1-1889

Corn

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DAKOTA

AGRICULTURAL COLLEGE

AND

EXPERIMENT STATION,

BROOKINGS, DAKOTA.

Bulletin No. 9.

JANUARY, 1889.

Department of Agriculture.

CORN.

PRESS STEAM PRINT, BROOKINGS, DAKOTA.

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CORN.

The corn experiment embraced a set of thirty-nine plats, each containing sixty rows, twenty-four hills in length. Thirty-three of these plats were planted with different varieties of corn, eighteen of dent and fifteen of flint; the rest being used for experiments in deep and shallow cultivation.

On the first thirty-three plats the planting began on the seventh and eighth days of May. Two rows of each plat were planted every day for thirty consecutive working days.

It may, perhaps, be unnecessary to state that these daily plantings were made with the object of determining the corn growing season, when germination begins and the extreme length of planting time.

PREPARATION OF SOIL.

The land used is a sandy loam with a subsoil of clay and slopes slightly to the northwest. It was plowed the previous August to a depth of six inches and thoroughly harrowed in the spring just before planting. It had produced two crops of small grain and had never been manured.

PLANTING.

The rows were made with a marker three feet six inches each way. Part of the corn was dropped by hand and covered with the

hoe, the rest being put in with hand planters. Of the dent corn, the hills contained three and four grains, of the flint, four and five.

THE STAND.

The early part of the season was not favorable for corn growing, being cold and wet. The coming up was quite irregular, from six to ten days frequently elapsing between the appearance of the first and last hills in a row. This was especially true of the first fifteen days planting.

The stand, in general was poor, resulting in part from unfavorable weather and bad seed, but principally from the work of ground squirrels. This latter evil was the most persistent and damaging one with which the corn experiment had to contend. The per cent taken depended upon the location of the variety, whether more or less remote from the unbroken prairie. Notwithstanding all efforts to destroy the squirrels the damage done was very great. For several successive days previous to planting, poisoned corn was paced in every squirrel hole that could be found. This was done not only on the experiment ground, but also on the whole eighty acres and on the edges of the land immediately surrounding it. This work, reinforced with the trap and shot gun, was continued throughout the whole planting season.

CULTIVATION.

All the plats were given four different cultivations, a six-shovel corn plow and a doulbe spring-tooth cultivator being used for the purpose. In addition to this they were twice hoed. Cultivation began on the eleventh day of June and ended on the seventeenth day of July.

GENERAL REMARKS.

It was observed in all the plats, that the earlier plantings grew larger and stronger than the after ones and that the silks and tassels made their appearance more regularly.

The ears of nearly all varieties of the flint corn were infested with a species of worm. These did but little damage beyond marring

the appearance of the ears. The dents were not disturbed by the worms.

Immediately after the killing frost on the night of September the eleventh the corn on all the plats was cut and shocked. It was allowed to stand a few weeks before husking.

The results of a single season's work are only entitled to the public attention as showing the scope of the experiment undertaken.

Definite results of any practical value to the farmer can only be obtained by a continuance of the same experiment, under a system of careful observations, extending through a number of years. Of this a beginning has been made.

TABULATED STATEMENT.

In the following table that date of planting is taken which shows the least number of days from time of planting to maturity. The first seven to ten days planting came up and matured at the same time, while the coming up of the rest varied quite regularly with the time of planting.

The items in the columns headed "up", "in tassel", "in silk", "matured" and "days to mature" apply only to the planting up to and including the date in the first column. The items in the other columns apply to the whole piece.

The per cent of corn standing and that taken by squirrels was made from actual daily count of hills.

In computing the yield the corn was weighed instead of measured.

NAME OF VARIETY.	Planted	Up	Per cent taken by squirrels	Per cent of stand	In tassel	In silk	Average height	Matured	Days to mature	Yield per acre	Cwt. of stalk per acre	REMARKS.
DENTS.	May	June			July	July	ft in	Sept				
White Rustler	14	5 19	77½		20	30	7- 6	4	113	21½	24½	Few suckers—stalks very uneven in height—ears vary three feet in height on same hills.
Austin's Calico	14	5 20	75		21	31	6-10	10	119	27½	26	Ears irregular in formation—suckers few.
Dakota Yellow	13	4 23	75½		18	31	6-10	10	120	24	21	Ears very even in height and lop over as soon as formed.
Davis' White	14	6 4	91		23	30	7	11	121	42	43	Ears large and uneven in maturity—foliage dense—suckers none.
Hickory King	14	5 14	36		Aug 16	Sept 11	9				36½	Very large—not maturing—only fairly in silk.
Chester Co Mammoth	14	4 20	54		July 30	Aug 11	9- 6				45	Did not mature—only in milk.
Illinois Premium	14	5 9	64		Aug 1	10	8				30½	Not fully manured—gave 18½ bu. soft corn per acre.
Austin's Yellow	16	6 23	68		July 25	1	7	11	118	29	23½	Ears stand straight—matured unevenly—few suckers.
Davis' Yellow	16	6 4½	74		21	1	6- 6	8	115	24	18	Small stalk with slender ear standing straight up.
Edmund's Premium	16	8 12	85		25	4	7			31½	33½	Needed a little more time to mature—husked 31½ bu. soft corn per acre.
Pride of the North	16	4 15	78		18	July 27	6- 6	11	118	21½	22½	Very even—scarcely any suckers—few blades—heavy husks.
Clearance Yellow	12	5 25	70		24	Aug 10	7-10				24	Did not mature fully—yield per acre 19 bu. soft corn.
Wason's Yellow	16	6 35	54		28	10	8				21¼	Just beginning to dent when frost came, Sept. 11. Yield per acre 16½ bu. fair corn.
Improved Leaming	15	6 31	60		Aug 1	10	8				28	Ears very uneven in development, few commenced to dent. Gave per acre, 15½ bu. poor corn.
Dakota Gold Coin	16	7 15	79		July 23	July 31	6	6	113	27	16½	Large ears, standing at right angles to stalk, maturing evenly.
Golden Beauty	15	7 27	67		Aug 13	Aug 22	9- 6				66	Did not mature. Not fully in milk.
Bloody Butcher	16	6 21	51		July 25	4	8	11	118	15	20	Very uneven—ears numerous—two on many stalks.
North Star	18	5 6	72		24	1	7	8	113	21½	12	Unusually even—ears abundant—suckers, none—blades scarce.

FLINTS.												
Smut Nose	15	4	13	82	14	July 26	6	Aug 20	107	37½	18	Even in height—ears abundant and large.
Compton's Early	14	6	23	61	17	31	6	28	106	27	24	Plat unusually even—suckers abundant—ears low on stalk.
Top Over	12	6	29	45	19	Aug 2	5	Sept 2	113	28	30	Suckers many—ears not as numerous as usual on flints.
Early Canada	17	6	24	64	23	2	5- 9	11	117	17	42	Ears, suckers and leaves abundant.
Self-Husking	16	6		87½	16	July 27	5- 5	Aug 2	109	45	25½	Very even—ears abundant, long and slim.
Early Six Weeks	15	5	34	58	19	26	4- 8	19	96	15¾	8	An odd variety of flint—suckers none—ears small and plenty—blades few.
Chadwick	17	7	1	54	16	26	5- 3	30	105	24½	12½	Seed of very poor quality.
Mandan Indian	17	7	31	49	11	18	3-10	15	90	20	6	First to mature—large ear for size of stalk.
Longfellow	15	6	18	62½	23	Aug 2	5- 9	Sept 10	118	18	29	Suckers numerous—ears even in height—blades abundant.
Minnesota White	16	6	23	58	23	2	6- 6	6	113	27¾	25¾	Stalks rather tall for flint—blades and suckers plentiful.
Mercer	16	6	11	82½	16	July 26	6	Aug 27	103	37	19	Ears rather small, but even in size and abundant.
Waushakum	17	6	19	74½	20	31	5-10	Sept 11	117	36	33½	Many suckers and blades—ears not abundant.
Silver White	16	4	8	74	20	30	6- 2	11	118	27	28	Even—very few suckers—blades scarce—ears rather high.
King Philip	16	8	20	37	26	Aug 2	5- 6	11	118	9½	14¼	Suckers less numerous than with most flints—matured quite evenly.
Angel of Midnight	13	7	21	60	23	July 30	5- 2	1	111	24¼	18½	Stalks medium height—well covered with blades—suckers few.

DEEP AND SHALLOW CULTIVATION.

The plats used for this experiment were planted the fourth day of June with a variety of corn known as Dakota Gold Coin.

Each plat was cultivated four times, a double shovel plow being used for the deep cultivation and a spring-tooth cultivator for the shallow.

The corn was not fully matured when killed by frost. The following shows the results:

Deep No. 1,	bu. per acre, 21,	Weight of stalks, 2,933 lbs.
Deep No. 2,	bu. per acre, 26,	Weight of stalks, 2,916 lbs.
Shallow No. 1,	bu. per acre, 21⅔,	Weight of stalks, 3,250 lbs.
Shallow No. 2,	bu. per acre, 27,	Weight of stalks, 2,383 lbs.
Average deep,	bu. per acre, 23.5	Weight of stalks, 2,924½ lbs.
Average shallow,	bu. per acre, 24⅓	Weight of stalks, 2,816½ lbs.