NEW OR NOTEWORTHY VEGETABLE VARIETIES

By J. H. Schultz[1]

Improvement of varieties of garden vegetables is a continuous process and is bringing superior new varieties to home and commercial growers each year. If we compare the best varieties of today with the best varieties of 20 years ago (Yeager, 1930), we find some important changes. For example, 20 years ago there was not a single variety of hybrid sweet corn which was adapted to North Dakota. At present, hybrids have almost eliminated the old open-pollinated varieties.

With several vegetables we now have excellent adapted varieties where we could not even grow the vegetable 20 years ago. The best example of this is in Green Sprouting Broccoli. The new DeCicco variety is as easy to grow and about as reliable as early cabbage. At present, relatively few people grow this vegetable but its popularity is bound to increase, because of its desirable qualities and its convenience for freezing.

Varieties

The following discussion includes only the newer or otherwise noteworthy vegetable varieties and is not a complete listing. Only varieties which have been grown under trial by the Department of Horticulture are included. Since most of these varieties are relatively new, their final evaluation may differ from the present evaluation. For a more complete list of standard recommended varieties, the current list of garden varieties for North Dakota should be consulted (Graves and Butcher, 1950).

Broccoli. The green sprouting type of broccoli has rapidly gained in popularity. In addition to its use as a fresh vegetable, it makes an excellent frozen product and requires little work in preparation for freezing. The early varieties give good results when grown like early

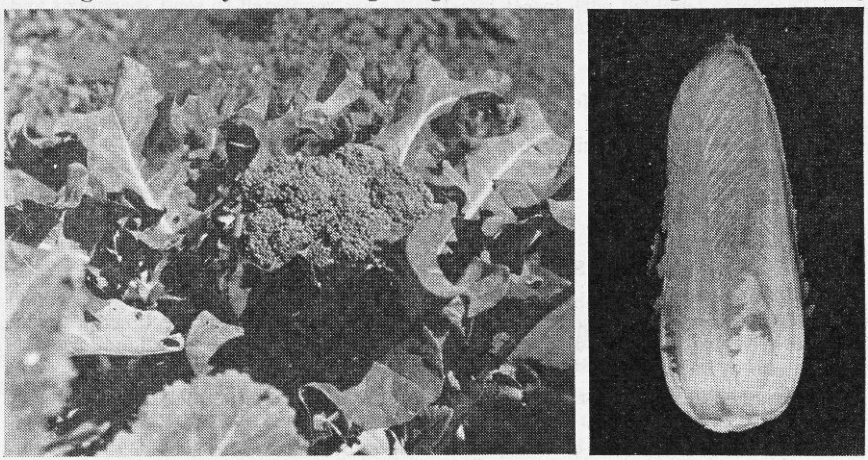

Fig. 1. At left, DeCicco green sprouting broccoli is an excellent vegetable for freezing. Fig 2 (right), a good head of Michihli Chinese cabbage, an excellent vegetable for fall salads.

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cabbage. In 1949 an excellent fall crop was also grown in spite of the dry late summer and fall. The new DeCicco (Fig. 1) is the earliest, most uniform variety. Early Green Sprouting (Ferry-Morse strain) has also been very good but more variable. On May 24, 1949, it withstood a minimum temperature of 28° F. better than did DeCicco. The medium and late strains are not at all adapted to North Dakota.

Chinese Cabbage. Improvement of varieties often arouses interest in minor vegetable. Such is the case with Chinese cabbage. This is an excellent salad vegetable and does well when grown as a fall crop. Chihili has been the standard variety but the new Michihli (Fig. 2) is much more reliable and uniform.

Cucumbers. For a number of years cucumber varieties such as Straight-8 and A & C for slicing, and National or Chicago Pickling for pickling, have been popular. In recent years gardeners have been having trouble with a disease that causes a severe wilting and death of the plants. Only the new first generation hybrid variety "Burpee's Hybrid" has tolerated this disease well in our trials. It is an excellent, vigorous, and productive variety which should be tried by gardeners having trouble in growing cucumbers. It is a slicing type (Fig. 3). Cubit is an open pollinated variety which is very similar to the above hybrid variety. It is worth a trial where disease is not a serious problem.

Lettuce. There has been no important development in leaf lettuce varieties since the introduction of "Slobolt" a few years ago. This variety is very resistant to bolting but possibly less resistant to injury from high temperature than older standard varieties.

Three major new head lettuce varieties were introduced in 1949. These three, Premier Great Lakes, Pennlake, and Progress, as well as Great Lakes were superior to New York 515 for the early transplanted crop. Pennlake (Fig. 4) gave the best performance, with 85 per cent of the plants producing good marketable heads. Other varieties with their respective percentages of good marketable heads were Great Lakes 74, Premier Great Lakes 60, Progress 49, and New York 515 with 40. Progress is not as well adapted to our conditions as are varieties of the Great Lakes type.

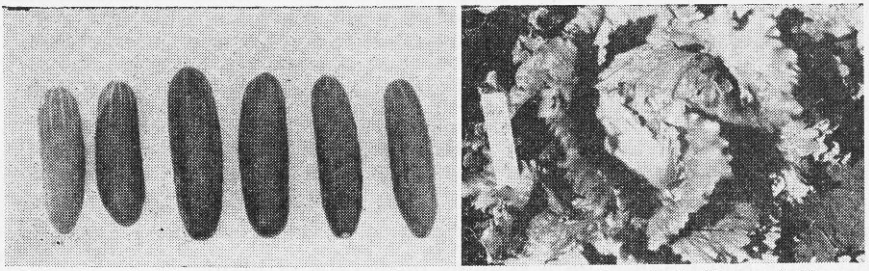

Fig. 3. (left), are cucumbers from first generation hybrid varieties; left to right (two of each), Faribo hybrid, Burpee hybrid and Sensation hybrid. Fig. 4 (right) Pennlake lettuce, a new variety, which has been outstanding in 1949 trials at Fargo.

Muskmelons. The outstanding muskmelon in our 1949 trials was Minnesota Midget. This is a very early, small, high quality melon which is distinct and a real addition to our variety list.

Onions. With onions grown from seed most gardeners are interested in the varieties that are adapted to storage. They come in a choice of colors, but the yellow varieties are preferred in this area. The Hollandale strain of Yellow Globe is very good but not as early as Early Yellow Globe. Iowa Yellow Globe 44 looked good in 1949 trials. It is early, very uniform, and reputed to be a good keeper. It has not yielded as well as have longer season varieties.

The Sweet Spanish onions are milder, may grow to larger size, are quite late, and generally do not keep as well as the above varieties. Yellow Sweet Spanish No. 6 and Michigan State Sweet Spanish have promise for this type of onion in our area. The latter is not as mild as the name implies. The Bermuda onions are also mild but are not adapted here unless grown as transplants.

Peppers. There has long been a need for improved early sweet peppers. Harris Earliest is the earliest variety but the fruits are very small. They turn to a good red and are useful for color in various types of mixed pickles.

Four rather new varieties are somewhat similar and all have possibilities as high quality sweet peppers adapted to stuffing or similar uses. These are Pennwonder, Patrick Henry, Merrimac Wonder, and Waltham Beauty. Pennwonder may be the best all around pepper of the four, but the other three are slightly earlier. The fruit is large and of comparable size on all plants.

Fig. 5. (left) are four varieties of "squash" and pumpkins—although botanically all are pumpkins. Left to right, Table Queen, Table Queen Bush, Cheyenne Bush and Dakota. Fig. 6 (right) shows three popular squash varieties for this climate. In the group of three, Buttercup at the left, Banquet at the right, both leaders in quality and convenience. Between, and slightly above them in the picture, is Baby Blue, which grows on a plant which approaches the bush plant. (All photos by the author.)

Pumpkins. Cheyenne Bush is a distinct new type of pumpkin. The fruit resembles that of New England Pie (Fig. 5) but is exceptionally early and is borne on a genuine bush type of plant.

Squash. Buttercup (Fig. 6) remains the standard of comparison among high quality squashes. Banquet is similar but with an attractive orange skin color when ripe. Baby Blue resembles a small blue Hubbard but is interesting in that it is the closest approach to a bush type plant among the true squashes. By time of frost most of the squash lie within a radius of one or two feet from the center of the plant.

A few pumpkin varieties are used as winter squash and are commonly referred to as squash. Table Queen is one of these. A very promising new bush type of this variety was introduced recently as "Table Queen Bush". (See Fig. 5).

Sweet Corn. There has been a great shift from open-pollinated to hybrid sweet corn during recent years. A good selection of hybrid sweet corn varieties offers many advantages over the open-pollinated varieties. The tendency for home gardeners is to plant on one date three to five hybrids which mature in succession and thus ensure a continuous supply of corn for fresh use or canning and freezing. One of the outstanding newer hybrids is Washington. It is early but combines good quality with high yield and ear size such as is usually associated with late varieties. Pershing and Brookhaven are new very late maturing varieties which have promise for the most favorable corn areas in North Dakota.

Watermelons. Several fine new watermelon varieties have made their appearance in recent years. The earliest and most interesting of these is New Hampshire Midget. It is a very early, small, red-fleshed variety of good quality. People who have difficulty in getting watermelons to ripen during hot weather when they are really appreciated should try this variety. Colebrook is another new larger-sized variety from the Orient via New Hampshire, where it was purified and named.

References:

Graves, H. A. and F. G. Butcher, 1950. Garden Varieties for North Dakota. Circular A-1, North Dakota Agricultural Extension Service.

Yeager, A. F., 1930. Vegetable Varieties for North Dakota. Bulletin 187 North Dakota Agricultural Experiment Station.

ROOT HAIRS IN FLOWERING PLANTS

The development of root hairs in flowering plants was discussed in the November number of the Botanical Review. The problem involves such questions as:

Why do some epidermal cells produce hairs, others none?

Is there a difference between these two kinds of epidermal cells?

In some plants the epidermal cells are not all alike. Is this associated with root hair production?

Why should root hairs elongate so greatly? What determines their length?

Why should they be so short lived?

What water, temperature and chemical conditions favor their development? Needless to say the questions are not fully answered. The author notes that epidermal cells often continue to elongate after the formation of the root hair has begun, but after the cell has completed its elongation it cannot be stimulated to produce root hairs. The character of the wall of the root hair has been of special interest in connection with nodule forming bacteria which enter the plant through root hairs.

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The United States leads in both production of, and international trade in, soybeans. United States exports of soybeans and oil reached the equivalent of about 65 million bushels in 1949; equal to 30 per cent of domestic production. Europe took 62 per cent of the beans and 90 per cent of the oil. (Data from Vol. 60, No. 9, "Foreign Crops and Markets", Office of Foreign Agricultural Relations, U. S. D. A.)