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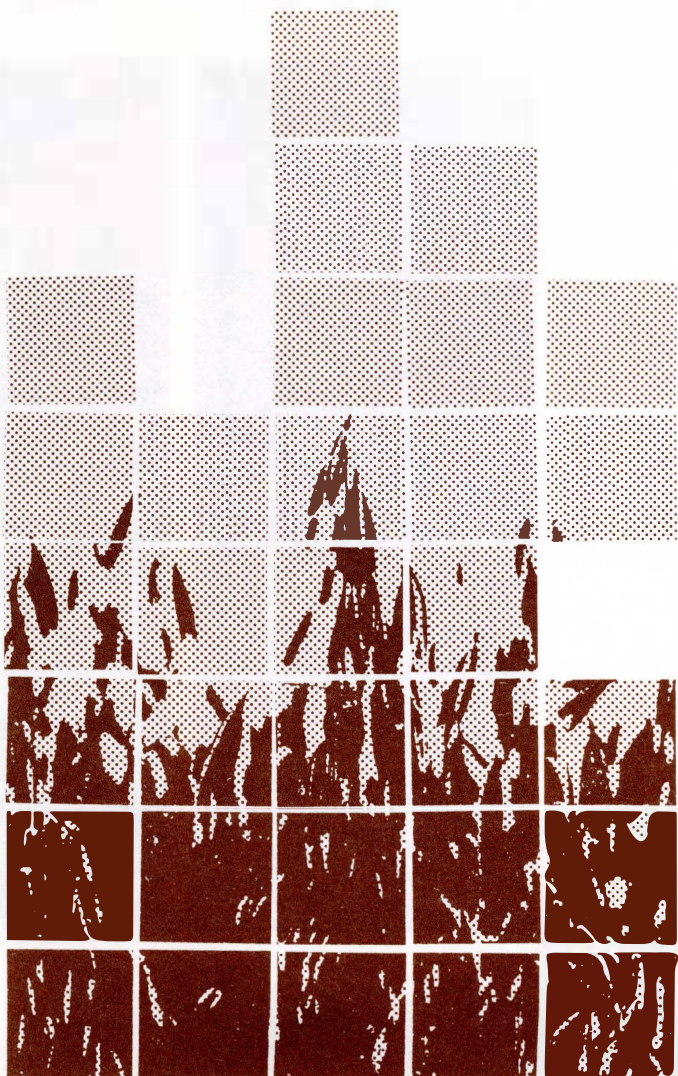
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A new oat: Sandy

Agricultural Experiment Station
South Dakota State University
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A new oat: Sandy

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Sandy is a tall, late-season, white (light cream-colored) oat developed by the South Dakota Agricultural Experiment Station and released in March 1986. The variety has an excellent yield potential, a very good test weight record, and good agronomic characteristics.

It was named in honor of Elmer (Sandy) Sanderson, who served with distinction for many years as the Extension agronomist in eastern South Dakota.

Origin

Sandy was obtained from a single second-generation panicle from a Dal/Nodaway 70//Moore cross. The final cross was made in 1976, and the resulting bulk population was maintained until 1978 when second-generation panicles were selected. The final selection was made on a third-generation head row which was later designated and tested as SD 790188.

The Crop Performance Testing Project grew Sandy at all South Dakota testing sites in 1984 and 1985. At the same time, it was also grown in the Regional Uniform Midseason Oat Performance Nursery, which is coordinated by the USDA.

Agronomic characteristics

Sandy is a tall, late-season variety. Compared to Moore, it is slightly taller in height and equal to or slightly later in maturity. Sandy is about 4 to 5 days later than Burnett.

Although quite tall, Sandy has very good straw strength, having

lodging scores superior to Moore.

The kernels are a light cream color and are fluorescent under ultraviolet light. Breeder seed contains about 0.15% non-fluorescent variants, however, usually yellow in color. Panicles having some kernels with awns are very common. Most of the awns are small, but some are mid sized. The base of some awns is dark.

In 1984 and 1985, the milling yields of Sandy were 147 and 159 lb, respectively. (Milling yield is the pounds of raw oats needed to produce 100 lb of oat groats. Milling yields of 160 lb or less are considered very good in the milling industry.) Sandy's milling yields were similar to

Lancer, Nodaway 70, and Kelly. Both groat protein and oil are in the medium range.

Crown rust resistance of Sandy is good, being similar to Dal. Seedling tests show Sandy to be susceptible to races 264A and 264B of crown (leaf) rust. Its stem rust resistance is equal to other varieties currently grown in this region. Sandy is susceptible to barley yellow dwarf (red leaf).

Smut has never been observed in Sandy in South Dakota, although regional tests indicate it may be susceptible to certain races.

Performance data

Yield and test weight data in Tables 1 and 2 indicate Sandy performs better in the more northern and the higher rainfall areas of the state. It appears, therefore, that Sandy is best adapted to the northeastern quarter of the state.

In areas where it is best adapted, it outyields Burnett and Nodaway 70 and is very competitive in yields with Moore and Lyon. The test weight of Sandy is usually higher than Moore but lower than Burnett and Nodaway 70 unless crown rust is prevalent. In that case,

Table 1. Two-year average yield and test weight comparisons (1984-85) for five eastern South Dakota locations.

Variety	Brookings		Watertown		Beresford		Highmore		Selby	
	bu	tw	bu	tw	bu	tw	bu	tw	bu	tw
Sandy	110	36.4	114	36.6	86	35.1	85	38.3	93	36.4
Burnett	75	32.0	118	36.9	76	35.7	83	38.4	92	36.6
Lancer	91	33.2	127	35.9	82	34.9	86	36.8	83	36.0
Lyon	93	34.1	116	36.0	78	34.5	78	35.9	87	34.7
Moore	107	35.3	116	36.1	92	35.4	84	37.1	90	35.4
Nodaway 70	75	32.4	93	37.6	67	36.6	80	38.3	86	37.1

Table 2. Two-year yield and test weight comparisons (1984-85) for four western South Dakota locations.

Variety	Wall		Bison		Martin		Ralph	
	bu	tw	bu	tw	bu	tw	bu	tw
Sandy	74	37.4	51	36.5	36	36.3	49	36.1
Burnett	74	36.6	53	39.0	40	36.5	51	37.9
Lancer	81	36.4	57	38.8	43	36.0	48	36.9
Lyon	74	34.7	54	34.6	47	33.6	46	34.0
Moore	81	34.4	57	35.6	48	35.1	52	36.7
Nodaway 70	85	37.8	63	38.8	43	37.1	42	39.8

the test weight of Sandy is superior to Burnett and Nodaway 70.

Sandy is not as well adapted to the more arid regions of South Dakota as some other varieties. In these areas Sandy does not exhibit a yield advantage over Burnett and Nodaway 70.

On a state-wide average (Table 4), Sandy has been intermediate in yield to the higher yielder Moore and the lower yielders Burnett and Nodaway 70. In addition, the test weight of Sandy has been equal to Burnett, higher than Moore, and slightly lower than Nodaway 70. The protein content of Sandy is similar to that of Moore. Both

Table 3. Two-year state-wide performance comparison (1984-85).

<i>Variety</i>	<i>Yield (bu/A)</i>	<i>TW (lb/bu)</i>	<i>Crown rust** (%)</i>	<i>Groat protein (%)</i>	<i>Heading date (June)</i>	<i>Height (in)</i>
	(9)*	(9)	(1)	(9)	(1)	(9)
Sandy	78	36.6	2	15.6	25	45
Burnett	74	36.6	50	15.3	21	42
Lancer	74	35.9	45	16.5	22	39
Lyon	75	34.7	19	17.1	23	44
Moore	81	35.7	15	15.9	24	44
Nodaway 70	70	37.3	66	15.7	18	41

* Number of locations averaged.

** Only Brookings location.

Table 4. Agronomic characteristics from 1984-85 Uniform Midseason Oat Trials.

<i>Variety</i>	<i>Yield (bu)</i>	<i>Test weight (lb/bu)</i>	<i>Heading date in June</i>	<i>Crown rust (%)</i>	<i>Plant height (in)</i>
	(4)*	(4)	(1)	(1)	(2)

Sandy and Moore are higher in protein content than Burnett.

Sandy	124	38.4	26	5	46
Ogle	111	33.1	22	29	37
Dal	111	37.2	27	9	42

*Number of locations averaged.

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