo	33.5	2.3	33.6	45.4	35.4	82.1	58.7	54.3
Natty	35.5	5.0	30.2	49.8	21.6	68.5	45.1	46.6
Hayden	35.8	5.0	26.5	52.5	17.5	66.6	42.1	45.5
Shelby427	37.0	4.5	30.7	45.6	28.6	61.3	44.9	45.2
MN Pearl	39.3	3.5	30.2	-	49.1	99.3	74.2	-
Esker2020	34.8	2.3	29.5	-	-	98.9	-	-
GM2015Y3232	36.3	2.5	30.9	-	-	97.8	-	-
Trial Average#	37.5	2.7	31.5	60.8	39.5	99.2	62.8	61.2
LSD(0.05)†	2.0	0.8	0.9	6.8	6.8	7.9	-	-
C.V.%‡	-	-	2.0	7.9	10.6	5.7	-	-

* Lodging score: 1, perfectly standing; to 5, completely flat.

Trial averages may include values from experimental lines that are not reported.

† Value required (\geq LSD) to determine if varieties are significantly different from one another.

‡ C.V. is a measure of variability or experimental error, 15% or less is considered acceptable.

Table 2. 2020 oat variety response to fungicide (average of 4 replications) at Volga, SD.
Entries are sorted by 2020 yield. Varieties yielding in the top 1/3 of the trial are shaded light blue.

Variety	Height (in)	Lodging* (1-5)	Test Wt (lbs)	Yield w/fung. (bu/a)	Yield no fung. (bu/a)	Response to fung. (bu/a)
Rushmore	36.3	1.3	34.8	134.8	115.8	19.0
Deon	37.8	1.5	32.9	126.1	93.9	32.1
MN Pearl	39.3	1.5	32.9	125.6	99.3	26.3
Goliath	47.5	1.8	34.4	122.2	70.8	51.4
CS Camden	34.3	1.3	27.9	118.9	93.8	25.1
Hayden	35.8	1.3	33.4	118.1	66.6	51.5
Warrior	35.0	1.0	31.7	117.0	108.7	8.3
Esker2020	34.8	1.0	30.3	115.2	98.9	16.3
Saddle	33.0	1.0	31.9	111.1	102.0	9.1
Shelby427	37.0	1.0	33.4	110.1	61.3	48.8
Natty	35.5	2.3	33.2	109.4	68.5	40.9
GM2015Y3232	36.3	1.0	30.6	106.8	97.8	9.0
Antigo	33.5	1.3	34.8	103.0	82.1	20.9
Trial Average#	37.5	1.3	33.2	120.2	99.2	27.6
LSD(0.05)†	2.0	0.5	0.9	6.2	7.9	-
C.V.%‡	3.8	-	1.9	3.6	5.7	-

* Lodging score: 1, perfectly standing; to 5, completely flat.

Trial averages may include values from experimental lines that are not reported.

† Value required (\geq LSD) to determine if varieties are significantly different from one another.

‡ C.V. is a measure of variability or experimental error, 15% or less is considered acceptable.