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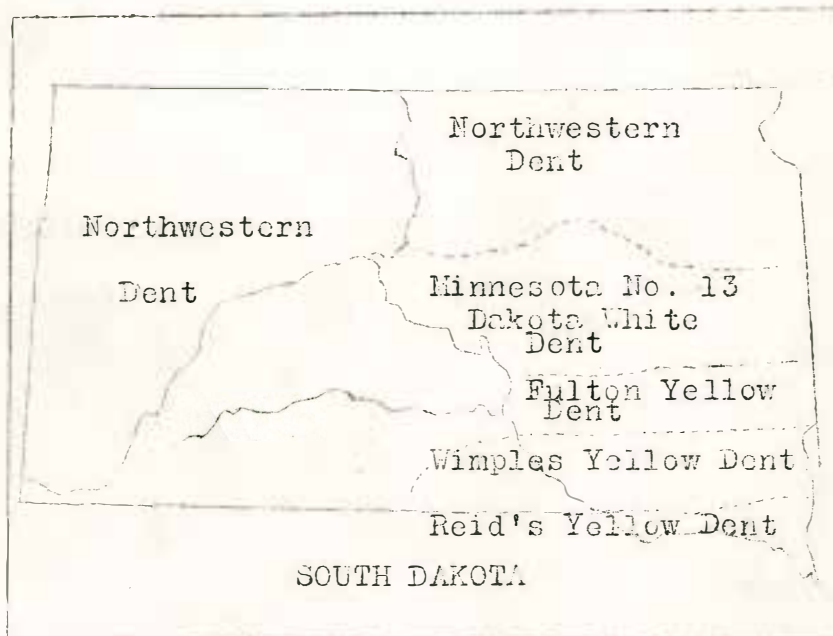
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CORN GROUPS AND VARIETIES.

by

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Map of state showing leading varieties of dent corn and areas to which they are especially adapted. (S. D. Bulletin 181.)

Corn Groups and Varieties.

In the study of corn culture a very intimate knowledge of corn varieties is a necessity. The experienced corn grower knows the advantages of different varieties and if he is a corn breeder he will endeavor to develop some of the more desirable characters of several varieties into one variety.

A. Six Different Groups of Corn.

There are six different kinds of corn which are distinguished by the structure or make-up of the kernel. These include Dent corn, Flint corn, Flour corn, Sweet corn, Pop corn and Pod corn.

Dent corn is the most important of all and is so named because it is made up of starch and glassy or flinty matter. When the moisture dries out of the kernels, the starch shrinks faster than the flinty materials and the result is a dent in the top of the kernel. Dent corn is four colors, yellow, white, red and mixed.

Flint corn is so called because the glassy material in the kernel is at the crown or top of the kernel so that when the shrinking takes place there is no dent formed. On account of the glassy part being near the upper surface of the kernels, the corn is harder than Dent corn. Flint corn is of many colors, including blue, red, yellow, white and mixed.

Flour corn is so named because the kernels are soft, consisting almost entirely of starch. Flour corn is of many colors, including purple, blue, white and mixed. Some South Dakota farmers grow it to put in their silos or to use for pasture for their hogs.

Sweet corn is so named because the kernels contain sugar as well as starch, giving the corn a distinctly sweet taste. It is used for the most part for cooking when green and in this form we are all familiar with it. It also makes excellent fodder, especially for milch cows, to be fed when the pastures begin to get short in August. Sweet corn is of many colors, but the varieties commonly grown in South Dakota are either yellow or white.

Pop corn is so named because it will pop open when heated. The pop corn kernel is very similar to the kernel of Flint corn, except that it is smaller. There are two distinct kinds of pop corn, the Rice pop corn which has sharp kernels, and the Pearl corn which has smooth kernels. Both of these have red, white and blue varieties, but the most common kind is the white variety of Rice pop corn, known as White Rice.

Pod corn is so called because there is a small separate pod over each kernel. This is not grown in the United States except as a curiosity, but is grown in some countries in South America.

B. Definition of a Corn Variety

Variety - Sometimes a plant appears that shows some variation in size, form, earliness or other character so as to make it, and its progeny, more useful or desirable for certain purposes than the members of the sub-species as a whole. Farmers and seedsmen frequently select plants possessing some desirable quality and develop from them a group of plants varying slightly from the type as a whole. Such a group of plants is called a variety. Thus we have Learning, Reids Yellow Dent, Wimple's Yellow Dent and numerous other varieties of the dent type of corn. Likewise there are varieties of sweet, pop and flint corn. The distinguishing variety characteristics may be marked such as the color of the grain, earliness or lateness and the like.

There are many varieties of corn in the United States and naturally so because of widely varying conditions under which corn is grown. Between four and five hundred varieties of dent corn have been described, some seventy or eighty varieties of flint and a large number of the pop and sweet types are known.

We cannot list in this circular all of the varieties grown and it is not necessary that we do so. As corn growing has developed in the United States, a strip of land, varying from time to time, extending from Southwestern Ohio to Southeastern South Dakota, has developed corn growing most intensively and has become known commonly as the "Corn Belt". It will be of interest and help to all corn raisers to know something about a few of the most important varieties of dent corn for this "Corn Belt" region.

C. Corn Varieties in the United States.

Reids Yellow Dent: Typical ears of this variety are from $9\frac{1}{2}$ to $10\frac{1}{2}$ inches in length with a circumference of from $6\frac{1}{4}$ to $7\frac{1}{2}$ inches. The ear is nearly cylindrical, sometimes tapering at the tip with from 16 to 22 closely paired straight rows of kernels. The kernels are rectangular at the crown, tapering gently with straight edges to a rather blunt or rounded tip. They are often narrow, usually of medium thickness and inclined to be deep. The color varies from a yellow with a reddish cast to a lemon yellow, the latter being the standard color.

Silver King: This variety is grown in nearly all parts of South Dakota and many corn club members are familiar with it. The variety was first brought to public notice by Mr. H. J. Goddard of Ft. Atkinson, Iowa, but its origin traces to Indiana, from which state it was brought to Fayette County, Iowa, in 1862. Mr. Goddard planted a half bushel of the corn in 1869 and was so well pleased with it that he began to improve it by carefully selecting each year the type of seed ears which came nearest his ideal, giving special attention to early maturity and productiveness. He selected an ear of medium size, a little large in circumference in proportion to length, with deep, closely set kernels, well-filled tips and butts, and a comparatively small cob.

A rather rough rugged type was developed without giving much attention to fancy show characteristics. Great care was taken to eliminate stalks which were barren or which bore only nubbins.

Boone County White: This variety is not grown in South Dakota but is widely grown in Ohio, the eastern end of the "Corn Belt" region. This corn was originated by Mr. James Riley of Boone, Indiana. Standard ears of Boone County White corn are from $8\frac{1}{2}$ to $10\frac{1}{2}$ inches long, from $7\frac{1}{2}$ to $8\frac{1}{2}$ inches in circumference, cylindrical or nearly so, and have from 16 to 20 straight rows of kernels. The spaces between the rows are of medium width. The butts are moderately rounded, with a fairly large shank. The tips are regular, rather blunt, either filled over the end or with a small amount of cob protruding. The cob is rather large and white. The kernels are rather large and thick, with sharp corners, of medium depth, and pearly white. The germ is usually large, extending well up to the crown of the kernel. The indentation varies from a crinkled to a rough dent.

It would be very interesting to know the history and description of other "Corn Belt" corn varieties but we will learn more about these in another circular. A few other important varieties of dent corn are, Leaming, Johnson County White, Silvermine, St. Charles White, Bloody Butcher, Calico. Many more could be listed but the above varieties have served as foundation stock for other varieties.

D. Corn Varieties in South Dakota.

We have already learned that southeastern South Dakota is recognized as a part of the real "Corn Belt", where such typical corn belt varieties as Reids Yellow Dent and Silver King are grown. Every county in South Dakota grows corn and the real "Corn Belt" is being extended farther north and west in South Dakota year after year.

Soon after the first settlement of South Dakota there were many failures in corn growing and many thought it would be impossible to grow corn profitably except in the extreme southeastern section. Other settlers thought it possible to make corn a leading crop and began to improve what they had and also to look for better varieties. By their efforts and assistance from experiment stations we now have some excellent varieties of corn and it is grown in every county of the state.

The following are some distinct varieties of dent corn for South Dakota listed by classes and in order of earliness.

<u>Yellow Dent</u>	<u>White Dent</u>	<u>Mixed Dent</u>
Alta	Dakota	Northwest-
All Dakota	Silver King	ern
Golden Glow	Rustlers	Minnesota
Minnesota No. 13		King
Fulton		Minnesota
Murdock		No. 23
Pride of the North		Model
Wimple's		Calico
Reid's		

Alta Yellow Dent. This variety originated at the Highmore Experiment Farm from the Minnesota No. 13 and Golden Bantam Sweet corn. It has yellow kernels and red cobs. It matures from a week to ten days earlier than Minnesota 13 and is small. Ears average six inches in length.

All Dakota: A variety produced by Dr. A. N. Hume, Agronomist, South Dakota State College from a number of varieties of corn. Dr. Hume used Golden Glow and Fulton Yellow Dent to begin with but has introduced other varieties since. A yellow dent with red cobs; ears six inches or more in length.

Golden Glow: This variety resulted from a cross between Toole's North Star and Wisconsin No. 8 (Early Yellow Dent) and combines the yielding qualities of the North Star with the earliness of Wisconsin No. 8. The ears vary in length from 6 to 9½ inches, with 14 to 18 rows on each cob. In color the corn is soft golden yellow, uniform thruout with a medium cherry cob, The kernels are smoother than Silver King.

Minnesota No. 13: This variety was developed at the Minnesota Experiment Station from a lot of corn secured from a seed company in 1893. This seed as it came to the station was listed as No. 13, hence the name, Minnesota No. 13. As near as can be determined it comes from Pride of the North stock. In 1897 breeding work was started by the ear-to-row test and improvement has been continued. Ears are 6 to 10 inches long with 12 to 16 rows of kernels which are yellow with a red cob.

Fulton Yellow Dent. This variety was developed by Mr. H. E. Dawes, near Fulton in Hanson County, South Dakota. It comes of the old Shabino Yellow Dent. The kernels are of a rich yellow color which are fairly deep and wedge shaped and mature a little later than the Minnesota No. 13. It was best adapted at first to Davison, Hanson and surrounding counties but is now successfully grown along the James River as far north as Redfield.

Murdock: This variety is a medium early yellow dent corn. Typical ears are from 8 to 9 inches long and from 6 to 6½ inches in circumference, gently tapering. The kernels are medium in depth and have a very shallow indentation. This corn can be grown in the central and southern portions of South Dakota, but is not recommended so highly as Minnesota No. 13 for the central portion or Wimple's Yellow Dent for the southern part of the state.

Pride of the North: This variety is of the later yellow dents. It was originated by the veteran corn grower, H. J. Goddard of Ft. Atkinson, Iowa. The start came from seed sent out by the U. S. Department of Agriculture in 1870. For many years following its introduction it was the only distinct variety of northern yellow dent.

Wimple's Yellow Dent: For the southeast corner of the state including Union, Clay, Turner, Yankton, Lincoln, Bon Homme, Hutchinson and the southern part of Charles Mix counties, the Wimple's Yellow Dent is an excellent variety. It has deep yellow kernels, red cobs and averages even height on the stalk. It gives excellent results in the counties where it matures.

Reids Yellow Dent: A description of this variety is found elsewhere in this circular.

Dakota White: This variety of corn is well adapted to the northern portion of the state which lies east of the Missouri river. Dakota White has kernels fairly deep and smooth with about 6 to 7 inches in length. It matures early and makes a good sound corn most every season.

Silver King: This is a medium early White Dent Corn. The ears are from seven to eight inches long and 6 to 6½ inches in circumference. There are usually fourteen rows of deep kernels. The dent in each kernel varies from deep to shallow. The shallow dent appears to be closely associated with early maturing qualities and preferred in Northern latitudes. The ears are gently tapering from the butt to the tip and the cob is white. Silver King corn is adapted to the central and north-central portions of Eastern South Dakota.

Rustlers: This variety is an early white dent, the ears 6 to 7 inches long and slowly tapering and having 12 to 16 rows. The kernels are white and rather smooth. This variety ranks high as a good yielder. It is a variety which has spread widely over the Northwest and is considered the foundation stock of the early white dent corns.

Northwestern Dent: In a test at Eureka this variety yielded about twice as much corn as the other early varieties. The Northwestern Dent has white cobs, dark red kernels with brown caps. The kernels are shallow, but this is necessary if the corn is to ripen in a short period of time. The ears are from 7 to 8 inches in length and grow at various places on the stalk. By careful seed selection it would be very possible to improve Northwestern Dent so that it will have more even ears and will grow at a more uniform height on the stalk. Such improvement can usually be made in the course of from three to five years of selection, so that comparatively few of the ears will grow at an inconvenient height.

Minnesota King: This variety is a yellow semi-dent, 5 to 7 inches long, cylindrical or slightly tapering; eight rows of kernels, yellow with creased dent, cob white.

Minnesota No. 23: A semi-dent variety with ears 6 to 8 inches long gently tapering; twelve rows of kernels; kernels white cap with light yellow sides; cob white.

Model: This variety is a medium dark red dent; ears 7 to 8 inches long with ears gently tapering; kernels shallow and dimple dented.

Calico: Calico corn is a variety in which the color of the grains is the distinctive characteristic. The color is a mixture of white and blue grains, although mixtures of red and white or red and yellow are also found. It is considered by many farmers to be superior to the varieties of white and yellow for feeding purposes although there is no basis other than opinion upon which to justify the contention.

Other varieties which are grown in South Dakota include Rainbow, Blue and Genn flints. Among the sweet corn the most popular varieties include Evergreen, Country Gentlemen and Golden Bantam.

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