

to a windbreak row of seedling chokecherries. Since then all the chokecherries in this 300-foot row have become infected and about one-third of them have died.

Another center of infection appeared in a partially isolated seedling row of chokecherries adjacent to a new plum and cherry variety orchard set out in 1940. The first chokecherries to die in this row (and presumably the first to become infected) were adjacent to the north end of the new variety orchard. From this apparent center of infection, the disease had progressively spread about 200 feet east and 200 feet west to the ends of the chokecherry row by 1948. Virus infection is now general in the stone fruit variety orchard set out in 1940.

Control of Chokecherry Virus Disease

The Red Leaf Chokecherry virus disease should not become serious in North Dakota if the disease is recognized and suitable control measures are followed. As with any virus disease in plants, control is based on prevention. It is particularly important that infected trees be eradicated from the vicinity of nurseries which propagate or grow any stone fruits. Infected trees should likewise be eradicated from shelterbelts and the vicinity of home orchards. At present there is no indication that this disease can be transmitted through the seed. To prevent further spread of disease, almost all chokecherry bushes were removed by bulldozer in October, 1948. Seeds from bushes showing various stages of disease were collected for further tests on seed transmission of the disease.

SWEET CORN VARIETIES AND HYBRIDS

by

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The open pollinated varieties of sweet corn are gradually being replaced by improved sweet corn hybrids. Although the best open pollinated varieties are better than many hybrids, they are generally inferior to the better hybrids in the various maturity seasons.

At present there is a wide range of choice among sweet corn hybrids from extra early to late maturity. This has led to the system of planting a number of hybrids of different maturities at one time and harvesting the crop over a period of about one month or longer if desired. The better hybrids, when compared to open pollinated varieties of the same maturity season, generally yield better; are more uniform in plant and ear characteristics; have a shorter range of maturity from first to last picking; and are more resistant to smut. Varieties of poor as well as excellent quality exist in both open pollinated and hybrid sorts.

Hybrid and open pollinated sweet corn varieties and strains totaling 29 in 1947 and 44 in 1948 were tested at Fargo. Plantings

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Table 1—Selected Sweet Corn Varieties Tested in 1948.

Variety	Source ¹	Days to first picking	Marketable yield per 100-ft. row		Per cent		
			No. ears	lb. husked ²	mrkt-able	cull	smut
Orchard Baby (O. P.) ³	6	72	110	10	82	12	6
Spancross (H.)	1	72	64	21	59	12	29
Golden Gem (O. P.)	6	76	77	15	56	14	30
Seneca Dawn (H.)	5	76	82	35	68	8	24
Washington (H.)	2	76	114	46	77	9	14
Marcross (H.)	4	76	63	25	56	7	37
Earligold (H.)	6	83	75	31	61	10	29
Carmelcross (H.)	4	83	61	25	58	6	36
Seneca Golden (H.)	5	83	81	31	68	9	23
Golden Bantam (O. P.)	3	87	28	8	42	22	36
Improved B2 (H.)	4	87	114	32	80	8	12
Sunshine (O. P.)	1	87	28	12	45	16	39
Golden Bantam, Gr. Pl. Strain (O. P.)	6	87	63	19	62	10	28
Sunshine (O. P.)	6	87	54	28	56	21	23
Grant (H.)	2	87	60	35	66	10	24
Charlevoix (O. P.)	3	87	36	12	46	25	29
Lincoln (H.)	5	93	87	42	79	3	18
Golden Bantam, Std. Strain (O. P.)	6	93	76	21	60	24	16
Golden Cross Bantam VT20 (H.)	4	93	89	36	75	17	8
Golden Bounty (H.)	4	93	102	44	71	21	8
Golden Cross Bantam N. C. (H.)	4	93	107	42	77	12	11

¹Source

1. Associated Seed Growers, Inc.
2. Connecticut Agricultural Experiment Station
3. Ferry-Morse Seed Company
4. Northrup, King and Company
5. Robson Seed Farms
6. Oscar H. Will and Company

²The yield of cut corn is usually about one-third of the husked weight.³O. P. signifies "Open Pollinated", H signifies "Hybrid".

were made on May 28 in 1947 and May 22 in 1948, using 42 by 24 inch spacings in replicated 22-hill plots thinned to two plants per hill.

Data from the 1948 trials are summarized in Table 1. The varieties are grouped by maturity seasons. All open pollinated varieties tested in 1948 are included but only superior, commercially available hybrids are listed in Table 1.

From Table 1 it may be seen that among open pollinated varieties only one strain of Sunshine (Oscar H. Will & Co. strain) can compete with the best hybrids in its season. The number of days from planting to first picking may vary somewhat from year to year, but the varieties usually fall into the same relative position with respect to maturity.

For a complete succession of maturities five selected hybrids would mature over a period of about four weeks. For most home garden purposes a succession of three hybrids would be adequate. The following list offers a choice of the better commercially available varieties for such a succession planting.

Extra Early (72 days)

Spancross—the earliest hybrid combining good size, yield and quality.

Early (76 days)

Washington—a new high-yielding hybrid of good quality and large ear size.

Seneca Dawn—large ear but tapers gradually to a long point. In some trials this hybrid is in the extra early season.

Marcross—good size and quality but rather subject to smut.

Early Mid-Season (83 days)

Earlgold—a good and attractive hybrid.

Seneca Golden—ears are of Golden Bantam type but larger.

Carmelcross—a very good hybrid but subject to smut.

Mid-Season (87 days)

Improved B2—an attractive Golden Bantam type ear.

Grant—a new hybrid of very good quality and large ear.

Sunshine (Oscar H. Will strain)—Although much more variable than the hybrids listed here, it is the only open pollinated variety that performed well in these trials.

Late (93 days)

Lincoln—a good hybrid sometimes falling into the preceding maturity group.

Golden Cross Bantam—the two hybrids listed are similar but VT20 is more uniform and better in appearance than N. C. although the latter yielded more.

Golden Bounty—very similar to the above Golden Cross Bantam hybrids.

While there are later hybrids available, it appears desirable to make successive plantings of one of the late varieties if later maturity is wanted.

In most cases early varieties are inferior to later ones in quality and yield. Therefore, varieties in the later groups should be planted in sufficient quantity to provide corn for canning and freezing. Golden Cross Bantam is excellent for freezing or canning as cut corn. For freezing on the cob varieties with smaller ears such as Seneca Golden and Improved B 2 are usually preferred.

In addition to the hybrids listed in Table 1 a number of experimental hybrids were also included in the trial. Some of these were quite outstanding but are not yet available commercially.