



## PLANT SCIENCES

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NEW YORK STATE AGRICULTURAL EXPERIMENT STATION, GENEVA, A DIVISION OF THE NEW YORK STATE COLLEGE OF AGRICULTURE AND LIFE SCIENCES, A STATUTORY COLLEGE OF THE STATE UNIVERSITY, CORNELL UNIVERSITY, ITHACA

# Fruit varieties in New York State: Berries

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There are many good small fruit varieties available for home garden or commercial planting. The wide climatic variations and soil types within New York State influence the performance and recommendations on varieties. Nurserymen, commercial growers, processors, chain store buyers, and home gardeners all have definite ideas about the relative importance of different varietal characteristics.

The commercial grower is interested in high annual yields, the chain store buyer in long shelf-life, and the home gardener in high quality, freezing ability, and suitability for culinary purposes. Dessert quality is considered less important in a market variety. High quality or flavor may stimulate greater fruit consumption, but increased firmness may be necessary to get the fruit to the consumer in good condition. Most purchases are made on eye-appeal rather than quality. In many berry crops, large fruit size has great appeal. Disease tolerance or resistance may be important only when soil or surroundings present a disease problem. Many growers are fumigating their soils, thus eliminating the need for certain resistant varieties.

In some areas, competition with other growers, as well as market preferences, may determine whether an early- or late-ripening variety is planted. In choosing a variety, the grower must also consider how much labor is available to care for and to harvest the crop. On dairy farms, for example, the harvesting of strawberries and raspberries often conflicts with haying.

Some home gardeners will choose high quality varieties despite size or productivity. It is possible, with early- and late-ripening strawberries, everbearing varieties, early-, late-, and fall-bearing raspberries, blackberries, blueberries, currants and gooseberries, to have an abundance of fruit from early June to mid-October.

A variety should not be chosen for New York on the basis of a glowing catalog description or because it has proved itself in other areas such as the South or California. New varieties developed at experiment stations in the Northeast, USDA programs, or Canada should be considered.

Unusual weather conditions or the failure of plants to grow well may cause poor performance in a variety which might eventually do well. New varieties should therefore be tested for at least two or three crop seasons.

The recommendations in this publication are based on New York State Agricultural Experiment Station data and on reports from cooperators. For further information, contact your local county extension agent; the small fruit extension specialist at Cornell University, Ithaca, N. Y.; or the Department of Pomology and Viticulture, New York State Agricultural Experiment Station, Geneva, New York.

Growers should carry out their own test of promising new varieties and meanwhile follow variety performance on other farms in the same area. Soil type, moisture, drainage, exposure, and temperature are important in varietal performance. Several varieties of each fruit are recommended rather than only one.

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## STRAWBERRIES

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New strawberry varieties are frequently released from breeding programs around the world. Varieties most likely to succeed in New York are those which have originated in areas having nearly the same latitude. Varieties from the southern and West Coast programs have not been of commercial value. The varieties that are generally successful in New York have been produced at the New York State Agricultural Experiment Station, Geneva; the New Jersey Agricultural Experiment Station, New Brunswick; or the Plant Industry Station of the United States Department of Agriculture in Beltsville, Maryland. Strawberry growers should test the new varieties from these stations as they appear. Some of them will be superior to the older varieties.



Figure 1.—Holiday strawberry.

The choice of a variety depends on where and how it is to be marketed. If the principal outlet for the crop is either the auction or a distant market, firmness is essential. Local markets and "pick-your-own" outlets can use softer varieties and place more emphasis on production and dessert quality. Suitability for freezing is also important. The home gardener can grow high-quality varieties that may not be productive or firm enough for the commercial grower. Resistance to diseases such as red stele, root rot, and Verticillium wilt are important only where a disease problem exists. Fumigation can be used to control Verticillium wilt; however, no effective methods have been found to control other soil-borne diseases unless fumigation is done under plastic. Since fumigation is expensive, it should be considered only where a high return per acre can be realized. Virus and nematode-free plants of most varieties are now available from large plant growers.

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## CHARACTERISTICS OF STRAWBERRY VARIETIES

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**Major Varieties:** Most successful and widely adapted.

Earlildawn—Very early, soft, tart, very susceptible to Verticillium wilt.

Catskill—Early, very productive, large, soft, resistant to Verticillium.

Sunrise—Early, soft, large, moderately productive, light colored, disease resistant.

Surecrop—Midseason, moderately productive, good freezer, disease resistant.

Midway—Midseason, very productive, large, resistant to red stele.

Sparkle—Late, productive, good freezer, vigorous, disease resistant.

**Minor Varieties:** Grown on a limited scale in New York.

Redcoat—Early, soft, productive, not disease resistant.

Raritan—Early, medium firm, productive, susceptible to soil borne diseases.

Redchief—Midseason, productive, firm, resistant to red stele and Verticillium wilt.

Guardian—Midseason, productive, firm, rough, disease resistant.

Fletcher—Late, midseason, soft, high quality, moderately resistant to Verticillium wilt and fruit rots.

**Varieties which are rapidly being replaced:** Vesper, Jerseybelle, Robinson, Empire, Midland, Pocahontas, Erie, Redglow.

**New Varieties:** Recent introductions not fully tested but may be promising in certain areas.

Holiday—Early, large, attractive, easy to pick, very firm, good quality.

Veestar—Early, medium size, soft, very productive.

Vibrant—Early, medium size, soft, dark, very productive.

Marlate—Very late, medium size, moderately productive.

**Everbearing Varieties:**

Geneva—Productive, medium size, soft, high quality, slightly dark.

Ozark Beauty—Productive, large, slightly seedy, plants often develop June Yellows.

**Varieties Resistant to Red Stele:** It is not necessary to grow these varieties unless the red stele fungus is present. Red stele is usually serious on poorly drained soils. Resistant varieties are: Guardian, Redchief, Midway, Sparkle, Sunrise, Surecrop, Redglow.

**Varieties Resistant to Verticillium wilt:** This disease is

usually serious in soils where tomatoes, potatoes, peppers, eggplant, etc. have been grown.

**Very resistant varieties**—Catskill, Empire, Surecrop, Guardian, Redchief, Sunrise.

**Moderately resistant**—Fortune, Fulton, Midway, Redglow, Sparkle, Veestar.

**Very susceptible**—Earlidawn, Fletcher, Redcoat, Redstar, Raritan, Vibrant, Holiday, Vesper, Pocahontas.

#### **Best Flavored Varieties:**

Empire, Fairfax, Fortune, Fletcher, Geneva, Suwannee, Sparkle.

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## **RASPBERRIES**

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For many years, commercial raspberry plants were infected with one or more viruses. Today, most nurseries have virus-free stock. It is recommended that no commercial planting be made unless virus-free plants are used as raspberry plantings are long-term investments. Plants infected with visible viruses are of no value for fruit production and serve as a source for spread throughout a planting. Some old stocks may contain latent viruses which produce no visible symptoms on the foliage but reduce plant vigor and productivity. Crumbly fruit is caused by feeding of the tarnished plant bug, at the time of flowering, or tomato ring-spot virus infections. Tomato ring-spot viruses are spread by nematodes in the soil. If certain nematodes are present in the soil, fumigation is highly recommended prior to establishing a planting. For a home garden planting, fumigation is impractical. Virus-free plants are superior in vigor, enable a planting to become established quickly and remain productive.

Plants of different raspberry varieties vary considerably in their resistance to severe winter temperatures and to cold spells following relatively mild weather conditions in the early spring. Management of the planting is important in conditioning the plants to resist winter temperatures. Growers should plant several varieties to determine which are most suitable to their particular locality.

#### **Red Raspberries.**

##### **Summer-fruiting varieties:**

Milton—Midseason, productive, large, vigorous, less susceptible to virus infection.

Newburgh—Midseason, productive, large, fair quality, firm, slightly hard to pick.

Taylor—Midseason, productive, firm, good quality, large, attractive.

Latham—widely grown, hardy, vigorous and productive, fruit very small, tart, not recommended.

Canby—A West Coast variety, often **not** fully

hardy, fruit large, light red, immune to the raspberry aphid.

Amber—Productive, amber-fruited, very soft, high quality, home garden variety.

Viking—Productive, vigorous, very small fruit.

Hilton—Largest fruit of all red raspberries, productive, difficult to pick until fully ripe.

##### **Fall-bearing varieties:**

Heritage—Widely adapted, erect canes, fruit medium size, very firm, good quality, fall crop ripening August 20 at Geneva.

September—Early spring crop, medium size, medium firm, fall crop ripening in late September.

Fallred—Fall crop early ripening, fruits small, productive, tart.

##### **Varieties recommended for trial in Long Island and southern portions of New York:**

Reveille, Scepter, and Citadel released from Maryland; Pocahontas and Cherokee from Virginia.



*Figure 2.—Heritage fall-bearing red raspberry.*

## Black Raspberries.

All black raspberry varieties are susceptible to viruses, orange rust, and *Verticillium* wilt. Precautions against these diseases should be taken if the planting is to be successful and long-lived.

Bristol and Dundee have long been the standard and widely grown in New York.

Jewel, Huron, Allen, and Alleghany are promising new varieties worthy of trial. Morrison, Black Hawk, and New Logan are old varieties not widely grown but sold by nurseries.



Figure 3.—*Jewel black raspberry.*

## Purple Raspberries.

Purple raspberries are hybrids between the black and red varieties. They are very vigorous and productive. They are excellent for canning, freezing, and making jam.

Marion and Sodus are old varieties, occasionally grown.

Clyde, a newer variety, is recommended for planting; it is vigorous, productive, purple dull colored fruit, tart, good quality, medium firm.

Amethyst, a new release from Iowa, is vigorous and productive, very soft, glossy purple, low quality.

## BLACKBERRIES

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Darrow is the best erect blackberry for New York. It is widely adapted, very vigorous and productive; the berries are large, medium firm, glossy, and of excellent quality, ripening early and over a long period of time.

Bailey and Hedrick are satisfactory but not as good as Darrow. Most nurseries have discontinued these varieties in favor of Darrow.

For many years, plants of a sterile type which bloom but do not set fruit have been distributed. These plants are generally triploid and should be discarded since they produce no fruit; such mixtures have been difficult to prevent.



Figure 4.—*Darrow blackberry.*

## BLUEBERRIES

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Blueberries require a sandy acid soil with a pH of 5.0 or preferably somewhat lower for best performance. It may be necessary to completely enclose a planting or cover bushes with netting when the fruit is ripening to prevent severe loss or damage by birds. The varieties suggested are of the high-bush type, the plants growing to a height of about 6 feet and 5 feet in diameter.

Blueberries are available for nearly 8 weeks from

the first picking of Earliblue to the last picking of Coville or Lateblue. Two or more varieties should be planted to provide cross-pollination. Cross-pollinated flowers produce larger berries that ripen somewhat earlier than the berries from self-pollinated flowers. Winter temperatures lower than -20 F may injure the plants of some varieties.



Figure 5.—Blueray blueberry.

The following varieties are listed in order of ripening:

Earliblue—Very early ripening, large, fair quality, productive.

Collins—Vigorous, productive, large good quality.

Blueray—Vigorous, productive, very large fruit, compact clusters, good quality, widely adapted, highly recommended. Bluecrop—Vigorous, productive, very firm, light

blue fruit, good quality when fully ripe, turns color early. Berkley—Vigorous and productive, firm, large, light

blue, mild flavor. Herbert—Vigorous and productive, large, dark

colored, tender skin, very good quality, not recommended for shipping.

Jersey—An old variety, productive, large loose clusters, vigorous, uneven ripening, good quality when fully ripe. Coville—Vigorous, productive, large, firm, tart,

very late, quite winter hardy.

Lateblue—Recommended for trial, very late, large, productive, fair quality.

The hardiest varieties are Bluecrop, Concord, Jersey, and Earliblue. Older varieties which have been superseded and are not recommended are: Atlantic,

Burlington, Cabot, Dixie, Ivanhoe, June, Pioneer, Rancocas, Rubel, Scammell, Stanley, Wareham, Wey-mouth, and Darrow.

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## ELDERBERRIES

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Elderberries are used for pies, jelly, and homemade wine. Commercial plantings are being made to produce fruit for the processor. Elderberry varieties produce little or no fruit when self-pollinated; a planting should therefore consist of two or more varieties. Recommended are: York—vigorous, productive, large berried, and large clustered; Adams No. 2 and Nova are other recommended varieties which are vigorous and productive.

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## CURRANTS

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Since the black currant is the host plant for one stage of the white pine blister rust, a serious disease of white pines, the growing of this fruit is prohibited in New York State.

Red currants are prohibited in the Adirondack and Catskill state park areas, but may be grown elsewhere in the state. The best varieties are: Red Lake, Minnesota 71, Stephens No. 9, and Wilder. White Imperial is the best white fruited variety; it is productive and vigorous, generally grown in home gardens, and superior to White Grape.

Rondom, a Dutch variety, is very productive with large, well-filled clusters.

Rote Spatlese, a German variety, is very late ripening, productive, and vigorous with large well-filled clusters. Both foreign varieties are under a plant patent.

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## GOOSEBERRIES

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The growing of gooseberries is prohibited in the Adirondack and Catskill state park areas but may be grown in other sections of New York State.

The large-fruited English varieties are rarely grown because of their susceptibility to mildew.

Fredonia—Vigorous, productive, greenish-red, large-fruited, good quality.

Chautauqua—Productive, green-fruited.

The American types are somewhat smaller-fruited but resistant to mildew.

Poorman—Highly recommended, vigorous, productive, red, excellent quality.

Downing—Green-fruited and productive.

Pixwell—Green-fruited, small, poor quality.

Welcome—Red, medium size, fair quality, very productive.



*Figure 6.—Poorman gooseberry.*

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**OTHER RECOMMENDED  
SMALL FRUIT PUBLICATIONS**

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Growing strawberries in New York State by J. P. Tomkins and D. K. Ourecky, Information Bulletin 15, Cornell University Extension Service, Cornell University, Ithaca, N. Y.

Raspberry Growing in New York State by D. K. Ourecky and J. P. Tomkins. Cornell Extension Bulletin 1170.

Elderberry Growing in New York State by Roger D. Way, Cornell Extension Bulletin 1177.

Blackberries, Currants and Gooseberries by D. K. Ourecky, Cornell Extension Bulletin 1216.

Blueberries in the Home Garden by John C. Cain and G. L. Slate, Cornell Extension Bulletin 900.

Minor Fruits in New York State by D. K. Ourecky, Information Bulletin 11, Cornell Extension Service, Cornell University, Ithaca, N. Y.

Individual pest control guides for strawberries, raspberries, blueberries, currants, and gooseberries, published each year, are available from the Cooperative Extension Service.