One Hundred Years of Gardening in North Dakota

Bob and Diane Askew

Long before the Europeans reached the Americas, Indians were highly accomplished gardeners. Nine of the nearly 50 vegetables which are common to the American diet are native to the Americas. They are corn, common beans, lima beans, peppers, squash, summer squash, sweet potatoes, white potatoes, and tomatoes. Originating in Central and northern South America, they represent many of the most important and popular vegetable crops grown commercially and in home gardens today.¹

The ancestors of the Mandan Indians settled in the Dakotas along the Upper Missouri and its tributaries in the early 1300s and, by 1450, had established permanent villages and were trading produce with nomadic tribes.² Their river-bottom agriculture, recognized today as microclimatic horticulture, later was adapted and shared by the Hidatsas and the Arikaras in the Upper Missouri areas.

The Mandans grew enough to supply all their needs, seed for two years, and some reserve for trade. Willows and brush were cut and piled over the gardens in the fall to catch snow for moisture. Women gardened with crude tools while children kept birds and animals out of the gardens.

The Mandans raised beans, corn, melons, pumpkins, squash, sunflowers, and tobacco. Sunflowers were planted around the garden perimeter to define each family plot. The American Indians initiated the culture and use of tobacco³ which was planted at the same time as the sunflowers but on the poorest soil since it was not an essential food crop.

Corn was the main crop. Each family cared for one to three acres and planted two or three varieties. Indian gardeners considered 60 to 100 yards sufficient distance to prevent cross-pollination. Black, red, spotted, or white beans were planted between corn rows to save space. White traders introduced potatoes to the Mandans during the 1830s and, by the 1860s, potatoes were grown more than corn. Gourds, melons, pumpkins, and squash were a mainstay of any Indian garden, but the seed had been lost by the early 1900s.

IMMIGATION TO NORTH DAKOTA

Alexander Henry, a partner in the North West Fur and Trading Company, moved to Pembina in 1801. He and his men, the first Europeans to garden in North Dakota, planted cabbages, carrots, onions, potatoes, and turnips.

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In 1811, the Hudson's Bay Company granted Thomas Douglas, the fifth Earl of Selkirk, 116,000 square miles on the Red River of the North for an agricultural colony. Although Selkirk brought agricultural colonists from Scotland, most of the Red River settlers were Metis, people of mixed Chippewa and French origin, who farmed small plots of land fronted on the river. They planted barley, corn, potatoes, tobacco, bearded wheat, and a variety of garden vegetables.⁴

Most settlers came from Europe or the eastern United States. Some of the fruits and vegetables they planted in the Dakota Territory succumbed to drought, insect problems, and frost due to a shorter growing season. The settlers were dismayed at the lack of fruit. In 1887, one settler from McIntosh County said,

"Nothing did we miss more than having a basement lined on every side with boxes and barrels of apples."⁵

The settlers used everything the prairie produced, including Juneberries, buffaloberries, wild plums, currants and choke-cherries. 6

Mary Dodge Woodward, in her book **The Checkered Years**, described the early years of pioneering near Fargo and, in 1884, stated,

"Everything that can stand the cold grows luxuriantly in Dakota, but I do not believe apples or any other fruit will ever grow here. No. 1 Hard Wheat will be the chief product for all time. Still, the railroad facilities are so good that people need not be deprived of fruit if they have the money to buy it."⁷

In 1886 a barrel of apples cost 3.40 which, for many settlers, was prohibitive.⁸

Icelanders in northeastern North Dakota quickly acquired a taste for the strange beets, cabbage, and carrots their German neighbors grew. However, a new arrival from Iceland, accustomed to potatoes and turnips, turned up his nose at sauerkraut and declared, "I did not come to America to eat grass."⁹

In 1885, the first settlers from the German colonies of the southern Russian Ukraine moved to North Dakota. They built sod houses and outbuildings and broke ground for the few acres they could afford to plant. Like the Indian tribes of the Upper Missouri, these German Russians planted rows of sunflowers around the perimeter of their gardens for wind protection. Sunflowers, unknown to other settlers, were called "Russian peanuts" and, in later years, the shells became a nuisance in public places and on the sidewalks of the towns near German Russian settlements.¹⁰

Many settlers in North Dakota came from Norway and immediately began to raise gardens. One Norwegian settler stated, "We raised most of our food and about the only thing we had to buy was flour, sugar, salt, soda and tobacco and when we felt rich we would buy a barrel of apples for the winter months."¹¹

NORTH DAKOTA AT THE TURN OF THE CENTURY

In 1900, North Dakota had 45,332 farms. By 1910, due to the last great influx of immigrants, North Dakota had 74,360 farms, of which half were owned by foreign-born settlers. Nearly 70 percent of all farmers grew potatoes, totaling 54,000 acres, and produced over 5.5 million bushels valued at over \$2 million. Only 40 percent of all farms had vegetable gardens planted on 13,000 acres valued at \$1 million.¹²

Most of the 60 percent who did not garden were the large wheat farmers. During the 1930s, the Farmers Home Administration offered free vegetable seeds and advised farm wives to raise gardens and can the produce, but few wheat farmers did. They proudly "only raised wheat."¹³

E.C. Hilborn, owner of Northwest Nursery at Valley City, told the Minnesota Horticulture Society in January, 1913,

"Our farmers rush themselves to raise more wheat to buy more land to raise more wheat. This is keeping them so busy that they and their families haven't had time to live. It is no home if with a fertile soil, the yard is barren and wind swept with no windbreak to give protection, no trees to shade the yard and porch, no wealth of shrubbery and flowers to furnish a succession of blooms, and no garden or orchard for the nourishment of its occupants."¹⁴

Settlers could buy nursery stock, plants, and seeds from the Northwest Nursery at Valley City and Oscar H. Will Seed Company at Bismarck and could order garden seeds from Gurney's Seed Company, a large mail order nursery and seed house at Yankton, South Dakota, and other large mail order merchandizers.

ESTABLISHMENT OF THE "AC"

In 1890, the North Dakota Agricultural College (AC) and the North Dakota Agricultural Experiment Station were established at Fargo. Botanist C.B. Waldron became professor of Horticulture and Forestry at the AC and arboriculturist at the experiment station. He recognized the importance of windbreaks or shelterbelts to provide shelter and beauty and to supply timber and fuel for the farm.¹⁵ He often stated that passing from the shelter of trees to open country made one aware of the difference between comfort and misery.

Waldron was concerned with the problems of fruit growing. By 1891, he had initiated a testing and research program with native and cultivated fruits, trees, grasses, and vegetables. The 'Hibernal' apple was hardy and reliable, and the 'DeSoto' plus and 'Dunlap' strawberry were adaptable to this area. Raspberries could be grown but had to be covered with soil over the winter.¹⁶

He initiated the first North Dakota Horticultural Society in January 1904; it was dissolved in 1919. The present North Dakota Horticultural Society was organized in 1923 and immediately approved a list of recommended fruit varieties for North Dakota.



Potatoes are North Dakota's most important horticultural crop. Robert Johansen has been involved in releasing 14 potato varieties since 1957.

The U.S. Department of Agriculture established a 640-acre field station in 1912 at Mandan. The station differed from the other 22 USDA field stations because of its research in horticulture rather than forestry and agronomy. The Mandan field station by 1962 had introduced 23 varieties: eight apple, one apricot, two cherry-plum, three crabapple, one sweet corn, four plum, three tomato, and one geranium. The fruit and vegetable research at the station was discontinued in 1965.

In 1914, H.O. Werner became assistant horticulturist at the AC. Before he left in 1918, he had laid the foundation for tomato improvement and for breeding experiments in other fruits and vegetables, including North Dakota Extension project No. 9. This project involved 1) growing vegetables and fruits for home use, 2) planting and caring for windbreaks and shelterbelts, 3) landscaping farm grounds, and 4) producing spray, and treating potato seed.

Plant breeder A.F. Yeager came to the AC in 1919. He introduced the 'North Dakota Earliana' tomato in 1922 and eventually introduced 30 varieties of fruits and vegetables, including the 'Pixwell' gooseberry, the 'Buttercup' squash, and the 'Yeager Sweet' apple, named to honor his contribution to prairie horticulture.¹⁷

By 1920, North Dakota's population was 646,872, and it had 77,690 farms, of which 70 percent grew over 4 million

bushels of potatoes valued at over \$10 million. Nearly 67 percent of North Dakota's farms had garden valued at over \$3 million¹⁸

Seeds were affordable. A half-ounce packet of vegetable seeds cost 5 cents, onion sets 20 cents a pint, and seed potatoes \$1 per half bushel.¹⁹ Will's seed catalog listed most of the items in French, German, and Norwegian, as well as English.

According to the 1928 North Dakota Agricultural Economic Conference, the cost of an average one-eighth acre garden was \$23: \$7 for seeds and transplants, \$10.50 for 30 hours of man labor at 35 cents an hour and \$5.50 for 55 hours of horse labor at 10 cents an hour. The value of the garden was about \$83, which should have produced the 2,900 pounds of vegetables required to feed a family of six.²⁰

DEPRESSION YEARS IN NORTH DAKOTA

North Dakota's per capita income in the 1930s dropped to \$145 a year compared to the U.S. average of \$375. The farm population dropped 17 percent, and more than 120,000 people were forced to leave the state. One-third of North Dakota's population was on relief.²¹ Waldron stated that one of the most important steps toward farm relief was to reduce living costs by growing a good farm garden. He claimed that, in spite of unfavorable conditions, a considerable amount of healthful and nutritious food could be produced on a well-cared-for quarter acre of land.²²

In 1932, Yeager stated,

"The continuous expanion, intense effort to increase financial income, low self-sufficiency, high dependence on cash income and frequently, soil exhaustion, is responsible for getting many distressed farmers into their present predicament. A farm home that produces the fruit, vegetables, meat, eggs, milk and butter needed for family use is the one on which depression strikes comparatively little."²³

In 1934, the average value of a garden in North Dakota was \$29 per farm compared to the normal value of \$52, not including potatoes or sweet potatoes. The severe drought and the onslaught of grasshoppers almost wiped out gardens in the western half of the state. The Dickinson Experiment Station recommended that half of each garden be summer-fallowed each year to conserve moisture.

The 1935 Agricultural Census reported that the drought and grasshoppers had left nearly 80 percent of North Dakota farms without a garden. But some North Dakota gardeners raised creditable gardens with snow traps similar to those the Indians used to provide added moisture. The value of vegetables grown for farm households in North Dakota was slightly over \$200,000 compared to nearly \$1 million in 1930 and over \$3 million in 1920.²⁴

Victor Lundeen, the first extension horticulturist at the AC, drew up a project to stimulate interest in a live-at-home program, which stressed the value of a garden, organized garden clubs, supplied horticultural information, and demonstrated pruning, hotbeds, garden tools, storage, and small-scale irrigation.

In 1936, Oscar H. Will urged farmers to forget wheat and to concentrate on corn, vegetables, and feed crops for livestock much as the Indians did. Will's catalogue offered collections of vegetable seeds for 60 cents to \$1.

NORTH DAKOTA VICTORY GARDENS

The most important vegetable crop North Dakotans grew during the first 50 years was potatoes. Most families grew them as a dietary staple whether or not they grew other vegetables.

By 1940, only 61 percent of North Dakota farms reported gardens. An intensive state garden program was launched in the spring of 1941 to make the farm and small-town garden a part of every household, and 168 demonstration gardens were planted across the state to promote better gardens.

With the advent of World War II, North Dakota gardeners, as well as gardeners nationally, were asked to donate vegetable seeds for the British War Relief.²⁵ In the fall of 1941, North Dakota was asked to increase the number of gardens by over 13,000 in 1942 as its part of the National Defense program to increase production of protective foods for defense purposes. Towns rented garden plots on vacant lots for a small fee.²⁶ By March 1942, North Dakota had launched a statewide coordinated Victory Garden program. Over 40 organizations formed a plan for an adequate garden on every farm that year.

The North Dakota Victory Garden Program of 1942 was one of the most successful in the nation with 86.9 percent of all homes in North Dakota having gardens. Only 13 percent of the state's households bought potatoes for winter supply. Most districts shared a surplus of garden vegetables with those who did not have gardens.

In 1943, county extension agents helped to reorganize and rebuild garden clubs in every county to encourage more and better Victory Gardens.²⁷ The tightening of the food rationing program convinced people to garden. A Gallup poll that spring showed 21 million U.S. families planted a garden compared to 14.5 million in 1941.²⁸ An estimated 90 percent of all North Dakota farms and 82 percent or urban homes had an adequate garden. So successful was North



Kindred squash, an NDSU variety.

Dakota's Victory Garden Program that it received national attention and was used as a model for other states.²⁹

Garden seed sales in North Dakota rose 15 percent in 1944 compared to a drop of 15 percent nationally. The number of gardens in North Dakota leveled off in 1944 and 1945; however, both years were cold and wet, decreasing the amount of vegetables produced. From 1941 to 1944, garden seed sales had risen over 200 percent in North Dakota.³⁰

POSTWAR GARDENING IN NORTH DAKOTA

Farm gardens continued the same in 1945 and 1946, but urban gardens dropped because so many of the garden plots were sold for building purposes.³¹ In 1947 and 1948, vegetable seed sales in North Dakota remained high due to the high cost of canned vegetables.³²

Governor Fred Aandahl asked North Dakota families to raise their own vegetables as part of North Dakota's contribution to a nationwide USDA Freedom Garden Drive, the 1948 version of the Victory Garden Program. Demonstration gardens were maintained across the state. Nine main vegetables were recommended for an adequate garden: 'Tendergreen' beans, 'Detroit Dark Red' beets, 'Copenhagen Market' cabbage, 'Chantenay' or 'Coreless' carrots, 'Lucullus' chard, 'Golden Bantam' or 'Earligold' sweet corn, 'Early Ohio' and 'Pontiac' potatoes, 'Buttercup' squash, and 'Chatham' or 'Firesteel' tomato.

"Plant America" was the slogan of a nationwide drive in 1950 to make America more attractive. The objective of the program was to conserve land.³³ The government once again was promoting war gardens.³⁴

The per capita consumption of cereal grains and fresh potatoes had declined by 1960 while the per capita consumption of fruits and vegetables had increased. However, potato consumption had stabilized and showed promise of increase because of the variety of processed potato products.

CHANGES IN NORTH DAKOTA GARDENING

Shorter work weeks, earlier retirement, and longer vacations in the sixties all contributed to increased leisure time and to a greater interest in gardening, which included lawns, shrubs, flowers, and trees as well as fruits and vegetables. More than 40 million amateur gardeners spent over \$4 billion on lawns, gardens, and yards in 1964.

During the 1970s, fruits and vegetables constituted 40 percent of the daily diet. The NDSU Horticulture Department, with about 10 horticulture majors in the late 1960s, had increased to over 120 by the late 1970s. A new self-teaching program on vegetable gardening was created in 1977. "Everybody's Garden Guide," an illustrated booklet, was distributed to 4-H members with garden projects.

A Gallup survey showed that 51 percent of households in this country had some kind of vegetable garden in 1976, the first time since World War II Victory Gardens that a majority of households had a garden. Of the 49 percent who did not have a garden, 40 percent said they would if they had the space.

In 1979, the county extension staff in every North Dakota county was surveyed. Generally, they felt gardening could reduce food budgets. Socially, gardening had become an excellent form of recreation.

Selected older members of the North Dakota Horticultural Society completed as questionnaire in 1989 about their parents' gardening experiences. Of the 35 questionnaires sent out, 33 were returned, representing nearly half of the counties in North Dakota. Many of the respondents had one or more foreign-born parents, representing 11 European countries. Most said gardens were a necessary part of their food supply, especially in times of hardship, and were their only source of fresh fruit and vegetables in their early years. Sixty-seven percent raised cabbage and processed sauerkraut, and 97 percent raised cucumbers which they pickled.

The responses reflected that, regardless of the gardener's ethnic heritage, within one generation all garden contained the same produce, including what grew well in North Dakota and what was available from local seed catalogs. The only exception was the German Russians who planted sunflowers.

Gardening in North Dakota gradually will decline. More attention will be devoted to lawns, shrubs, shade trees, and flowering plants. Technology will provide better varieties and plants that are easier to care for. Gardening will change from need and production to convenience and appearance.

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Continued from page 11

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