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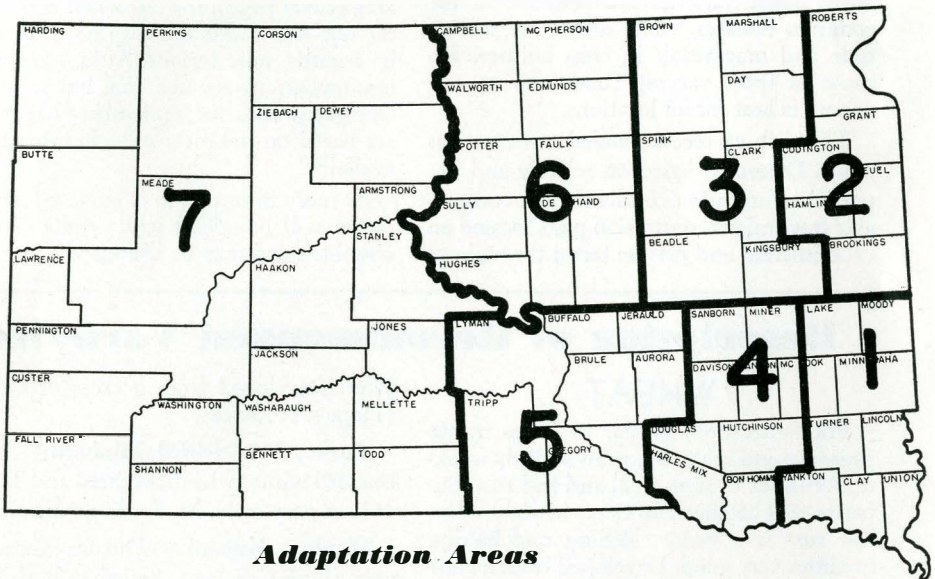
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South Dakota Crop Varieties

Recommendations AND Descriptions



SOUTH DAKOTA STATE COLLEGE
AGRICULTURAL EXTENSION SERVICE
United States Department of Agriculture

John V. Hepler, *Director*. In furtherance Acts of Congress May 8, June 30, 1914.

South Dakota Crop Varieties

Recommendations and Descriptions

By MEMBERS OF AGRONOMY STAFF*

The yield obtained from any variety depends upon its adaptability to local conditions, soil type and the environment under which it is grown. All varieties recommended in this publication have some merit, but they also have some weaknesses which show up more some years than others. In some years, only early maturing varieties produce a crop, while in other years the late varieties give the highest yield. Some varieties are resistant to the common diseases, while others are susceptible and may result in crop failures. Because of these varying conditions no one variety is best for all locations.

This list of recommended varieties for South Dakota is based on reliable and impartial information obtained from comparable test and demonstration plots located on experimental and private farms throughout

this state. These recommendations are based not only on yield but also on earliness, disease resistance, quality and other characteristics. Yield data for recommended varieties are given in Agronomy Pamphlet No. 2, 1944, "1943 Crop Yields and Recommendations," available in county extension offices.

Since there are usually several good varieties recommended for each adaptation area (cover page), the farmer should choose the one that meets the crop hazards which he regards more serious. Although the recommendations are not final but subject to change, it must be remembered that they are based on the most reliable information available.

As more information is obtained new varieties will be added while some of those now included may be dropped.

Description of Recommended Varieties

WHEAT

Pilot—Bearded, similar to Ceres in appearance and maturity, straw slightly weaker. Resistant to stem rust, and leaf rust. Superior to Thatcher and Ceres in yield when leaf rust is a factor. Milling and baking qualities very good. Developed from a cross of Hope x Ceres. Adapted for all spring wheat areas in state.

Rival—Bearded, purplish straw. Resistant to leaf rust, stem rust and bunt. Superior to Thatcher and Ceres in yield when leaf rust is a factor. Milling and baking qualities good. Yields about the same as

Pilot. Developed from a cross of Ceres x (Hope x Florence).

Turkey 144, Nebred, Minhardi—All are bearded winter wheats. Nebred and Turkey 144 are very early. Minhardi medium early.

Mindum, Kubanka—Durum wheats are very similar in characteristics. Both these have flattened heads. Chaff is brownish when ripe. Both are moderately resistant to stem rust.

Pelissier—Also called black bearded durum. Has large amber colored kernels. Chaff smooth and white.

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OATS

Ikota, Tama, Boone, and Vicland—Medium early yellow oats derived from the cross of Victoria x Richland. These varieties are resistant to leaf rust, stem rust, and smut.

Miomark—A medium early white oat derived from a cross of Markton x (Iogold x Markton). This oat is resistant to smut and stem rust but is extremely susceptible to leaf rust.

Brunker—A very early red oat selected from Burt. This oat is susceptible to leaf rust, stem rust and resistant to smut.

BARLEY

Odessa—Introduced from Russia, by the way of Canada in 1902. In 1914 Odessa was released by South Dakota State College and is still being grown on about one million acres in South Dakota. This variety is six rowed, rough awned, with a somewhat stiffer straw than Trebi. It is acceptable on the market as malting or distiller's barley.

Wisconsin Pedigree 38—A smooth awned, six row barley derived from the cross of Wisconsin 5 x Lion. It has a tendency to be weak strawed. It is accepted on the market as malting barley. This variety is too late for central and western South Dakota.

Velvet—A smooth awned, six row barley derived from a cross of (Manchuria x Lion) x Luth. It is slightly earlier than Wisconsin 38 and has a stiffer straw. It is accepted as a malting type barley.

Spartan—A two-rowed, smooth awned, stiff strawed variety. It was derived from the cross of Michigan two row x Black Barbless. It is very early and has high test weight and high protein content. Valuable as a feed barley.

Trebi—A six-row, rough awned feed barley introduced from the vicinity of the Black Sea in 1905. It is later than Spartan, extremely vigorous and has in general produced higher yields than Spartan; however, because of Trebi's weak straw, late maturity and rough awns, Spartan barley is generally grown in its place.

FLAX

Redwing—A medium early, brown-seeded, medium tall flax. It is resistant to wilt, medium susceptible to rust, and susceptible to pasmo.

Koto—A mid-season, brown-seeded, medium-tall variety. It is resistant to wilt, resistant to some races of rust and susceptible to pasmo. Seed will not be available in 1944.

Crystal—A mid-season, yellow-seeded, medium tall flax. This variety is resistant to wilt, immune to rust and susceptible to pasmo. Seed will not be available in 1944.

Buda—A mid-season, brown-seeded and medium tall variety. Moderately resistant to rust and resistant to wilt.

FIELD CORN

(SOKOTA HYBRIDS)

411—A medium early, medium leafy, fairly stiff stalk, good general appearance, and fairly consistent yielder.

412 and 412A—Appears slightly later than 411, medium leafy, stiff stalk, has a tendency to tiller on rich heavy soils, not as good or consistent yielder as 411.

413, 413A, 413AA—Medium maturity, very stiff stalk, good general appearance, all appear to be very consistent, and good yielders.

414—Medium maturity, leafy, stiff stalked, good general appearance and fairly good yielder.

415—About equal to 414 in most all characters but appears not to be as consistent and high in its yield.

416A—Appears slightly later than 413AA, fairly stiff stalk, its yielding ability appears to be more erratic.

417—Medium early, leafy, stiff stalked, has a tendency to have slightly more broken stalks, very good consistent yielder.

SORGHUMS

39-30-S—(Low prussic acid) Dakota Amber—Very early, leafy, uniform, 60 inches tall, juicy, sweet and a good yielder of both grain and forage. (Continued on p. 6)

Varieties Recommended for South Dakota

Crop and Variety	WHEAT	Areas in which adapted
Spring Wheat		
Pilot -----	}	All areas where spring wheat is grown
Rival -----		
Winter Wheat		
Turkey S D 144 -----	}	Southern part of areas 1, 4, 5 and 7.
Nebred -----		
Minhardi -----		
Amber Durum Wheat		
Mindum -----	}	Areas 2, 3, 4, 5, 6, and 7.
Kubanka -----		
Pelissier -----		Areas 5, 6, 7.

	OATS	
Vikota	}	Areas 1, 2, 3, 4 and northern one-third of area 6.
Tama		
Boone		
Vicland		
Miomark		Northern one-third of area 6.
Brunker		Areas 5, 7, southern $\frac{2}{3}$ of area 6, and western part of area 4.

	BARLEY	
Odessa		Areas 1, 2, 3, eastern part of 4 and northern part of 6.
Wisconsin Pedigree 38	}	Areas 1, 2 and eastern part of 4.
Velvet		
Spartan		Areas 1, 2, but especially in areas 3, 4, 5, 6, and 7.
Trebi		Area 7.

	FLAX	
Redwing	}	Areas 1, 2, 3 and eastern part of area 4.
Koto*		
Crystal*		Northern part of area 2.
Buda		Areas 2 and 3.

*Seed is being increased but not available in 1944.

	FIELD CORN*	
Sokota Hybrids		
411, 414 and 416A		Areas 2 and 3
412, 413AA and 415		Areas 2, 4, and 5
417, 412 and 413A		Areas 3 and 4
413, 418 and 420		Areas 2, 3, and 6
Open Pollinated		
Alta	Dakota White Dent	}
Eureka	Brown County Dent	
Fulton	Northwestern Dent	
Silver King	Squaw Corn	
Gehu Flint	Rainbow Flint	
Falconer		

*For commercial hybrids see The 1943 South Dakota Corn Performance Test, South Dakota Agricultural Experiment Station Circular No. 50, in County Extension offices.

age sorghums

Low Prussic Acid (39-30-S)	All areas where sorghum is grown.
Atlas (on lowlands)	Areas 1, 4, 5 and southern part of area 3.
Rox or Waconia	
Leoti Red	
Norkan	Areas 1, 4, 5 and southern parts of areas 3 and 6.
Sudan Grass	All Areas

Grain Sorghums

Sooner Milo	Areas 2, 3, 4, 5, 6 and 7.
Improved Coes	Areas 4, 5, 6, and 7.
Colby Milo	
Sedan Kafir	
Cheyenne Kafir	Areas 5, 6 and 7.

SOYBEANS

Manchukota	Area 1 and southern part of area 2.
Mandarin	Area 2 and northern part of area 1.
Habaro	Areas 1 and 2.
Richland	Southern one-half of area 1.

ALFALFA

Ranger*	All areas of the state. Because of their wilt resistance, these varieties are recommended especially for seed production.
Hardistan	
Ladak	
Cossack	
Dakota Common	All areas of the state.
Baltic	
Grimm	

*Seed being increased but not available in 1944.

RYE

Dakold	All areas of the state
South Dakota Common	

PROSO MILLET

Red Thurgai (early)	All areas of the state.
Early Fortune (early)	
Black Voronezh (late)	Southeastern part of the state.

FOXTAIL MILLETS

Kursk	Areas 3, 5, 6, 7.
Siberian	
Hungarian	Areas 1, 2, 4.
German	Area 1.

MINOR CROPS

Rape—Dwarf Essex	Where these crops are desired, these varieties are recommended.
Emmer—Vernal (white spring)	
Dry Beans—Great Northern, Pinto, Tepary	
Sweet Clover—White Blossom, Yellow Blossom	
Edible Soy Beans—Agate	
Buckwheat—Japanese, Silver Hull	

Sorghums (continued)

Atlas—Tall sturdy leafy stalk, juicy and sweet. Seeds white, palatable, grain yield in South Dakota not dependable because of late maturity.

Rox or Waconia—A very sweet stalk sorgo. Makes excellent forage or silage. Brown seeded. Mid-season in maturity.

Norkan—A cross between Atlas and Early Sumac. Semi-sweet stalk. Seeds white, palatable. Earlier than Atlas. 60 to 70 inches tall.

Sooner Milo—Drawf Milo—early, medium leafy, 36 inches tall, small compact oval head and brownish seed.

Improved Coes—35 to 50 inches tall, leafy, slender stalk, semi-juicy. Very early. Seed heads long, erect, and semi-compact, seeds white. A fair dual-purpose sorghum.

Colby Milo—Combine type. Grows about 2 feet tall. Produces compact heads of brownish seeds. Not as early as Sooner Milo, but has stronger stalk permitting it to stand for combining.

Sedan Kafir—60 inches or more tall, leafy, slender stalk, semi-juicy, long slender seed head, fairly compact, small brown seeds.

Cheyenne Kafir—Very early, 60 inches tall, medium leafy, slender stalk, juicy, varying from sweet to acid, seed heads medium size semi-compact, seeds white. Fairly drought resistant, adapted to low rainfall and short growing season.

SOYBEANS

Manchukota—Was developed at the South Dakota Agricultural Experiment Station. It possesses an upright habit of growth, is resistant to lodging under normal growing conditions and has produced the most beans at the Station over a period of years. It has also performed very well in tests in the Middle West.

Mandarin—Is about five days earlier in maturity than the Manchukota. It produces more vegetative growth and is more inclined to lodge than is the Manchukota.

Habaro—Has yielded very well consistently at the South Dakota Experiment Station and in the area north. It is more vegeta-

tive in growth habits and more inclined to lodge than is the Manchukota, hence, requiring more difficulty in combine operations.

Richland—Is later than the varieties mentioned above and can be used in the southeastern portion of the state where the season is from five to ten days longer on the average.

ALFALFA

Ranger—Is a new variety developed by the Nebraska Agricultural Experiment Station and the U. S. Department of Agriculture by combining several superior strains. Seed of this new variety is being increased and will probably be available commercially in a few years.

Hardistan—Was obtained in 1930 from an old superior field in Nebraska believed to be of Turkistan origin. It is resistant to bacterial wilt but has produced less forage than Grimm or Cossack.

Ladak—The parent material of this variety was introduced from Northern India in 1910. The selection work was done at Redfield, S. D. It produces abundantly the first cutting. Recovery after cutting is slower than in other varieties and the second cutting is generally lower in yield. Ladak is high yielding, cold and drought resistant and is resistant to bacterial wilt.

Cossack—The original seed of Siberian origin was introduced to the United States in 1907 by N. E. Hansen of the South Dakota Agricultural Experiment Station and the U. S. Department of Agriculture. Cossack is winter hardy and produces high yields of forage.

Dakota Common Alfalfa—Is seed of alfalfa which may be harvested from unknown variety. It is usually designated by the state in which it was produced, as Dakota Common.

Baltic—Originated in 1906 at Baltic, S. D. It is the result of natural selection, probably from Grimm. Baltic is resistant to cold and produces high yields of quality forage.

Grimm—The original seed was brought from Germany in 1857 by Wendelin Grimm who settled in Minnesota. It yields well and is winter hardy.

RYE

Dakold—Originated at North Dakota Agricultural Experiment Station. It was developed by a process of natural selection whereby seed from surviving plants of commercial rye was saved year after year until this variety was evolved. It is very hardy since it can survive winters of North Dakota and Canada.

PROSO MILLET

Red Thurgai—An early grain millet maturing in about 70 days. It has in general produced highest average yields in area represented by North Dakota, South Dakota and Wyoming. The hay is of poor quality.

Early Fortune—An extremely early grain millet. Reddish brown seed. Because of its small growth and extremely early maturity this variety produces relatively small yields. However, it may be ready to harvest 60 days after sowing.

Black Voronezh—A late grain millet. Brownish-black seed. Average days from seeding until ripe is about 80 days.

FOXTAIL MILLETS

Kursk—A selection from Siberian. Earliest of all foxtail millets. Can sometimes be cut for hay 45 days after seeding. Average date for hay production is 60 days. Popular in western South Dakota.

Siberian—A hardy drought resistant variety. Seeds are orange in color. Under good growing conditions it is ready to cut in 50 days.

Hungarian—This millet has a small compact head, resembling common millet very closely. Bristles are of purplish color.

Seed color varies from pale yellow to brown, sometimes dark purple. Will mature for hay in about 60 days but it is not as drought resistant as Kursk or Siberian.

German—A late foxtail millet requiring 85 to 90 days for hay production. It has heavy stems, broad leaves. Seeds are small and dull in appearance. Requires more moisture for development than Kursk or Siberian.

RAPE

Dwarf Essex—A biennial variety. It is generally ready to be grazed 10 to 12 weeks after seeding.

EMMER

Vernal (white spring)—This is the common variety grown in South Dakota. It has slender, nodding heads about 2 inches long. Very resistant to rust and smut. Emmer is better adapted to eastern South Dakota than to central and western areas.

DRY BEANS

Great Northern—A large white early maturing, drought resistant variety of high productivity resistant to common bean mosaic disease.

Pinto—A speckled buff colored bean, adapted to the dryland conditions.

Tepary—A white edible bean, resistant to heat and drought.

BUCKWHEAT

Japanese—Large seeded brown variety.

Silverhull—Silver gray seed. Plants smaller than Japanese. It is a common practice to mix seed of Japanese and Silverhull. The shorter Silverhull supports the taller Japanese plants and the taller plants help shade the shorter Silverhull preventing heat injury.

Description of Varieties of Secondary Importance

WHEAT

Thatcher—Beardless, heads are shorter than Marquis and more compact. About two days earlier than Ceres. Resistant to stem rust, very susceptible to leaf rust and moderately resistant to bunt. Milling and baking qualities very good. Developed from a cross of (Marquis x Iumillo durum) x (Kanred x Marquis).

Ceres—Bearded, intermediate between Marquis and Thatcher in maturity. Susceptible to some races of stem rust, susceptible to leaf rust and very susceptible to bunt and loose smut. About equal to Thatcher in yield when stem rust not a factor. Good milling and baking qualities. Developed from a cross of Marquis x Kota.

Reward—Beardless. Very early. Hairy chaff. Susceptible to stem rust, leaf rust and covered smut.

Marquis — Beardless. Medium late. Heads slightly longer than Thatcher. Susceptible to leaf rust and stem rust.

Regent—Beardless, about the same maturity as Thatcher. Yield not as high as Pilot or Rival at locations tested. Resistant to stem rust and leaf rust. Developed from a cross of H44 x Reward. Milling and baking qualities good.

OATS

Richland—A medium early yellow oat selected from Kherson. It is resistant to stem rust and to loose and covered smut, but susceptible to leaf rust.

Gopher—A medium early white oat selected from sixty day oats. It is susceptible to smut and leaf rust and is moderately tolerant to the common races of stem rust.

Nakota—A hullless oat developed from a cross of (Markton x Richland) x (Swedish Select x Kilby Hullless.) It is resistant to smut and to stem rust but highly susceptible to leaf rust. The yields are comparable to Richland when the weights are adjusted for hulls.

Burt—A very early red oat. This oat is resistant to some races of stem rust and susceptible to leaf rust and resistant to smut.

BARLEY

Dryland—A six row, smooth awned barley. This variety is very early but extremely susceptible to loose smut. It is acceptable as malting barley. Suitable for the central and western areas.

Glabron—Bearded, smooth awned, six row, very similar to Velvet. Stronger straw than Velvet.

FLAX

Bison—A mid-season brown-seeded medium tall variety. It is resistant to wilt, susceptible to rust and susceptible to pasmo.

B. Golden CI 644—An early, yellow-seed, short-strawed flax. This variety is resistant to wilt, immune to rust, and highly susceptible to pasmo. It is too short strawed to compete with weeds under the usual South Dakota conditions.

Biwing and Redson—Characteristics and yields similar to Redwing. These varieties tend to combine the good oil quality of Redwing with the higher oil yields of Bison.

SORGHUM

Early White Milo—Very similar to white milo but much earlier, fewer leaves, smaller panicle and more slender stalks, seeds white.

Early Hegari—Medium tall, leafy, medium size stalk, semi-juicy and slightly sweet. Seed heads compact medium length, erect, seeds white with reddish brown markings.

Highland Kafir—Is similar to Improved Coes, but it produces a little more sprangled head and more of a grain type sorghum.

Modoc—Slightly later than Sooner Milo, medium leafy, medium height, juicy stems, slightly sweet, seed head erect, somewhat long, seeds pearly white.

Day Milo—Dwarf Milo 20 to 30 inches tall, leafy, seed head slightly longer than Sooner Milo, very compact and brownish seed.

Early Kalo—An early selection from Kalo, medium tall, leafy, seed heads long semi-compact, seeds small and brownish. Likely to lodge when over-ripe.

SOYBEANS

Minsoy—This variety is extremely early maturing and has produced a good yield of beans for two years. The one serious objection to this variety is its extremely short growth and the production of beans very close to the ground making it difficult to get the entire crop with machine harvesting methods, particularly the combine.

ALFALFA

Hardigan—Is a selection from Baltic made by the Michigan Agricultural Experiment Station in 1920. It produces high yields of forage and seed under Michigan conditions.

Arizona Chilean—Is seed produced in Arizona from South American non-hardy seed. In tests during five years it produced only half as much forage as Cossack.