



2022 South Dakota Oat Variety Trial Results Regional Summaries

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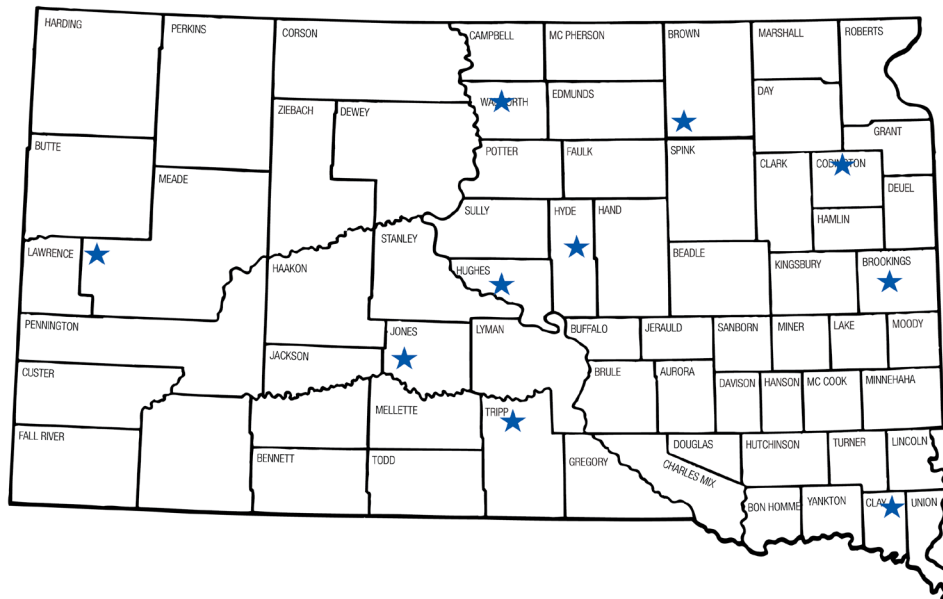
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Eastern trial locations: Beresford, South Shore, Volga

Central trial locations: Northville, Miller, Pierre, Selby

Western trial locations: Okaton, Sturgis (no data), Winner

Individual trial location results can be accessed online at: <https://extension.sdstate.edu/oat-variety-trial-results>



2022 South Dakota Oat Variety Trial Results Variety List

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Table 1. List of oat varieties tested in 2022 along with origin, agronomic, and grain quality characteristics.

Variety	Testing and Origin		Agronomic Characteristics			Grain Quality§			Disease Ratings¶			
	Years tested in SD trials	Origin†-Year	Relative Heading (days)	Height (inches)	2022 Lodging Score‡	Grain Color	2022 Test Wt. (lb/bu)	2022 Protein (%)	Smut	Stem Rust	Crown Rust	BYDV
CS Camden	5+	MS-16	7	34	1.9	White	33.1	14.1	MR	(S)*	5	4
Deon	5+	MN-13	6	37	2.1	Yellow	35.7	15.1	R	MR	5	4
Esker2020	3	WI-19	2	34	2.4	Yellow	32.9	14.0	-	-	4	4
Goliath	5+	SD-12	7	41	2.7	White	35.9	14.6	MR	R	6	4
Hayden	5+	SD-14	5	36	2.3	White	35.8	14.4	R	MS	7	4
MN Pearl	4	MN-18	6	36	2.4	White	34.3	13.3	R	-	7	4
Reins	2	IL-15	1	28	1.5	White	36.2	15.1	(R)	-	6	-
Rushmore	5+	SD-19	3	35	2.2	White	36.1	14.6	R	-	7	3
Saddle	5+	SD-17	June 19	32	1.8	White	35.2	14.7	R	S	7	3
SD- <i>Buffalo</i>	5+	SD-21	3	36	2.1	White	35.5	14.4	R	-	6	-
Shelby427	5+	SD-09	2	36	2.0	White	36.7	15.0	R	MS	6	3
Warrior	5+	SD-18	4	33	1.7	White	35.4	14.5	R	-	5	4
Trial Average	-	-	-	-	2.1	-	35.2	14.5	-	-	-	-

† IL, Illinois; MN, Minnesota; MS, Meridian Seeds; SD, South Dakota; WI, Wisconsin; - (Year of Release)
‡ Lodging scores: 1, standing perfectly to 5, completely flat
§ Grain protein content and test weight statewide averages
¶ Disease ratings: 1, most resistant to 9, most susceptible (or traditional ratings MR, MS, etc.)
Parenthesis and italics (X) denote ratings provided by the entity submitting the variety; NR = not reported



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2022 South Dakota Oat Variety Trial Results Quality Characteristics

Table 2. Grain quality and milling characteristics.

Variety	% Plump	% Mid	% Thin	1000 Kernel Weight (g)	Groat %	NIR groat protein (%)	NIR groat beta- glucan (%)	NIR groat fat (%)
CS Camden	42.4	51.3	6.2	35.1	71.2	18.5	5.1	4.9
Deon	26.2	63.1	10.5	35.6	72.6	17.7	4.7	5.1
Esker2020	27.1	60.4	12.5	32.0	71.2	18.4	5.0	3.9
Goliath	29.2	58.9	11.7	35.0	73.3	16.9	4.7	4.8
Hayden	39.1	52.5	8.4	36.1	71.6	16.9	4.6	5.6
MN Pearl	43.6	47.7	8.6	34.5	74.4	15.8	4.5	5.5
Reins	39.3	53.1	7.4	33.0	73.8	18.7	4.7	4.6
Rushmore	42.2	50.9	6.9	33.3	73.0	18.6	4.5	4.7
Saddle	18.6	71.1	10.3	32.0	73.1	17.3	4.3	4.2
SD-Buffalo	36.7	56.7	6.4	36.9	72.1	18.0	4.5	5.4
Shelby427	36.3	56.1	7.6	33.1	73.7	17.9	4.5	5.2
Warrior	34.6	58.6	6.7	33.6	73.5	18.1	4.8	4.8
Trial Average	34.6	56.7	8.6	34.2	72.8	17.7	4.7	4.9
LSD(0.05)†	9.2	7.8	2.7	2.3	2.1	0.7	0.2	0.2
C.V.%‡	25.1	15.9	37.4	7.2	3.1	4.0	4.8	5.1

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

‡ C.V. is a measure of variability or experimental error



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2022 South Dakota Oat Variety Trial Results Eastern Summary

Table 3. 2020-2022 oat variety performance trial results for testing sites in eastern South Dakota. Varieties ranking in the top 1/3 of each trial category are bolded and shaded light blue.

Variety	2020 Yield (bu/a)	2021 Yield (bu/a)	2022		2-year		3-year	
			Yield (bu/a)	Test Wt (lbs)	Yield (bu/a)	Test Wt (lbs)	Yield (bu/a)	Test Wt (lbs)
Deon	118.5	86.7	104.9	33.9	94.0	33.0	101.0	33.2
CS Camden	110.1	91.8	101.6	30.5	95.7	29.8	99.8	29.5
SD-Buffalo	121.8	84.0	100.7	33.5	90.7	32.3	99.5	32.5
Warrior	112.0	86.1	100.1	33.1	91.7	32.3	97.5	32.3
MN Pearl	121.2	80.5	93.9	32.1	85.9	33.0	96.0	33.1
Rushmore	121.0	77.2	90.5	34.9	82.5	34.5	93.5	34.7
Goliath	108.4	81.6	95.4	33.5	87.2	33.4	93.2	33.4
Esker2020	108.2	78.4	98.7	32.1	86.5	31.4	92.7	31.3
Hayden	99.3	85.1	93.9	33.5	88.6	32.7	91.7	32.6
Shelby427	87.9	83.0	92.7	35.0	86.9	34.2	87.2	34.2
Saddle	102.7	69.6	75.9	33.6	72.2	31.8	80.9	31.8
Reins	-	80.4	84.4	34.7	82.0	34.7	-	-
Trial Average#	113.0	84.5	99.2	33.6	90.1	32.9	94.2	32.8
LSD(0.05)†	14.3	8.0	3.1	0.5	7.2	1.4	7.9	1.1
C.V.%‡	5.3	5.1	4.4	-	4.8	-	5.3	-

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.



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2022 South Dakota Oat Variety Trial Results Central Summary

Table 4. 2020-2022 oat variety performance trial results for testing sites in central South Dakota. Varieties ranking in the top 1/3 of each trial category are bolded and shaded light blue.

Variety	2020 Yield (bu/a)	2021 Yield (bu/a)	2022		2-year		3-year	
			Yield (bu/a)	Test Wt (lbs)	Yield (bu/a)	Test Wt (lbs)	Yield (bu/a)	Test Wt (lbs)
CS Camden	155.8	107.2	118.7	33.6	114.8	32.9	131.2	32.3
Hayden	151.1	71.5	124.1	37.7	106.6	35.0	124.4	35.4
Deon	147.8	86.6	119.5	36.8	108.5	35.4	124.2	35.1
SD-Buffalo	149.3	74.4	124.0	37.1	107.5	35.3	124.2	35.5
Esker2020	143.1	89.3	113.7	32.7	105.6	32.0	120.6	32.1
MN Pearl	146.7	78.6	110.9	35.4	100.1	34.5	118.8	34.6
Warrior	133.2	84.3	119.2	36.2	107.5	34.3	117.8	34.2
Goliath	138.6	76.6	110.3	37.2	99.0	35.8	114.9	35.6
Rushmore	143.4	76.7	104.2	37.4	95.0	36.0	114.4	36.1
Shelby427	127.6	83.9	112.2	37.6	102.8	35.9	112.7	35.8
Saddle	130.0	48.2	103.6	35.7	85.1	33.6	103.1	33.8
Reins	-	89.1	107.7	36.8	101.5	36.2	-	-
Trial Average#	142.7	81.2	117.2	36.4	104.9	35.0	118.7	34.8
LSD(0.05)†	3.9	6.0	4.7	0.5	12.8	1.8	10.1	1.1
C.V.%‡	4.0	7.5	5.8	-	6.1	-	5.4	-

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.

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2022 South Dakota Oat Variety Trial Results Western Summary

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UNIVERSITY EXTENSION**

Table 5. 2020-2022 oat variety performance trial results for testing sites in western South Dakota. Varieties ranking in the top 1/3 of each trial category are bolded and shaded light blue.

Variety	2020 Yield (bu/a)	2021 Yield (bu/a)	2022		2-year		3-year	
			Yield (bu/a)	Test Wt (lbs)	Yield (bu/a)	Test Wt (lbs)	Yield (bu/a)	Test Wt (lbs)
Esker2020	92.7	57.5	84.7	34.0	71.1	31.9	80.4	32.2
Hayden	92.8	50.6	79.7	36.1	65.1	33.3	77.0	34.3
Shelby427	92.0	53.9	69.1	37.5	61.5	34.7	74.5	35.1
SD-Buffalo	83.1	58.1	73.8	36.0	65.9	32.6	73.3	33.7
CS Camden	84.3	56.9	72.4	35.3	64.6	31.8	73.0	31.6
Rushmore	90.8	53.8	61.7	35.9	57.7	33.3	71.9	34.4
MN Pearl	95.4	42.5	63.6	35.5	53.0	33.4	71.2	34.2
Goliath	89.8	52.7	61.4	37.0	57.1	34.8	71.1	35.0
Warrior	82.2	39.5	75.4	37.0	57.4	33.8	68.1	34.1
Deon	88.9	46.3	55.3	36.3	50.8	34.9	67.1	35.0
Saddle	76.8	49.3	63.5	36.4	56.4	33.2	65.1	33.9
Reins	-	45.7	72.1	36.9	58.9	35.9	-	-
Trial Average#	88.3	51.5	69.7	36.2	60.8	33.9	72.2	34.1
LSD(0.05)†	2.7	4.3	9	1.2	13.2	2.8	10.2	1.7
C.V.%‡	14.7	8.5	13.1	-	12.0	4.4	14.3	-

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

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