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CORTLAND

NEW YORK STATE FRUIT TESTING COOPERATIVE ASSOCIATION

GENEVA, N. Y.

1934 - 35

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## NEW YORK STATE FRUIT TESTING COOPERATIVE ASSOCIATION

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WHY DO WE NEED NEW FRUITS?



KENDALL

Because there are no perfect fruits and all can be improved in many ways.

How?

Most fruits can be improved in size, color, shape, texture, flavor, and aroma.

- By breeding greater immunity to this disease or that, as pear blight, mosaic of raspberries, apple-scab, peach-mildew, and many others.
- Fruit users need new fruits for new purposes, as canning, freezing, fruit juices, preserves, and earlier or later seasons.
- Fruit growers need better pollinating, earlier bearing, later blooming, better producing, and hardier varieties.
- To secure these and many other improvements the Geneva Experiment Station has been breeding new fruits for a half century. The sorts it has produced can be obtained by fruit growers from the New York State Fruit Testing Cooperative Association.

What is the New York State Fruit Testing Cooperative Association?

It is an organization to test new fruits of which any fruit grower in the world may become a member by paying a fee of one dollar, after which the new varieties listed in the annual catalog of the Association may be purchased at cost. Applications for membership should be made to the New York State Fruit Testing Cooperative Association, Geneva, N. Y.



## SUGGESTED LIST OF NEW FRUITS FOR HOME AND COMMERCIAL PLANTING

The Varieties Starred (\*) are Primarily Adapted for Home Use.

APPLES

Cortland

Kendall

Macoun

Medina

Milton

\*Ogden

Orleans

\*Sweet Delicious

\*Sweet McIntosh

Newfane

Lodi

Early McIntosh

Valiant Veteran

### NECTARINES

Hunter Sure Crop

#### CHERRIES

**PLUMS** 

\*American Mirabelle

Early Rivers Emperor Francis Giant Lyons \*Royal Duke Seneca Victor

Albion

Beauty

\*Formosa

Hall

\*Sannois

Stanley

Brocton

Dunkirk

Santa Rosa

Fredonia Golden Muscat \*Hanover \*Keuka Ontario Portland Seneca Sheridan \*Urbana \*Watkins Wayne

#### RASPBERRIES

June Lloyd George Naples (black) Newburgh

#### GOOSEBERRIES

Fredonia Poorman

#### STRAWBERRIES

Bliss Camden \*Cato Clermont Culver

## PEARS

Cayuga Y. \*Clyde Ewart Gorham

Phelps Pulteney

#### PEACHES

Delicious Eclipse Golden Jubilee Marigold Mikado Oriole

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GRAPES

#### APPLES

McIntosh and Delicious types of apples now find greatest favor, yet all of the varieties of these two types have faults or do not cover apple seasons and purposes. This Association is offering several improved varieties of each type and a few other new apples. All are noteworthy additions to the apple orchard.

**Carlton** ripens one month later than Red Astrachan which it resembles. It is large, round-conic, and an attractive dark red. The flesh is white, tender, juicy, subacid, and of Astrachan flavor. The tree is vigorous and bears annually. Carlton is recommended for home use and for roadside markets.

**Cortland** is an improved late McIntosh. The fruits of the two varieties are similar, but those of Cortland are more oblate, average larger, and are more uniform in size; they have more color and the red is lighter and brighter and the stripings and splashes are laid on differently; the taste of Cortland can hardly be distinguished from that of McIntosh; the flesh is firmer but just as juicy; the season is several weeks later; the apples do not drop so readily and ship better. Cortland is the best apple introduction of the twentieth century.

Who can name an early apple with fewer faults of fruit than a McIntosh ready to eat in August? That is what **Early McIntosh** is. Besides pleasing the taste, this apple pleases the eye. The red is handsome; the uniform round-oblate shape is most attractive and permits packing in various packages in which apples fit well and look well. The trees are vigorous, hardy, healthy, productive, and bear annually. The parents of Early McIntosh are Yellow Transparent and McIntosh. The light color of the wood and the leaf betoken Yellow Transparent; the shape and frame work of the tree, especially the heavy-butted branches, are like those of McIntosh. The crop ripens 10 days later than that of Yellow Transparent.

Of all the McIntosh seedlings originated at the Geneva Station, Kendall, the last one to be introduced, is by far the most attractive. It is handsomely colored over the entire surface with dark red covered with a rich bloom. It has attracted more attention from fruit growers than any other new apple. Its season is about that of McIntosh, but it keeps a little longer. The apples are large, trim in outline, and possess the whitish, fine-grained flesh of McIntosh. The flavor is much the same but more sprightly than that of McIntosh. The apples hang better than McIntosh but not as well as Cortland. Kendall promises to be the "apple of apples" in the McIntosh season.

Lodi is a cross between Montgomery and Yellow Transparent. The tree is of the type of Yellow Transparent, but draws upon Montgomery for increased vigor and size. The fruits are of the type of Yellow Transparent but are larger and ripen a little later. The variety is an improved Yellow Transparent.



BREEDING A NEW APPLE Buds Ready for Emasculation

Macoun produces a late crop of redskinned, white-fleshed, richly flavored, aromatic. McIntosh - like apples. The season is about a month later than that of McIntosh. In shape, the fruits of Macoun are similar to those of McIntosh: the color is a dark red. less striped, and with a heavier bloom; the flesh is much the same in color, texture, flavor, and aroma. The trees bear regularly and heavily. Macoun comes in long after all other McIntosh-like apples are out of season and fills out the season to make certain "a McIntosh every day in the year."

Medina is an apple of the Delicious type and prolongs the season of that variety. The apples resemble those of Delicious but are larger and more attractive on account of the golden yellow ground color which the fruits of Delicious rarely develop. The shape of the basin is like that of Delicious with the same deep corrugations and the five distinct crowns—an improved Delicious.

Milton is a McIntosh-like apple which ripens with Wealthy and a month before McIntosh. The tree is hardy and vigorous. The fruits are pinkish red with a heavy bloom—most beautiful. The flesh is white, tender, crisp, juicy, and of McIntosh flavor and aroma. Milton is the handsomest of all the McIntosh tribe.

Newfane produces large-sized fruit of a very attractive red color. The shape is

oblong-conic and the flesh tender, medium juicy, mildly flavored with a pronounced Delicious aroma. Newfane is a delicious dessert apple at Christmas time.

Ogden is a sweet apple which ripens a little before McIntosh. The apple is large, roundish oblate, handsomely colored with dark solid red and heavy bloom

like that of McIntosh. The white flesh is often stained with red and, altho a little coarse, is tender and juicy with an aromatic sweetness which makes the sort especially desirable for baking. The tree is hardy and productive. Ogden is a delicious sweet apple.

**Orleans** is of the Delicious type, but the fruits are more attractive in appearance and run larger. While Orleans comes in season about with Delicious, it keeps longer in common storage. It has the aroma of Delicious but is more sprightly another "improved Delicious".



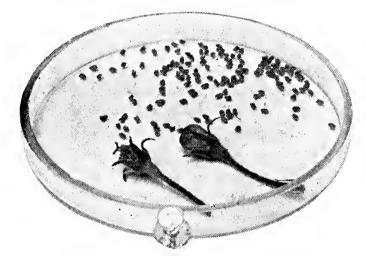
BREEDING A NEW APPLE Buds After Emasculation

**Red Gravenstein** differs from the old Gravenstein only in the solid, dark red fruits, the parent fruit being light red and much striped with yellow and green. All of the Gravensteins are most excellent autumn apples, but the new one is so much superior in appearance to any of its kin that in the future its culture alone should be recommended.

**Red Sauce** is a large, roundish conic apple, nearly covered with solid red. The flesh is coarse, tender, crisp, juicy, briskly subacid, aromatic, and red to the corelines, making a red sauce when cooked. The crop ripens in October. Red Sauce is a most interesting and desirable curiosity.

**Red Spy** is a typical Spy, except in color. The color is a solid bright red without either stripes or splashes. Red Spy, with its beautiful fruits, should give new life to the Spy type of apple. It puts the old Spy out of commission.

Sweet Delicious fruits are flatter than those of Delicious—large and attractive in size, color, and shape, with the sweet aromatic flavor of Delicious. The variety is an apple for home use where it will be chiefly appreciated for dessert and baking.



BREEDING A NEW APPLE Anthers Cut from Buds in Order to Obtain Uncontaminated Pollen Sweet McIntosh suggests McIntosh in appearance, flavor, and aroma. The variety is, of course, primarily adapted for home use—for baking and to eat out of hand. It should become a splendid home and roadside market sort.

#### CRAB APPLES

Dolgo is a handsome red crab apple imported from Russia in 1897 by Professor N. E. Hansen of the South Dakota Experiment Station. The fruit is full of juice, jellies easily, and makes a rich, ruby-red jelly of beautiful color and excellent flavor. The tree

is hardy, vigorous, and productive; the season early September. Splendid for cider as well as jelly.

Young America produces abundantly, attractive red fruits of excellent size and quality. Jelly made from the fruit is a clear, beautiful red and splendidly flavored. The tree is especially vigorous and hardy. The season is about the middle of September. Young America should be planted as an ornamental as well as for its fruit.

#### CHERRIES

In the breeding of cherries, the New York State Agricultural Experiment Station has so far accomplished little in a field where much might be done. Only one cherry bred at the Station can be offered, but this one—Seneca—is especially meritorious. Several other noteworthy new cherries, all of which have been thoroughly tested on the Station grounds, are offered to cherry growers by the New York Fruit Testing Association.

Early Rivers originated many years ago in England where it is widely planted as an early black cherry. The tree is vigorous and productive. The large, hand-

some, crimson-black cherries are excellent in quality with firmer flesh than most early cherries. Early Rivers ripens a week to 10 days earlier than Black Tartarian. Plant Early Rivers to succeed Seneca.

**Emperor Francis** is a cherry of the Napoleon type to precede that variety. The cherries are larger and much better in quality than those of Napoleon. The color



of the two fruits is similar, except that those of Emperor Francis are a little redder and become darker. It ripens 2 or 3 days ahead of Napoleon and holds well to the tree. All in all, Emperor Francis promises to be one of the best main-crop sweet cherries.

Giant was introduced by Luther Burbank in 1914. The tree is large, vigorous, and very productive. The cherries are attractive in size and color; the crop is about the latest of all to ripen, coming in season just before Lambert which the black fruits resemble in size and color. The quality is splendid and the cherries do not crack and keep and ship well. Giant is one of Burbank's most notable productions.

Lyons seems never to have been grown in America, though known for more than a century in Europe. Of the many sweet cherries tested on the grounds at this Station during the past 20 years, it is one of the best blacks for an extra early

market cherry. The tree characters are about all that could be desired in a sweet cherry. This is the cherry, with Seneca, to open the cherry season.



### BREEDING A NEW APPLE

Buds Covered After Emasculation and Pollination in Order to Prevent Undesired Pollination

**Royal Duke** has long been grown in Europe to follow May Duke. The trees are hardy, healthy, and productive. The cherries are large, handsome, bright red, well scattered along the branches, pleasantly flavored, refreshing, and very good in quality. Royal Duke has a place in home orchards for roadside and local markets—everyone likes a Duke.

Seneca is so remarkable in one character at least, earliness, that it is bound to be a great acquisition to cherry growing. Its fruits ripen in the first weeks of June, more than 2 weeks earlier than Black Tartarian, the standard early cherry. The cherries resemble those of Black Tartarian in being large, round-cordate, purpleblack, with juicy, melting flesh, and a rich, sweet flavor. The pit is free and the skin does not crack. The tree is very vigorous, productive, and has an uprightspreading growth. Seneca is one of the Station's most notable additions to varieties of hardy fruits.

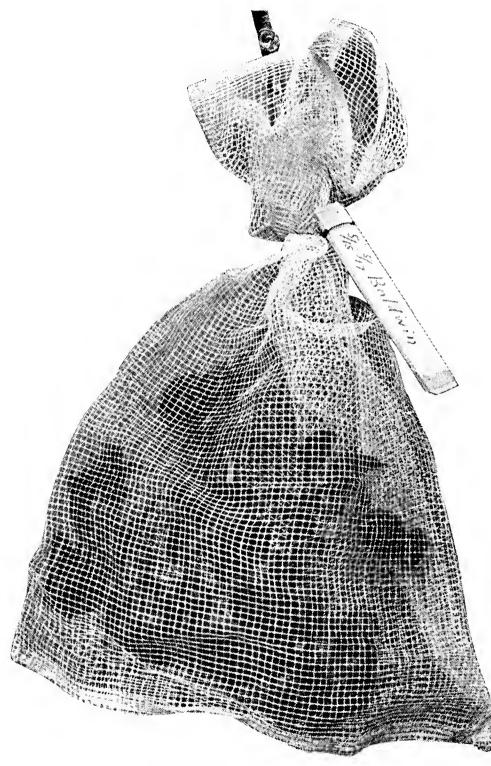


BREEDING A NEW APPLE A Tree with Pollinated Buds Bagged for Protection

Victor originated in 1916 at the Horticultural Experiment Station at Vineland, Ontario. The fruit resembles that of Napoleon and ripens midway between Napoleon and Governor Wood. The cherries are large, firm-fleshed, light-colored and of excellent quality. The tree is large, vigorous, and productive. Victor is a splendid new sweet cherry which everybody will like.

**Prunus tomentosa** is a beautiful dwarf cherry from northern China, the leaves of which are covered on the under side with tomentum, hence the name. The

fruits are small, round, bright red, and similar to those of Montmorency in flavor. The plant is beautiful in leaf, flower, and fruit. Desirable in the lawn



BREEDING A NEW APPLE

Paper Bag Replaced with Open Netting Sack to Protect Fruit and to Permit Sunlight to Reach Leaves and Fruit

or the garden as an ornamental and for fruit.

#### NECTARINES

A nectarine is a smooth-skinned peach, a sport of the peach. The fuzzy skin of a peach is objectionable to delicate palates to which that of the nectarine is pleasing. The flesh of the sport is sweeter and richer than that of the peach. Nectarines add variety and charm to the list of hardy fruits. All that is needed to make them as popular as peaches is a greater number of varieties adapted to American conditions.

Hunter is said to have come from an Elberta pit. The tree is vigorous and productive. The fruit is large, round, yellow with a heavy blush. The flesh is

free from the stone, with the true nectarine flavor, although somewhat tart. It ripens in midseason.

John Rivers is an early variety, ripening the first week of August. The tree is small but productive. The fruit is of medium size, nearly covered with red, and is of very good quality; the flesh is white and adherent to the stone. This variety begins the nectarine season.

**Rivers Orange** is a yellow-fleshed nectarine which ripens in early midseason. The fruit is a freestone nearly covered with a dark red blush. No nectarine has a richer, sweeter flavor. This is one of the choicely good European sorts.

Sure Crop was imported from New Zealand and so far is the most promising nectarine at the New York Experiment Station. The tree is vigorous and productive. The fruits are large, roundish, white and overlaid with very attractive red. The flesh is firm, tender, free from the stone, and very pleasing in flavor; late midseason. Sure Crop will probably suit the palate and the eye better than any other of the several delectable nectarines here listed.



#### BREEDING A NEW APPLE

Seed Protected by Wire Netting and Stratified in Sand from Harvest to Early Spring

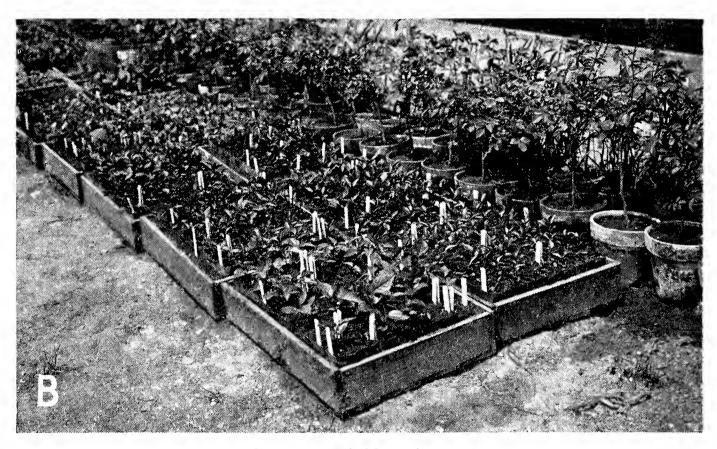
#### PEACHES

Forty or fifty years ago the peach was America's most profitable fruit. Now the peach industry is down in the dumps. Why? Because people do not like the abominable Elberta, about the only peach they can buy. The peach industry will never "come back" in this country until growers plant better varieties than Elberta—grow peaches that are "peaches". The New York Fruit Testing Association offers a succession of varieties, each and every one of which is better than Elberta in fruit and some of them equal to it in tree.

**Mikado** is a popular early variety. The tree is medium in size and vigor and is very productive in mixed plantings. The fruit ripens the first week of August, is

medium in size, round in shape, semi-cling, and is an attractive yellow blushed with red. The quality is good. Mikado is pollen-sterile and therefore requires cross-pollination.

The following varieties are recent introductions of merit from the New Jersey Experiment Station:



BREEDING A NEW APPLE Young Seedlings Transplanted and Ready for Nursery

**Delicious** is a white-fleshed seedling of Belle. The tree is vigorous and productive. The fruit is of the Belle type, medium to large in size and very attractive; the flesh medium firm, good or above in quality, and free from the stone. Delicious is in season just ahead of Carman and surpasses that variety in appearance and quality.

**Eclipse** is a self-pollinated seedling of Belle. The trees are productive. In size and shape the fruits resemble those of the well-known Belle. The color is an attractive yellow with a deep blush; flesh fine-grained; quality good; a freestone; midseason.

Golden Jubilee, a second generation seedling of Elberta and Greensboro, is a large early peach. It resembles Elberta in shape, but it is better in quality and

ripens 3 weeks earlier. The skin is yellow, blushed with red; flesh yellow, juicy, medium firm, tender; sweet or slightly subacid; freestone.

**Goldfinch** is a roundish oval, yellow-fleshed peach of medium size. It is a freestone with firm but tender flesh, subacid, and good in quality. This attractive peach ripens early, about a week ahead of Carman.

**Marigold** is an early peach, a cross between Lola and Arp. In shape, color, and flavor it resembles Arp, but while Arp is very stringy in texture and a strong cling, Marigold is a semi-cling with tender flesh.

**Oriole** is in season about a week after Marigold and a week ahead of Rochester. The tree is vigorous and productive. The fruit is medium to large in size, roundish, yellow, very good in quality, and a freestone. It lacks the bright yellow of some varieties, but is very attractive. Oriole is notable as an early peach of high quality.

Cumberland originated as a cross between Belle and Greensboro. The fruit is above medium in size, attractive in color and shape, good in quality, and ripens with Goldfinch. The stone is practically free.

Sunbeam is derived from a cross between Slappey and Arp, ripening a week later than Marigold. The trees are productive. The fruit is large, round, deep yellow, nearly covered with red, and good in quality. Although a semi-cling its attractive color commands attention.

The three splendid varieties of peaches described below originated at the Horticultural Experiment Station, Vineland, Ontario, Canada.

Valiant, a seedling of Elberta, is very promising. The fruit is large, roundish oblate, yellow blushed with red, with firm juicy flesh of very good quality; a freestone. The trees are productive. It is in season by the first of September or about two weeks ahead of Elberta. Noteworthy because of earliness and its rich delectable flavor—a thousand times better than Elberta.

Vedette is the earliest of the three Canadian varieties, ripening a few days before Valiant. Like Valiant it was obtained from an Elberta seed. The tree is productive and the fruit is large, roundish oval, yellow fleshed, and a freestone. It ripens 3 weeks before Elberta and is superior to its parent not only in quality but in color as well.

Veteran originated in 1919 as a cross between Vaughan and Early Elberta. The fruit is large, round, yellow fleshed, freestone, and far superior to Elberta in quality. Since it ripens a few days later than Valiant, it makes a desirable sort to follow that variety.

#### PEARS

The New York State Agricultural Experiment Station is trying to breed pears less susceptible to blight than sorts now grown. Seckel, being fairly free from blight, and with splendid tree and fruit characters, is the parent that has been commonly used.

Clyde is an open-pollinated seedling of Seckel, resembles its parent in tree and fruit characters. Fruit larger than Seckel, similar in shape but longer and less obovate, of about the same color but lighter; flesh tender, juicy, and buttery,

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#### A SEEDLING NURSERY

with the Seckel flavor but not quite as rich or spicy; ripens two or three weeks later than Seckel and keeps much longer. Tree similar to Seckel in all respects.

**Cayuga** pears average as large as Bartlett, but in shape and color they are similar to Seckel. The flesh is firm and fine in texture quite to the center, with the rich, delectable flavor of Seckel. The quality is better than in any other standard sort except Seckel, its parent.

**Ewart** comes from Mortimer Ewart, East Akron, Ohio. The fruit is remarkable for its large size and good quality. It is greenish yellow, netted with russet, and has a fine, melting, tender, juicy flesh. The season is a month later than Bartlett.

Gorham ripens its fruits 2 weeks later than Bartlett and keeps a month longer. The fruits resemble those of Bartlett in size, color, and shape. The flavor is sweet and vinous with a very marked and pleasing aroma. The flesh is white, tender,

buttery, and juicy—a combination which, with the rich flavor and spicy aroma, makes this one of the very best flavored pears of its season. The trees are vigorous and productive—and as yet have not blighted on the Station grounds. Plant Gorham for pears to follow Bartlett.

**Ovid** ripens in December at Geneva. Its fruit is large and in color resembles that of Bartlett, except that it bears russet patches. The flesh is fine-grained, tender, nearly white, sweet, agreeably flavored, and good in quality. Ovid promises to be a splendid late pear.

**Phelps** is of the type of Bartlett, but the pear ripens much later. The flavor is better than that of Bartlett, but the appearance is not so pleasing as the color is duller. The flesh is tender and juicy with a pleasant vinous flavor. It ripens around Thanksgiving and keeps until Christmas—a good late pear.

**Pulteney** is from a sister plant to Phelps and is of the Bartlett type, with fruits a little more regular in outline, skin smoother, but possibly not as attractive in color. It ripens 4 weeks later than Bartlett, hence valuable to prolong the Bartlett season.

Willard ripens about 2 weeks later than Ovid and resembles Bartlett more closely in shape and color. Its flesh is yellowish, fine-grained, tender, and juicy. Recommended for high quality and lateness—one of the best winter pears.

#### PLUMS

To stimulate anew the growing of plums, this Association offers Albion, Hall and Stanley, three of the best flavored and handsomest plums in a collection of over 300 varieties grown on the grounds of the New York Agricultural Experiment Station. Beside these choicely good sorts, several other noteworthy plums are listed.

Albion is the latest ripening good plum grown at Geneva. It belongs to the Grand Duke type, but its fruits are larger and better in quality. The tree is productive, strong, and vigorous. All in all, Albion is one of the most remarkable new plums described in many years.

American Mirabelle is a small, sweet, yellow Damson. The fruits resemble those of the European Mirabelle closely in color, but are much larger. The tree is splendid in every way. The flavor is delightfully good and the new variety will be appreciated by all lovers of choicely good fruits to eat out of hand or for culinary purposes.

Beauty is an early Japanese plum that precedes Abundance. The fruits are medium in size, roundish conic, medium to dark red, and covered with a lilac bloom; skin thick and tough; flesh yellowish tinged red, very juicy, tender but

stringy, subacid to sweet; good; clingstone. Beauty is a splendid sort to begin the plum season.

Formosa is a Japanese plum recommended for its productive trees and large fruits. The plums are oval to slightly cordate, greenish yellow nearly overlaid with red; flesh firm, juicy, melting, pale yellow, sweet and good; stone slightly clinging; ripens in midseason. It would be hard to find a more beautiful plum.



SEEDLINGS GROWING IN THE ORCHARD They are Set Close in Order to Grow as Large a Number as Possible

Hall is a cross between Golden Drop and Grand Duke, two of the largest and handsomest European plums, but both below the mark in quality. Hall is better in flesh and flavor characters. The fruits are so handsome and well flavored that they will sell in any market. The tree is nearly perfect. This is one of the best of the Station's new plums.

Imperial Epineuse is an old French plum of the prune type, reddish purple, tender, sweet, juicy, and one of the best flavored of all Old World Plums. The fruit ripens late and so escapes brown-rot. The trees grow wonderfully well in the East and the variety should be much more widely grown than it is. This is the plum of plums for the garden.

**Pearl** is a medium-sized yellow plum originated by Luther Burbank. Its quality is exceptionally sweet and rich. Recommended for the home garden.

Sannois is a very late reddish purple French plum of medium size. It is one of the sweetest and most delectable varieties of all the plum family—a veritable sweetmeat. Recommended for the home garden.

Santa Rosa is one of the new and noteworthy Japanese plums which in nearly all characters of tree and fruit surpasses Abundance and Burbank. The tree is a prolific bearer, and the large attractive fruits keep and ship well. Santa Rosa has long been considered the best Japanese plum on the grounds of the Experiment Station at Geneva.

**Stanley** is a cross between Agen and Grand Duke. The fruit is of the prune type, excellent for cooking or eating out of hand. The tree is healthy, vigorous, and produces full crops annually. The fruit is large in size, dark blue with thick bloom; flesh greenish yellow, juicy, fine-grained, tender, firm, sweet, pleasant; quality good to very good; stone free; midseason. Stanley, Hall, and Albion are the Station's three prize plums.

#### GRAPES

All of the men who have undertaken to improve native grapes, and there have been many, have chosen as their chief task hybridization with the European grape to obtain a combination of the fruit characters of the European grape with the vine characters of American grapes. Twenty-odd thousand hybrid grapes have been grown on the grounds of the State Experiment Station at Geneva in the last 25 years, with this end in mind, and with a high degree of success.

**Brocton** flesh is melting, separates readily from the seeds, and is sweet, richly and delicately flavored; bunches large. The vine is rather slow in growth, and is inclined to bear too heavily, for all of which reasons it should have special care in culture and pruning. This is one of the best of the Station's new green grapes.

**Dunkirk** has bunches and berries similar to those of Delaware, but both are larger, and the crop ripens later and keeps longer. The skin is thin like that of Delaware, of the same color, but is tough enough to make the grapes good shippers. The clusters are unusually uniform in shape and size, compact, and well filled by the berries. The vine is vigorous, hardy, healthy, and productive.

**Fredonia** gives promise of being the earliest good black grape. The vine is vigorous, hardy, and productive, and ripens its fruit 2 weeks earlier than Worden. The clusters are medium in size, cylindrical, and compact; the berries are large, round, and persistent; the skin is thick and tough; the flesh is juicy, solid but

tender; and the quality very good. Fredonia stands alone as an early black grape.

Golden Muscat possesses the rich golden color of Diamond and the fine muscat aroma of the European Muscat. For home use and the roadside market it is one of the best. The vine is vigorous, productive; the clusters are very large, tapering, single-shouldered, and compact; the berries are large, oval, juicy, tender, sweet, vinous, aromatic; season after Concord. This is the handsomest and best flavored grape grown in eastern America.

Hanover has clusters medium to large, compact, berries medium, slightly oblong, dark red; flesh slightly tough, sweet, vinous, and good in quality; ripens about October first. Still on trial but most promising.

Keuka is more nearly a European than a native grape. Bunch and berry are medium in size, but the bunch is compact and as trim as a well-formed cluster of Delaware. The berries are round-oval, dark red with heavy bloom which gives them a lilac color. The flesh is crisp and juicy with a sweet, Vinifera flavor, and scarcely separates from the tender skin so that the berries may be eaten skin and all. The vines are vigorous, healthy, productive, hardy, and ripen their crop a week earlier than Catawba. No grape surpasses Keuka in flavor.

**Ontario** is a cross between Winchell and Diamond which comes in season before Winchell, hitherto the best early green grape. Bunches and berries are larger and more attractive in appearance than those of the parents, and unlike those of either parent are usually single-shouldered. The vines are more vigorous and more productive. The grapes hang on the vine long after ripening. Ontario and Portland are becoming the standard early green grapes in eastern America.

**Portland** holds first place among grapes as an early green variety for the market. The vine is very vigorous, hardy, productive, and healthy. The variety is remarkable for its luxuriant and persistent foliage. Bunches and berries are larger than those of any other early green grape, and the quality is better than that of any other excepting Ontario.

Seneca is almost pure Vinifera, ripening in early midseason. The bunches are of medium size, tapering, compact, oval yellow berries. The texture is firm like that of a true Vinifera, melting and tender, while the flavor is sweet, vinous, and aromatic. The skin can be eaten with the berry. The vine is vigorous, healthy, productive, and hardy. Seneca is bound to make a high place for itself.

Sheridan is a promising late-keeping grape to extend the season of Concord. In many places where Sheridan has been grown under the same conditions as Concord, the plants have been found to be just as vigorous, healthy, hardy, and more productive. The bunches of Sheridan are larger and more compact; and

the berries are firmer and as large as those of Concord; the flavor is sweeter and richer; the season is a week later and the grapes do not shell as readily. Sheridan is now a standard commercial variety.

Urbana requires a long season and cannot be grown with certainty where Catawba does not ripen. The vines are vigorous, healthy, and productive, and will withstand as much cold as Catawba. Bunch and berry are large and very attractive. The berries are light red with skins which cling to the pulp like that of a Vinifera, and the flesh separates readily from the two or three small crackling seeds. The flesh is firm but tender, juicy, aromatic, and has a rich, sweet, vinous, spicy, refreshing flavor. The grapes keep in common storage without shriveling, shelling, or decaying until March—truly remarkable for late keeping.

Watkins is noteworthy for high quality. The vine is vigorous and productive; clusters medium to above, slightly tapering and loose; berries reddish black, medium in size, oval; flesh meaty, juicy, sweet. Promising for home use and roadside markets.

The vine of **Wayne** is strong, vigorous, and productive; clusters medium in size; compact; flesh firm, slightly tough, juicy, sweet, vinous; quality very good; its keeping quality is impaired by a tendency to shell. Well worthy of trial.

#### ELDERBERRY

The elderberry of the fields and fence-rows has always been popular for pies and home-made wine. It grows readily under domestication as a beautiful ornamental and is as easily improved in the breeder's hands as any other native fruit.

Adams is a selection made by the late William W. Adams, Union Springs, New York. The bush is strong, vigorous, and productive, and the fruit clusters and berries are exceptionally large. This fruit is a splendid example of what the plant-breeder can do in improving native fruits.

#### GOOSEBERRIES

The culture of gooseberries has long been on the wane because nurserymen choose to offer only the wretchedly poor Downing and Houghton. At the Experiment Station at Geneva, the aim has long been to obtain gooseberries with larger fruits, better flavor, and of better plant characters. Poorman was introduced a number of years ago as a better gooseberry, and where it succeeds it is a most admirable sort. Unfortunately it does not do well on sandy soils, thriving only on clays and fertile loams. Now the Station is introducing Fredonia with the hope that it will be more adaptable to soils.

**Fredonia** is a very large, late dark red gooseberry of the English type. The fruit is good in quality, and attractive in appearance, and keeps and ships well. The plants are vigorous, productive, and of an open habit of growth that makes harvesting easy. It has been free from mildew which attacks other English gooseberries. Every garden should have a few Fredonias.

**Poorman** possesses the highest quality of fruit and one of the largest, healthiest and most vigorous bushes of any variety in the Station collection. The fruit is large, red, and very attractive. The plants are exceedingly productive. This is a splendid gooseberry in heavy soils.

#### RASPBERRIES

It is apparent that unless varieties of red and black raspberries resistant to mosaic and other diseases can be bred that the production of these fruits must cease to be profitable. The Station is giving its utmost attention to procuring varieties of these fruits resistant to disease—with what success remains to be seen. The association offers several varieties as well as one English sort, which seem to be resistant and which are most admirable in every other particular.

**Dundee** is a promising new black raspberry notable for its high quality. The berries are large, glossy black, attractive, moderately firm, mildly subacid and very good. The plants are tall, vigorous, productive, and moderately resistant to mosaic. Naples for market and Dundee for home, is a good combination.

Lloyd George is the only English raspberry that has ever succeeded on the Station grounds, most of them suffering severe winter killing, or not withstanding the hot summer sun. Mosaic spreads slowly in this variety. The plants are stocky, of medium height. The fruit is very large, rather soft and dark if fully ripe, sprightly, and of excellent quality. Lloyd George is recommended for home use and local markets. It seems to prefer heavy soils and a cool, moist climate.

**Naples** is the most promising black raspberry that has ever fruited on the Station grounds. The plants are vigorous and productive. Records to date show that mosaic spreads slowly in Naples. The fruit is large, glossy, attractive, firm, and of good quality. The variety is excellent for market and home use—no other market variety as good.

Newburgh is the most promising variety in the Station collection. The fruit is very large, very firm, and does not crumble. The color is a bright, attractive red; in keeping and shipping quality it has no superior. The plants are vigorous, hardy and very productive, the weight of the fruit is so great that the canes are often bent to the ground. The fruit is borne out in the open where it may be readily picked. Mosaic has not appeared in the stock of Newburgh. In season

it is three or four days earlier than Cuthbert. In bush and fruit, this is the best red raspberry under cultivation.

**Bristol** was introduced last year as an early variety to precede Naples. It ripens about a week earlier than Naples and throughout its trial period has shown itself to be one of the most promising early black raspberries on the Station grounds. The fruit is large, an attractive glossy black color, firm, and good in quality. The bushes are vigorous and bear very heavy crops. The symptoms of red mosaic are sufficiently distinct to make rogueing relatively simple.

#### STRAWBERRIES

All varieties commencing with "C" were derived from the cross of Howard by Marshall. The plants of this cross are exceptionally vigorous and excellent plant makers; the fruits are large, glossy, very attractive, very good in quality, and ripen in midseason.

**Bliss** ripens in late midseason and the berries are large, an attractive light, glossy red, sweet and of very good quality. The plants are medium in number, vigorous, and productive. This variety is now well established and well liked.

**Camden** is a general market berry and noteworthy because of the extreme productiveness and vigor of the plants. The fruit characters are satisfactory for a market berry. The variety is a good plant-maker.

**Cato** is offered as a high quality variety for home use. It is nearly the equal of Marshall in quality, and much superior in plant characters. Because the skin bruises easily it will not make a satisfactory market berry unless handled very carefully. It would be hard to find a handsomer strawberry.

**Catskill** has done exceptionally well in eastern Massachusetts and in Maryland. The plants are large, very vigorous, and yield very heavy crops. The berries are very large, roundish wedge, slightly irregular, moderately firm. dark red, but glossy and attractive, mild subacid and good in quality. The berries ripen in midseason or about four days later than Howard. In 1930 this seedling received an award of merit from the Massachusetts Horticultural Society.

**Clermont** is a most excellent variety for both market and home use. The fruits are very large, and hold up well in size throughout the season. The berries are regular, very glossy and attractive, do not bruise easily, and are excellent in quality. This is one of the outstanding strawberries from the Station's list.

**Culver** is a late midseason berry, rather dark in color, and well adapted for canning and preserving. The berries are large, regular, and bruise slightly. The flavor is sprightly and the quality very good. Besides being excellent for preserving, it is a splendid sort for home use. Culver is already popular in several strawberry regions.

### FRUITS NOT PATENTED

The fruits in this catalog are not patented. Members of the New York State Fruit Testing Association are asked to propagate and distribute them to the uttermost.

In the words of an old English herbalist then,

"Forward in the name of God: graft, set, plant, and nourish up trees in every corner of your ground; the labor is small, the cost is nothing, the commodity is great; yourselves shall have plenty, the poor shall have somewhat in time of want to relieve their necessity, and God shall reward your good merits and diligence."