
Oregon Agricultural College

Experiment Station

Division of Horticulture

The Culture of Small Fruits on Irrigated Sandy Land

BY

R. W. ALLEN

Superintendent of the Umatilla Branch Experiment Station



CORVALLIS, OREGON

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THE CULTURE OF SMALL FRUITS ON IRRIGATED SANDY LAND.

By R. W. ALLEN,

Superintendent of the Umatilla Branch Experiment Station.*

The success of small fruits on irrigated sandy soils depends a great deal upon the treatment of the soil, and the selection of a suitable location. Careful irrigation and frequent use of fertilizers are necessary for satisfactory results. Much small fruit should be grown for home use. There are possibilities, also, for the successful establishment of a commercial industry in growing dewberries and other hardy and productive small fruits. Such an undertaking, however, should be handled cooperatively and with caution.

Extensive variety tests of strawberries, raspberries, and blackberries have been made, and definite knowledge has been gained of their comparative hardiness and value.

Choice of Location.

Rich, damp soil is necessary for vigorous growth of plants required to produce large and well-flavored fruit. South and southwest slopes should be avoided, on account of the direct exposure to the sun and wind. Suitable places are found in the lee of windbreaks, orchards, or groups of buildings. High land is preferable, especially for strawberries, as it is less frequently visited by killing frosts.

Convenience to the farm buildings is important, as much less travel is required in caring for the plantation and in harvesting the crop. The small number of plants necessary for family use should be located in a convenient plot near the house.

Soil Requirements and Fertilization.

Land upon which small fruits are to be grown should be thoroughly prepared for irrigation, and heavily fertilized with green or stable manure. At frequent intervals after planting, the land should be fertilized, as it is necessary to force a vigorous growth to get quantity and quality of fruit. Liberal application of manure should be made at least once in two years, and oftener if possible. Fine or decayed manure is preferable to coarse manure.

Small fruits do fairly well on fine types of soil, or in subirrigated locations, but they do not thrive on raw sandy land; hence they should not be extensively planted in such soil.

*The Umatilla Branch Experiment Station is located on the Umatilla Irrigation Project near Hermiston, Oregon. It is supported and operated by the State of Oregon and the United States Government. The work is being directed by the Division of Horticulture of the College, and the Office of Western Irrigation Agriculture of the Department of Agriculture.

Climate.

Although climatic conditions are favorable for growing many varieties of small fruits for home use, only a few varieties can be grown successfully for commercial purposes.

Warm days and dry winds, which occur during the harvest season of cane fruits, hinder proper development of exposed fruit by scalding and drying it. Short crops and poor quality frequently result from this cause. It is important, therefore, that all such plants be protected from the direct contact of the wind. Careful selection of sheltered and comparatively frost-free locations is necessary for best results.

Killing frosts seldom occur later than April 30. The average date of the last spring frost for a period of eight years is April 25. Strawberry blossoms are frequently injured, especially on low land, and the earliest blossoms of dewberries are also sometimes injured by late frost.

The season is generally warm, which causes early maturity of fruit and a high content of sugar.

The winters are too cold for Loganberry, Phenomenal and Mammoth. Extreme low temperatures, which range from 16 to 27 degrees below zero, infrequently injure the Snyder, Wilson, Lawton, and others of the stiff-caned blackberries. Dewberries, red and black raspberries, currants, gooseberries, and strawberries do not suffer seriously from low temperatures, if the land is kept moist.

Propagation.

To get plants of known variety and of desirable vigor, much care should be exercised in selecting parent plants and in propagating from them. Lack of proper interest and care in this work frequently results unsatisfactorily by lowering the vigor of plants, and the yield and quality of fruit.

Red raspberries, evergreen and upright caned blackberries propagate readily by suckers. Black raspberries, dewberries, the Loganberry, Phenomenal, Mammoth, and Evergreen blackberries propagate readily by burying the tips of the current season's growth in moist soil in the early fall.

Currants and gooseberries propagate from cuttings of the current year's growth. Pieces of cuttings from 6 to 12 inches in length should be taken in the fall or early spring, and planted deep in moist soil. New plants can also be started by placing a mound of dirt in and around growing plants. When dirt is placed over the forks of the plants during the growing season, and kept moist, roots will form on the branches, making each a well-rooted plant when removed.

The process of propagating plants of the small fruits is quite simple and can be done by anybody who is careful and observing.

Planting.

On account of the liability of drought during the winter season, when irrigation water is not available, all planting should be done in

the spring. Plants do best when set out as early as water is available with which to moisten the soil. Where seepage occurs and a uniformly moist condition of the soil is assured, fall planting is advisable.

The distance at which plants of the different kinds and varieties of small fruits should be planted varies according to the wide range in size of the plants.

Strawberries should be planted in rows 36 to 40 inches apart. All runners should be removed to prevent their taking root and causing the rows to become too wide and thick. Such rows are called matted rows, and are very difficult to keep free of weeds. The hill system with plants about 18 inches apart, or the hedge row, made by permitting a few plants to take root in such a manner as not to widen the row, are desirable ways to plant. The necessary vigor of growth and size of fruit will not be had if the plants are permitted to become crowded.

Currant and gooseberry plants should be set about 4 feet apart in rows 4 to 6 feet apart. Dewberries, raspberries, and upright caned blackberries should be 4 feet apart with 6 feet between the rows. Where the growth is quite vigorous more space is desirable. Dewberries and blackberries should be 4 to 6 feet apart in the rows; black raspberries 3 to 5 feet apart in rows 6 feet apart. The trailing varieties of blackberries require considerable more room. The Evergreen and Mammoth should be planted at intervals of 10 to 14 feet in rows 8 to 10 feet apart. The Himalaya, Phenomenal, and Loganberry do well 6 to 8 feet apart both ways.

Irrigation.

These fruits are native of humid climates and require a liberal supply of moisture to do their best. Frequent light irrigations should be made by means of shallow furrows sufficiently close to insure even and thorough moistening of the soil, or by flooding the spaces between the rows of plants.

The interval between irrigations, which is influenced largely by the character and condition of the soil, ranges from 6 to 21 days. The irrigations should be more frequent during the fruiting season than at any other time. This is necessary to give size to the fruit and duration to the picking season.

Cultivation.

Frequent shallow cultivation should be practiced up to picking time to keep the land warm and loose. During the remainder of the season infrequent cultivation is necessary to prevent hardening of the soil, and heavy loss of moisture by evaporation.

Deep cultivation is not advisable as many of the roots of these plants develop close to the surface of the ground and are easily destroyed.

Where a tendency occurs for the soil to be moved by the wind, cultivation should be discontinued and the land protected by a covering of manure or straw.

Pruning and Training.

All runners should be removed from fruiting strawberry beds, as they diminish the vitality of the plants and shorten the yield. New plants from runners subsequently crowd the original plants; this results in weakening of the entire bed.

Raspberries and stiff-caned blackberries may be trained to best advantage by pruning off the ends of the new canes when they are from 2 to 4 feet tall, depending upon the vigor of growth. Figure 1 shows the manner in which one of the most successful small-fruit growers in the Kennewick district, Washington, prunes his black raspberries. The bushes can be supported, when necessary, by being tied to stakes set near each hill, or by wires run between posts along each side of the row forming a trellis.

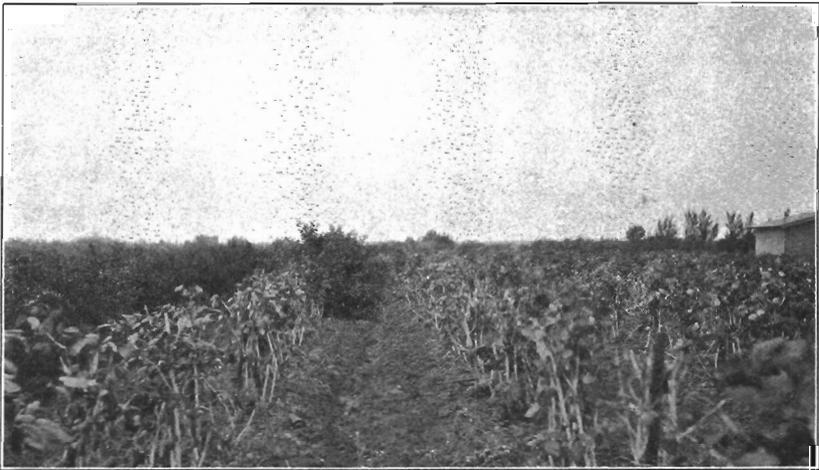


Fig. 1. Black raspberry patch pruned, July 16, 1916. The old canes are removed at this time and the new ones thinned to 6 or 8 in a hill, half of which are cut off one foot above the ground and the remainder two to two and one-half feet high. This system was worked out by a very successful grower.

Dewberries and the trailing varieties of blackberries should be pruned in like manner, as the forcing of branches on the new growth is often advisable to increase the fruiting area. They should be supported by a low trellis made in the manner just described.

In the fall or winter all the present year's fruiting wood of the cane fruits should be removed and burned or otherwise destroyed. When left in the rows it frequently furnishes harboring places for diseases that are injurious to the plants or fruit. If diseases such as rust and anthracnose exist in the district, the canes should be removed and destroyed as soon as the harvest is completed.

Currants and gooseberries are best pruned by removing about one-fourth of the oldest wood in the plants, each year. This prevents the

accumulation of old and unfruitful branches and keeps the plant in an open and vigorous condition.

Winter Protection.

Experiments in covering strawberry beds with straw showed no appreciable benefit resulting from the practice.

Numerous buds of Himalaya, Phenomenal, and Loganberry winterkill on unprotected plants. This results in a light crop of foliage and fruit. Plants covered with straw or soil, present a very similar appearance. Covering these tender varieties has not proved successful here. It is advisable, however, to press the new growth down close to the ground so that slight snowfall will cover it over. Other varieties of cane-fruits, gooseberries, and currants are seldom injured severely, and covering is not necessary for them.

Renewing Beds.

Beds of strawberries and other small fruits should be renewed periodically. If this is not done, the ground becomes exhausted; the plants become crowded; weak, and unproductive.

Strawberries should not be kept to exceed four years. Three years is better practice, and many growers report even greater net returns from beds kept only two years. Cane-fruits do well for eight or ten years, and frequently thrive for a much longer period when well cared for. When the growth becomes weak, the rows spread out too much and the roots of the old plants become dry and hard; hence new plants should be set and the old ones torn out. Gooseberries and currants, under proper care, remain strong and productive for many years.

Varieties.

The following recommendations of varieties for home and commercial production are made upon the basis of the opinions of growers and dealers, and upon extensive variety tests, the results of which are given below.

Strawberries. For marketing, Clark (Clark Seedling), Gold Dollar, and Gibson are preferable. For home use the list might be enlarged to include New Oregon, Arizona, or Kansas.

Currants. The hardiest common varieties, such as Fay, Perfection, and Lee, do well with proper care.

Gooseberries. Oregon Champion and Smith are desirable for marketing or for home use. Both grow vigorously and are prolific. The Smith is rather late, and of excellent quality, but tends to bear in alternate years. The Oregon champion bears regularly, producing an early, large, and rather soft fruit, of good quality. Houghton is a hardy and productive variety having small fruit.

Red Raspberries. Louden and Cuthbert are the most used and most desirable varieties. The Louden ripens through a comparatively long

season, can be gathered while yet firm, and ships well. The Cuthbert is productive, of excellent flavor, ripens through a short period, but is soft and does not ship as well as the Louden.

Black Raspberries (Black Caps). Cumberland, Atlas, Munger, and Kansas are desirable varieties. The Cumberland is less injured by warm weather and ripens earlier than the Kansas. Munger is early, vigorous, and productive.

Dewberries. Premo and Lucretia are the best varieties. Premo produces a small amount of early fruit. The Lucretia is early, although later than Premo, and produces abundant crops of excellent fruit.

Blackberries. Wilson, Lawton, and Kittatinny are choice varieties. The Wilson is vigorous and produces heavy crops of fruit of good quality that matures seven to fourteen days before the Lawton, which is the leading commercial variety of this district. The Kittatinny is similar in habit of growth, season, character, and quality of fruit, but it is slightly inferior to the Lawton and is frequently less productive.

Insect Pests and Diseases.

Pests and diseases of small fruits in this district are neither numerous nor difficult to control; others that are more serious, however, might make their appearance at any time.

Strawberry Leaf-roller. This insect rolls up the leaves of strawberry plants by drawing or folding the parts together, and spins its pupating cocoon in the protected place thus afforded. It can be held in check by mowing off and burning the tops of the plants as soon as the crop of fruit is harvested.

Other Insect Pests. Such insects as the strawberry root weevil, strawberry crown miner, strawberry root borer, currant maggot, raspberry cane maggot, and blackberry crown borer have not been found. Serious injury to plants and failure of crops frequently result from the attack of these pests, and their appearance should be carefully watched for.

Recommendations for the control of these insects, with descriptions of their work and appearance, are given in the First Biennial Crop Pest Report of the Oregon Agricultural College, pages 122 to 136*

Crown Gall. This disease is quite common on raspberry and blackberry plants. It usually attacks the roots and seriously weakens the entire plant. Affected stock should not be planted, and all plants found to be affected should be removed from the field and destroyed. Land on which diseased plants have grown should not be used for others.

Powdery Mildew. This fungous disease attacks and seriously injures gooseberry plants. It can be quite effectively controlled by spraying once with lime-sulfur in the winter, and several times in the spring, using the strength of spray recommended for these seasons.

*This reference is of value only to persons having copies of the First Biennial Crop Pest Report which is now out of print.

Anthracnose and blight of cane fruits, and Leaf Spot of the strawberry are not known to occur here, but might be found at any time. Recommendations for their treatment are given in the First Biennial Crop Pest Report, pages 261 to 268.*

Commercial Production.

Dewberries, strawberries, and gooseberries give promise of being of commercial importance and can be grown to advantage on well-prepared land by careful persons. To be successful, beyond supplying some small local markets, a commercial industry should be developed cooperatively on a sufficiently large scale to permit shipping regularly at frequent intervals throughout the season, and in sufficient quantity to furnish a continuous supply to all markets opened up. Extensive planting, however, should at first be undertaken with caution.

Strawberries do not produce heavy yields on the coarser soils, and they are frequently injured by frost. Gooseberries succeed under a wide range of conditions, and can be produced very cheaply in some localities. At best, the market is easily supplied with them. Dewberries offer the best opportunity for extensive planting on account of their hardiness, heavy yields, and early maturity. The Lucretia variety is to be preferred.

There is no indication that extensive production of blackberries, raspberries, and currants could be handled profitably in this district at the present time. Numerous factors tend to increase the cost of production above that of the humid districts; the yields are lighter here than in the coast regions, and much of the fruit grown is inferior in quality, except in small and unusually well-favored locations. The local demand and nearby markets might be supplied to advantage from small favorably located and properly cared for plots.

Small Fruits for Home Use.

Every home garden should contain a few bushes of a number of kinds and varieties of small fruits. These should be chosen to give a succession of fruit from the earliest strawberries to the latest maturing blackberries. This can be accomplished by proper selection of varieties of the different kinds.

The following suggestion is offered as a guide in selecting such a list of fruits: Clark Seedling (which is the earliest of the 70 varieties tried), Arizona Everbearing, New Oregon, Magoon, Sample, or Kansas strawberries; Oregon Champion or Smiths' Improved gooseberries; Fay or Lee currants; Munger or Kansas, and Loudon raspberries; Lucretia dewberries; Wilson, Lawton, and Evergreen blackberries. The Evergreen blackberry should not be planted near fences or ditches, as it tends to spread and cannot be properly controlled in such locations.

*This reference is of value only to persons having copies of the First Biennial Crop Pest Report which is now out of print.

RESULTS OF EXPERIMENTS.

The results of tests covering 70 varieties and other experiments with strawberries, 7 varieties of currants, 8 of gooseberries, 4 of dewberries, 16 of red and black raspberries, and 15 of blackberries are briefly stated below.

Condition Under Which Experiments Were Conducted.

The varieties of small fruits were tested under very exacting conditions. The work was begun as soon as the land was graded; hence no windbreaks were established for protection and the land was not enriched by the use of manure or other fertilizer.

Strips of rye were grown at frequent intervals through the field, but afforded very scant protection to the soil and plants. More or less of



Fig. 2. A portion of the variety test of small fruits at five years of age. The upright caned blackberries at the left and trailing varieties at the right, July 23, 1914.

soil erosion occurred at times which resulted in the destruction of foliage, and sometimes in the removal of sufficient soil to expose the roots of the plants.

Irrigations were applied frequently and the plants were protected by shading with small boards or straw, but a heavy loss of currants and raspberries occurred. No attempt was made to improve the soil, as vetch could not be used to advantage on account of the rows being close together, and manure was not procurable. The determinations on comparative hardiness were quite definite, but those on quality and value of the fruit could not be so definitely made. Varieties in this experiment that are termed large or vigorous are such in comparison with others under the same conditions, but would not be so considered in comparison

with plants growing under congenial surroundings. Figure 2 shows the appearance of the most successful portion of the field in July, 1914, when the plants were in their fifth year.

Strawberries.

Twenty-five plants of each of the following varieties were grown in a test to determine their comparative value:

Acme, Arizona, Aroma, August Luther, Auto, Autumn Belle, Beaderwood Beedler, Bismark, Brandywine, Bubach, Buster, Cardinal, Chesapeake, Clark, Climax, Clyde, Corsican, Crescent, Dorman, Enormous, Excelsior, Fendall, Gibson, Glen Mary, Gold Dollar, Goodell, Good Luck, Grandy, Haverland, Heritage, Highland, Hopkins Choice, Hummer, Kansas, Klondike, Lady Thompson, Lake Washington, Longfellow, Lovett, Magoon, Mark Hanna, Marshal, Michel's Early, Midnight, Miller, Morse, New Oregon, Nick Ohmer, New York, Oregon Iron Clad, Oswego, Ozark, Parker's Early, Parson's Beauty, Paul Jones, Pride of Michigan, Pocomoke, Sample, Senator Dunlap, Sharpless, Sixteen-to-One, South Dakota No. 1, Splendid, St. Lewis, Steven's Late Champion, Tennessee Prolific, Texas, Thompson's No. 2, Virginia, Warfield, Wm. Delt, Wolverton.

The six heaviest producing varieties in 1911 with calculated yields in pounds per acre were as follows: Miller, 2842; Sample, 2723; Texas, 2592; Arizona, 2232; Gold Dollar, 1307; and Cardinal, 1279.

In 1912 the yields in pounds per acre were, Sample, 2789; Grandy, 2193; Texas, 2187; Arizona, 1907; Gold Dollar, 1836; and Magoon, 1833.

The highest producers in 1913 were Parson's Beauty, 3661 pounds; Crescent, 3301; Texas, 1678; Arizona, 1853; Gold Dollar, 1497; and Stevens, 1383.

The 1914 crop was so light on account of frost that no attempt was made to record it.

Many varieties produced no more than two or three hundred pounds per acre at any one crop. Some were on land from which the surface had been removed by grading, so that but little could be expected from them. The yields shown above were all from varieties growing on the best soil in the plot. On account of this uneven condition of the land, with its consequent influence upon the growth and yield of the respective varieties, comparison of the success of those grown on the best soil only can be made.

Of the heaviest yielding varieties enumerated above none but the Gold Dollar is considered a good shipper. The Thompson should go to nearby markets in good condition. The others are soft and juicy, do not hold up well after packing, and are good for home use only.

After closely watching the growth, yield, and character of fruit of the numerous varieties in this test, it was decided that the Clark Seedling, although a light producer, is preferable for commercial production. This is on account of the fruit being smooth and uniform in shape, firm, highly colored, and of excellent flavor. It produced 774 pounds per acre in 1911, 609 in 1912, and 227 in 1913. Fair yields are produced on properly prepared soil. Table I gives the average date of blossoming and maturity of fruit of the varieties that fruited, and of the Clark Seed-

ling for three years, 1911, 1912, and 1913; also, the interval between the appearance of the first blossoms and maturity of the first fruit.

Table I. Average date of blossoming and date of maturity of fruit of all varieties that blossomed or fruited, (compared with similar observations of the Clark Seedling variety.

Year.	Variety.	First blossoms.	First ripe.	Days to develop.
1912	Average of the 10 that fruited	4-20	5-19	29
	Clark Seedling	4-18	5-16	28
1913	Average of the 63 that fruited.	4-24	5-27	33
	Clark Seedling	4-21	5-19	28
1914	Average of the 49 that fruited	4-14	5-19	35
	Clark Seedling	4-10	5-11	31
Average	4-18	5-19	31

Value of Different Methods of Setting Plants. To determine the method of setting strawberry plants best suited to this locality, 4 one-eighth acre plots were set to Clark Seedlings in the fall of 1910. The plants were set in double and single rows for hedge rows, in single rows with which to develop matted rows, and by the hill system. The growth of all plants was so weak that insufficient runners appeared with which to establish hedge and matted rows. Table II gives the yield of fruit from the respective plots in 1912 and 1913.

Table II. Yield of fruit from plots of strawberries in which the plants were set by four methods of planting that are in common use.

Plot	Quarts 1912	Quarts 1913	Average per plot	Calculated acre yield, qts.
Double hedge row	87.5	109.0	98.25	706
Single hedge row	62.5	70.0	66.25	530
Matted row	29.0	38.0	33.50	268
Hill system	39.0	23.5	31.25	250

Soil conditions were best in the first two plots, which contained the most plants. The acre yield is larger in these two than in the other plots, but the yield per plant is larger where the fewest plants were grown.

Winter Protection for Strawberry Beds. A thin covering of straw was put on a small area of one-year-old strawberry plants in the fall of 1911, to determine its value for winter protection.

When the mulch was removed in the spring the foliage of the covered plants was darker in color than that of the plants not covered, but no benefit could be seen to have resulted from the treatment at that time, or later in the season.

Currants.

Twelve plants each of Black Champion, Black Naples, Fay, White Grape, and Lee were planted in 1910; and 24 plants of Cherry and Perfection in 1911. All died out by the end of the third year although the ground about them was protected by a mulch of straw, and irrigation was applied frequently. Fay and Perfection survived longest.

Gooseberries.

Twenty-four plants each of Downing, Industry, Josselyn, Oregon Champion, Pearl, Smith, and Victoria were set out in 1910, and 14 of Houghton in 1912.

Oregon Champion, Smith, Victoria, and Houghton did fairly well. They fruited heavily, but on account of very weak growth have not given satisfactory results.

Dewberries, Phenomenal, Loganberry.

Four varieties of dewberries, Austin, Gardena, Lucretia, and Premo were planted. The Austin soon died out entirely, the plants not being hardy. The Gardena grows slowly, and produces light crops of early fruit that is small, irregular in shape, and sweet. Lucretia is much the best variety for home and commercial planting. It grows vigorously and produces heavy crops of fruit that is of good quality and ships well. The Premo is not usually as vigorous as the Lucretia. It produces a very light crop of small and irregular shaped fruit that is sweet and soft.

Dewberries are excellently adapted to this region on account of their habit of growth. The low dome-shaped plant is not seriously disturbed by the wind; and the heavy growth of foliage covers the fruit and protects it from the drying influence of sun and wind. They are hardy, growing fairly well on new land, and the berries mature at a time early in the season when little other fruit is available.

The Phenomenal and Loganberry succeed in similar manner. The plants are seldom vigorous, and grow irregularly. But few blossoms and a very light crop of fruit appears. Many buds are destroyed by low winter temperatures. Similar results follow covering the plants for protection in winter. They are not successful unless in well-protected locations, and are of little commercial value.

Raspberries.

Fifteen varieties were tried which include some of red, purple, and black. Red varieties: Brandywine, Cardinal, Cuthbert, Loudon, Miller, Japanese (Wine-berry); Purple varieties: Columbia, Haymaker, Schaffer; Black varieties: Atlas, Cumberland, Gregg, Johnson, Kansas, and Munger.

On account of the exposed location and raw infertile condition of the soil, none did well except Atlas and Munger. These two varieties are

very hardy, making a desirable growth where others died out. They set a heavy crop of fruit each year. The last berries do not develop on account of the influence of warm, dry weather. Under more congenial conditions these varieties should do well.

Blackberries.

Early Harvest, Eldorado, Erie, Evergreen, Himalaya, Kittatinny, Lawton, Mammoth, Mersereau, Rathbun, Snyder, Wilson, and Ward were grown. Heavy loss of plants occurred in getting them started, but thereafter the loss was light.

Wilson, Kittatinny, Lawton, and Mersereau gave best results in the order named.

A brief statement regarding each variety follows:

- Early Harvest: None of the plants survived.
- Eldorado: Plants weak, low, spreading. Fruit small, irregular in shape, firm, and rather sweet. Crop light.
- Erie: Plants weak, low, spreading. Fruit small, irregular, good flavor. Crop very light.
- Evergreen: Plants small for this variety, but hardy, low, and spreading. Fruit ranges, according to vigor of plant, from small to medium in size, and fair to good in quality. Crop light, matures late and through long season. Desirable for limited use.
- Kittatinny: Plants vigorous, upright, branched. Fruit medium size, firm, tart. Crop medium to heavy; matures rather early. A good home or commercial variety.
- Lawton: Plants vigorous, upright, and branched. Fruit medium size, fleshy, firm, fairly sweet. Crop heavy, midseason. One of the best commercial varieties.
- Mammoth: Plants rampant growers, spreading, and seriously injured by extreme low temperatures. Fruit small, round, soft, and sweet. Crop light and ripens through a long period. Not a desirable variety. Might be used to a limited extent in the home garden.
- Mersereau: Plants strong and vigorous, upright. Fruit small to medium, soft, sweet. Crop fair, midseason. Desirable for home use.
- Rathbun: Plants vigorous, canes slender, curved, making rows wide. Fruit small, irregular in shape, sweet, rather soft. Crop very light, midseason.
- Snyder: Plants small and weak. Fruit of poor quality and scarce.
- Wilson: Plants vigorous (largest in experiment), upright. Fruit medium to large, rather firm, highly flavored, sweet. Crop heavy, matures early. Most successful and desirable variety under conditions of this experiment.
- Ward: Plants hardy, vigorous, upright. Fruits small, firm, sweet, crop abundant, midseason. A desirable variety for good soil.