

J. M. ROBINSON

BULLETIN No. 211

DECEMBER, 1920

ALABAMA
Agricultural Experiment Station

OF THE

Alabama Polytechnic Institute

AUBURN

The Grape

(Reprint)

By
J. C. C. PRICE
Associate Horticulturist

1920
Post Publishing Company
Opelika, Ala.

SPRIGT DOWELL, President of the College
STATION STAFF

J. F. DUGGAR, Director of Experiment Station

AGRICULTURE:

J. F. Duggar, Agriculturist
E. F. Cauthen, Agriculturist
M. J. Funchess, Soils
J. T. Williamson, Superintendent Co-operative Experiments
H. B. Tisdale, Associate Plant Breeder

VETERINARY SCIENCE:

C. A. Cary, Veterinarian

CHEMISTRY:

E. R. Miller, Chemist
O. N. Massingale, Assistant

BOTANY:

W. A. Gardner, Botanist
G. R. Johnstone, Assistant

PLANT PATHOLOGY:

----- Plant Pathologist

HORTICULTURE:

G. C. Starcher, Horticulturist
C. L. Isbell, Associate
Lyle Brown, Assistant

ENTOMOLOGY:

W. E. Hinds, Entomologist
F. L. Thomas, Associate
J. M. Robinson, Assistant

ANIMAL HUSBANDRY:

J. C. Grimes, Animal Husbandman
W. H. Eaton, Dairyman
G. L. Burleson, Assistant

EDITOR:

P. O. Davis

VARIETIES OF GRAPES

By

J. C. C. PRICE, *Associate Horticulturist.**

A variety test of grapes was begun in 1912 to find the most desirable varieties for home and commercial plantings. Forty-eight varieties of bunch grapes and six varieties of rotundifolia (muscadines) grapes were used in this test. The soil was a sandy loam with clay subsoil. The rows were laid off eight feet wide and plants set nine feet apart in rows. Concord vines were planted in several parts of the vineyard as checks. The plants were fertilized at time of planting with bone meal and each year with 8-2-10 fertilizer (phosphoric acid, nitrogen and potash). The average annual yield record per vine for each variety is given in chart below. The following technical description of each variety used is the result of checking each variety over the full period of the experiment.

Varieties recommended for Alabama are listed on page 43.

GRAPES

VARIETIES

AGAWAM. (*Labrusca, Vinifera.*)

Bunches medium, short, rather loose. Berries very large $\frac{3}{4}$ inch in diameter, do not shatter off bunch, well formed, slightly roundish oblong, color red. Flesh solid, does not bruise easily, sweet, fine flavor, foxy. Seed, three, separate rather easily from pulp, large, long and narrow. Skin thick and tough. Vines not hardy.

AMBER QUEEN. (*Vinifera, Riparia, Labrusca.*)

Bunches medium, irregular, ragged. Berries irregular in size and not all well formed, dark red color, not firm, often shrivelling before thoroughly maturing. Flesh juicy, sweet, quality good. Very poor bearer, not hardy.

BARRY (ROG). (*Labrusca, Vinifera.*)

Bunches medium to large, shouldered, medium length, compact. Berries black, large, $\frac{3}{4}$ inch in diameter, well formed, solid, do not bruise easily, shatter off of bunch some. Flesh firm, sweet, good quality, good flavor, foxy. Seed, one to five, average three, medium size, oblate in shape, rather hard to separate from pulp. Skin medium thick and very tough. Vines not hardy.

* Resigned July 1, 1920. The entire first of this bulletin was destroyed in the fire that on October 16, 1920, consumed the Agricultural Building (Comer Hall), together with most of the office and laboratory equipment of the College of Agriculture and Experiment Station.

BERCKMANS. (*Riparia, Labrusca, Bourquiniana.*)

Bunches small to very small, close, compact. Berries small to medium, $\frac{1}{2}$ inch in diameter, well formed, roundish, oblong, hang on bunch well, color red, do not bruise easily. Flesh sweet, fine flavor and quality slightly foxy. Skin tough and thin. Seed three to four per berry, small, plump, hard to separate from pulp. Vines fairly hardy.

BRIGHTON. (*Labrusca, Vinifera.*)

Bunches medium to small, short shouldered, loose. Berries variable in size, average $\frac{3}{8}$ inch in diameter, well formed, slightly roundish oblong, color red, solid, do not bruise easily, shatter off bunch. Flesh sweet, fine flavor. Seed two to three, hard to separate from pulp, small to medium, broad, obtuse shape. Skin thin and tender. Vines hardy.

BRILLIANT. (*Labrusca, Vinifera, Bourquiniana.*)

Bunches small, short, very compact. Berries medium to small, round, well formed, color red. Berries solid and do not bruise easily. Flesh very sweet, good flavor, fair quality. Skin thick and tough. Seed two to four in berry, rather hard to separate from pulp. Vines fairly hardy.

CAMPBELLS. (*Labrusca, Vinifera.*)

Bunches medium to small, slightly shouldered, poorly filled. Berries rather round, well formed, bluish black color, loose on bunch. Flesh sweet, good flavor, slightly foxy. Seed, three to four to each berry. Bore second year after planting. Skin thick and tough, vines not hardy.

CATAWBA. (*Labrusca, Vinifera.*)

Bunches large to medium, rather loose, medium length. Berries medium, $\frac{9}{16}$ inch in diameter, roundish to slightly oblong, purplish red, do not bruise easily. Flesh solid, acid, foxy, fairly good flavor. Seed, three to four, large, round, oblate, rather hard to separate from pulp. Skin tough, thick. Vines hardy.

CHAMPION. (*Labrusca.*)

Bunches small, short, and compact. Berries medium size, round, well formed, shatter off very badly, black color. Flesh solid and does not bruise easily, very sweet good quality, good flavor. Seed, three to four, separate fairly easily from pulp, large. Skin thick, tender, adheres to pulp. Vines fairly hardy.

COLERAIN. (*Labrusca.*)

Bunches medium to small, long, medium length. Berries medium, variable, average $\frac{5}{8}$ inch, well formed, slightly oblong, hang on bunch well, color white, do not bruise easily. Flesh very sweet, fine quality, excellent flavor, very slightly foxy. Seed, two to four, rather hard to separate from pulp, medium, flat oblate shape. Skin thin, rather tough. Vines fairly hardy.

CONCORD. (*Labrusca.*)

Bunches large shouldered, loose, long. Berries large, uniform, $\frac{3}{8}$ inch in diameter, well formed, round, hang on bunch well, color black, ripen irregularly, do not bruise

easily. Flesh solid, sweet, fine flavor, foxy. Seed two or three per berry, hard to separate from pulp. Skin rather thick and tough. Heavy bearer, vine hardy.

DELAWARE. (*Labrusca, Bourquiniana, Vinifera*.)

Bunches medium to small, shouldered, short, compact. Berries small, $\frac{3}{8}$ inch in diameter, well formed, solid, roundish oblong, hang on bunch well, color red, do not bruise easily, flesh solid, slightly foxy, sweet, excellent flavor. Seed, two, short plump, flat, medium to small, hard to separate from pulp. Skin thin and tough. Good bearer, vines not very vigorous, but hardy.

DIAMOND. (*Labrusca, Vinifera*.)

Bunches very large, weight $\frac{3}{4}$ lb., medium length and shouldered, compact. Berries large, $\frac{5}{8}$ inch in diameter, well formed, oblong shape, do not shatter off of bunch, color white, do not bruise easily. Flesh sweet, good flavor, good quality, slightly foxy. Seed two to three per berry, easy to separate from pulp. Skin medium thick, rather tough. Fair bearer, hardy.

DIANA. (*Labrusca Vinifera, Aestivalis*;))

Bunches medium to large, slightly shouldered, long slender. Berries variable in size, average $\frac{3}{8}$ inch, well formed, slightly roundish oblong, color red, do not bruise easily. Flesh solid, sweet, fine flavor, fine quality. Seed, three to four, rather large, broad, rather hard to separate from pulp. Skin thick and tough. Not hardy.

DUCHESS. (*Vinifera, Labrusca, Bourquiniana, Aestivalis*.)

Bunches large, shouldered to double bunched, long, slender, compact. Berries irregular in size, average $\frac{3}{8}$ inch in diameter. Flesh solid, sweet, crisp, fine flavor. Skin thin and crisp, pale green color, does not crack easily. Seed, one to three, average two small and plump, easy to separate from pulp. Heavy bearer, vines hardy and vigorous grower.

EARLY DAISY. (*Labrusca*.)

Bunches medium to small, very full and compact, not shouldered. Berries medium, well formed, black color, very close on bunch. Skin thick and tough. Seed, three in berry. Flesh good flavor, sweet and somewhat foxy. Good bearer, fairly hardy.

EARLY VICTOR. (*Labrusca, Bourquiniana*.)

Bunches small, slightly shouldered, compact. Berries small, color black, very round and well formed. Flesh firm, very sweet, slightly foxy, fine flavor. Seed, two to three per berry. Skin thick and tough. No rot. Vine fairly hardy.

EATON. (*Labrusca*.)

Bunches medium to large, shouldered, rather loose. Berries very large $\frac{7}{8}$ inch in diameter, round, well formed, color black, do not bruise easily. Flesh firm, juicy, sweet, fine flavor, slightly foxy. Skin tough and thick. Seed three, hard to separate from pulp, short, plump brownish color. Good bearer, not hardy.

ELVIRA. (*Ripraria, Labrusca.*)

Bunches small, compact. Berries small, round, green color, shrivel badly, do not ripen well. Flesh tender, fair quality. Seed, one to four, average three, medium to large. Vine poor grower, poor bearer, not hardy.

EMPIRE (STATE). (*Ripraria, Labrusca, Vinifera?*)

Bunches medium to small, rather loose. Berries medium to small, round, pale yellow with gray bloom. Skin thick and tough. Flesh tender, juicy, good. Vine, poor bearer, not hardy.

ECLIPSE. (*Labrusca.*)

Bunches medium, rather compact. Berries large, round, black color. Flesh pale green, resembles Concord in taste, rather foxy, tender. Seeds separate rather easily from pulp, one to four in number. Vine fairly vigorous, fairly hardy, poor bearer.

GOETHE. (*Vinifera, Labrusca.*)

Bunches medium, rather loose. Berries large, roundish oblong, $\frac{3}{4}$ inch in diameter, shatter off of bunch rather easily, burst quite easily, color red with purplish bloom. Flesh not firm, tender, rather coarse, sweet, fine flavor, foxy. Seed three, large, oblong shape, very hard to separate from pulp. Skin thin, medium tough. Poor bearer, not hardy.

GREEN (EARLY). (*Labrusca, Vinifera?*)

Bunches medium, shouldered, rather loose. Berries medium, $\frac{1}{2}$ inch in diameter, oblong, well formed, do not keep well, shatter off of bunch badly, color white. Flesh not solid, bruises badly, sweet, very astringent, fair quality. Seed three, small and hard to separate from pulp, plump. Skin thin and tender. Poor bearer, not hardy.

HERBERT (ROG). (*Labrusca, Vinifera.*)

Bunches medium, shouldered, with berries rather loose on bunch. Berries large to very large, $\frac{3}{4}$ inch in diameter, well formed, round, color black. Flesh firm, sweet, good quality, fine flavor, slightly foxy. Seed two to four, hard to separate from pulp, large and long. Skin thick, tough, does not split easily. Not hardy.

ISABELLA. (*Labrusca, Vinifera.*)

Bunches medium to large, shouldered, rather loose. Berries large, $\frac{5}{8}$ inch in diameter, do not shatter off bunch, well formed, ripen very unevenly, roundish oblong shape, color black with blue bloom. Flesh soft, tender, slightly foxy, sweet, fine flavor. Skin tough and thick, very little pigment. Seed three, hard to separate from pulp, large and broad. Fair bearer, very hardy, fruit rots easily.

IVES. (*Labrusca, Aestivalis?*)

Bunches medium, compact, regular. Berries medium, $\frac{1}{2}$ inch in diameter, well formed, round, conical, hang on bunch well, color black, do not bruise easily. Flesh firm, acid, fair flavor. Seed three, medium, hard to separate from pulp. Skin medium tough. Good bearer, very hardy, vigorous grower.

JEFFERSON. (*Labrusca, Vinifera.*)

Bunches medium, long, and rather loose, slightly shouldered. Berries medium to small, well formed, slightly oblong, red color. Flesh solid and does not bruise easily, very sweet and good quality, extra fine flavor. Seed three, separate easily from pulp, large. Poor bearer, not hardy.

JESSICA. (*Labrusca, Vinifera.*)

Bunches small to very small, short and compact, slightly shouldered. Berries small, $\frac{1}{2}$ inch in diameter, well formed, round, color white, shatter off of bunch fairly easily, solid and do not bruise easily. Flesh firm, sweet, good quality, good flavor, foxy. Seed, two to three per berry, small, roundish, oblate, hard to separate from pulp. Skin medium thin and tough. Very poor bearer, not hardy.

KING. (*Labrusca?*)

Bunches large, double to triple shouldered, long, rather large $\frac{3}{4}$ inch in diameter, do not shatter, well formed, round, color black, do not bruise easily. Flesh firm, sweet, good flavor, foxy. Skin thick and tough. Seed two, rather hard to separate from pulp, short broad, plump. Fair bearer. Not hardy.

KING PHILLIP. (*Labrusca.*)

Bunches small, short, rather loose. Berries large, well formed, slightly oblong, color bluish black, cracks slightly. Flesh solid, good quality, slightly foxy. Seed four, large, separate very easily from pulp. Skin thick and tough. Very poor bearer. Not hardy.

LADY WASHINGTON. (*Labrusca, Vinifera.*)

Bunches large, double to triple shouldered, long, rather compact. Weigh $\frac{1}{2}$ lb. each. Berries variable in size, average $\frac{5}{8}$ inch in diameter, shatter off bunch, color white, do not bruise easily. Flesh firm, sweet, good quality. Seed two, which are hard to separate from pulp, medium size, plump, oblate shape. Good bearer, very hardy.

LINDLEY. (*Labrusca, Vinifera.*)

Bunches large, often shouldered, long loose. Berries large, $\frac{3}{4}$ inch in diameter, well formed, round, color red, do not burst easily, do not shatter off bunch. Flesh firm, quality fine, sweet, good flavor, slightly foxy. Seed three, small, oblate shape, fairly easy to separate from pulp. Skin medium, thin and tough. Fair bearer. Not hardy.

LUCILE. (*Labrusca.*)

Bunches medium to large, long, not shouldered, rather compact, close on bunch. Berries large, $\frac{3}{4}$ of an inch in diameter, well formed, round, red color, crack easily when ripe, rot badly. Skin thin and tender. Flesh firm, excellent flavor, good quality, very slightly foxy. Seed four and extremely hard to separate from pulp, very small, roundish oblate shape. Fair bearer. Not hardy.

MASSASOIT. (ROG). (*Labrusca, Vinifera.*)

Bunches medium, rather loose, medium length. Berries medium, $\frac{5}{8}$ inch in diameter, well formed, slightly oblong, hang on bunch well, color red, solid but bruise easi-

ly. Flesh slightly acid, good flavor, good quality, foxy. Seed three to five, medium, slightly oblong, very hard to separate from pulp. Skin medium thick and rather tender, splits fairly easily. Fair bearer, not hardy.

MOORE'S EARLY (*Labrusca*.)

Bunches medium size, shouldered, rather loose on bunch. Berries large to very large, round, well formed, black color, solid, but crack easily, shatter off of bunch easily. Flesh fairly sweet, fair quality, slightly foxy. Seed large, three in each berry, which separate easily from pulp. Fair bearer, hardy.

MOYER. (*Labrusca, Bourquiniana*.)

Bunches small, irregular, poorly shaped, medium compact. Berries small, dark red, round, fairly firm. Flesh juicy, tender, quality good. Seed separate easily from pulp, one to four, average two, small. Vine poor grower, poor bearer, not hardy.

NIAGARA. (*Labrusca, Vinifera*.)

Bunches large, compact, shouldered. Berries large, $\frac{3}{4}$ inch in diameter, do not shatter off of bunch, roundish, well formed, color whitish green, changing to pale yellow as they become well ripened, do not bruise easily. Flesh firm, sweet fine flavor, slightly foxy, seed separate easily from pulp, medium size, and one to five in number, average three. Heavy bearer, fairly hardy.

PROGRESS.

Bunches medium to small, fairly compact. Berries large, $\frac{3}{8}$ inch in diameter, well formed, slightly oblong, deep red color, almost purple, solid, do not bruise easily. Flesh firm, sweet, fine flavor, fine quality, do not shatter off of bunch very easily. Seed two to three per berry, medium size, oblate shape, very hard to separate from pulp. Skin medium thick and tough. Poor bearer, fairly hardy.

POCKLINGTON. (*Labrusca*.)

Bunches medium to small, rather loose and irregular. Berries medium size, yellowish green color, never ripened well. Vine fairly vigorous and not hardy, poor bearer.

REGAL. (*Labrusca, Vinifera*.)

Bunches large, rather compact. Berries large, round, pink color. Flesh firm, tender, juicy, good flavor. Seed separate easily from pulp. Not hardy.

SALEM. (*Labrusca, Vinifera*.)

Bunches medium to large, shouldered, compact. Berries large, round, dark red, skin thick, fairly tough, has no pigment. Flesh juicy, tender, slightly sweet, excellent quality. Seed three to four, large and broad. Vine good grower, good bearer, fairly hardy.

ULSTER. (*Labrusca, Vinifera*.)

Bunches small, close, compact. Berries medium, color red. Flesh solid, fairly sweet, fair quality. Seed three, small. Skin medium thick, tough. Poor bearer, not hardy.

VERGENNES. (*Labrusca*.)

Bunches small, irregular in size and shape. Berries medium size, round, red, do not shatter from bunch, have-

tendency to shrivel or dry on bunch. Flesh pale green, juicy, tender, rather stringy. Vine poor grower, not hardy.

WILDER. (*Labrusca, Vinifera*.)

Bunches medium to large, shouldered, medium length and compact. Berries medium, $\frac{5}{8}$ inch in diameter, well formed and round. Color black, solid, does not bruise easily. Flesh juicy, sweet, good quality, excellent flavor, slightly foxy. Seed two, medium oblate shape, very hard to separate from pulp. Skin medium thick and very tough. Good bearer, not hardy.

WINCHELL. (*Labrusca, Vinifera, Aestivalis*.)

Bunches medium to small, long, close and compact, shouldered. Berries small, well formed, slightly oblong, greenish white color, fruit solid and does not bruise easily, very sweet, flavor excellent. Seed one to four, average three, small and separate fairly easily from pulp. Vine good grower, good bearer, hardy.

WOODRUFF. (*Labrusca, Vinifera?*)

Bunches medium, shouldered, medium length and compact. Berries large, $\frac{3}{4}$ inch in diameter, round, well formed, color red, shatter off bunch. Skin cracks rather easily, medium thick, medium tough. Flesh firm, sweet, good quality, good flavor, slightly foxy. Seed three, medium size, and roundish oblate, hard to separate from pulp. Good bearer, not hardy.

WORDEN. (*Labrusca*.)

Bunches medium to large, loose, medium length. Berries large, $\frac{5}{8}$ inch in diameter, well formed, but ripen a little unevenly, color black, slightly oblong shape, hang on bunch well and when pulled do not bruise berries. Flesh solid, sweet, good flavor, foxy. Seed two or three, small to medium, hard to separate from pulp. Skin thick and tough. Very good bearer, very hardy.

WYOMING RED. (*Labrusca*.)

Bunches medium to large, slightly irregular, medium compact. Berries large, round, dark red, covered with lilac bloom. Skin thin, tender, adheres to pulp. Flesh pale green, juicy, tough, solid, very foxy, fairly good. Seed do not separate easily from pulp, average two, rather small. Vine fair grower, fairly hardy.

ROTUNDIFOLIA GRAPES

EDEN.

Fruit ripe Sep. 10. Clusters small, large for group. $\frac{1}{2}$ to $\frac{3}{4}$ inches, 5 to 15 berries to cluster, clusters loose. Berries round, black, many obscure dots, skin thick, tough, pigment, very sweet, quality good, pulp medium solid. Seed small, plump, pointed, vary from light green to dark brown. 1 to 4, average 3. Vine a vigorous grower, regular and heavy bearer.

FLOWERS.

Ripe Sept. 20, latest variety. Clusters small. 5 to 10 berries in cluster. Berries large, $\frac{3}{4}$ to $\frac{7}{8}$ inches in diameter. Roundish oblong in shape. Very black with many small

russet dots. Skin medium thick, tough, full of pigment. Good quality, pulp solid. Seed hard to separate from pulp, 2 to 4 in each berry, average 3. Seed medium to large, long and blunt, deep grooved, brown in color. Vine a good grower, regular and very prolific bearer.

JAMES.

Ripe Sept. 10. Clusters small, 4 to 7 berries. Berries large, $\frac{3}{4}$ to 1 inch in diameter, round in shape, black with many large russet dots. Skin thin to very thin. Much pigment. Very sweet. Best quality of black varieties, pulp medium solid. Seeds separate easily from pulp, medium to large, very plump seed, 1 to 3 seed in each berry, average 2. Greenish brown in color. Vine medium vigorous grower, regular and medium heavy bearer.

MISCH.

Ripe Sept. 18. Cluster small, 4 to 10 berries. Berries medium $\frac{1}{2}$ to $\frac{3}{8}$ inches, roundish oblong, black, some bloom, many russet dots, large, a few russet stripes. Skin medium thick, much pigment, sub-acid to sweet, quality fair, pulp very solid. Seed medium to small, plump, brown with green stripes, very blunt, 1 to 4, average 3. Vine a regular and prolific bearer. A good grower.

SCUPPERNONG.

Fruit ripe Sept. 1. Clusters small, 4 to 10 berries, large $\frac{5}{8}$ to $\frac{7}{8}$ inch, round in shape, green in color, nearly russet when well ripe, covered with many large russet dots. Skin thin, no pigment, very sweet, quality very good, pulp soft, separates easily from seed. Seeds large, irregular oblong pointed, 1 to 4 average 3, reddish brown heavily splashed with green. Vine good grower, regular and prolific bearer.

THOMAS.

Fruit ripe Sept. 15. Clusters small, 4 to 8 berries. Berries large, $\frac{3}{4}$ to 1 inch in diameter, round, reddish brown with blue bloom. Many large russet dots. A few russet stripes. Skin thin, tough, full of pigment, very sweet, quality very good, pulp soft. Separates easily from seed. Seed 2 to 5, average 3, usually green with brown dots. Some light green and some black, medium, oblong, plump. Vine very vigorous grower, regular and very heavy bearer. Best for culinary purposes.

The forty-eight varieties show for the six years test a very striking difference in productiveness, hardiness and vigor. A few of the varieties bore the first year after planting and gave good yields each year thereafter. Many of the varieties were slow to start bearing and did not yield good crops after coming into bearing. A few bore only one crop and died, showing a tendency to be weak or short lived. The Station Pathologists failed to find on such vines any disease that would cause the death of the vines, or the canes to die back to the old wood. The vines and foliage

would appear healthy until frost, and at midwinter, when the annual pruning was given, these vines or parts of vines would be dead. This tenderness appeared more noticeable in some varieties than in others. For example, all the plants of a variety would be injured alike, while those of another variety would be perfectly healthy. This was thoroughly demonstrated in Agawam and Ives. The Agawam died back each winter for the first three years and died completely the fourth winter, while the Ives grew vigorously and was not injured during the winter. Some of the vines appeared to be low in vitality throughout the growing season and to such a degree that they did not mature their fruit.

The greatest loss of vines was sustained in 1916-17. In 1916 there was a very rainy season in July and August and many fruit and forest trees died because the soil was so full of water. This damage was also noticeable in peach orchards. The peaches showed the effect of the excess water in the soil in a few weeks, while the grapes did not show any bad results until mid-winter. Fifteen of the varieties died outright, while eleven were so weakened as to bear light or no crops, and died the following winter. Five were injured to such a degree that two produced very light yields in 1917 and none in 1918. The other three did not produce any fruit in 1917-18. The following eleven varieties remained healthy throughout the six year's test and produced good crops of fruit, showing their ability to withstand adverse conditions, and should be selected for either home or commercial planting in Alabama: Brighton, Catawba, Concord, Delaware, Diamond, Ives, Isabella, Moore, Niagara, Worden, and Winchell. These varieties are being used for further variety tests on a larger scale.

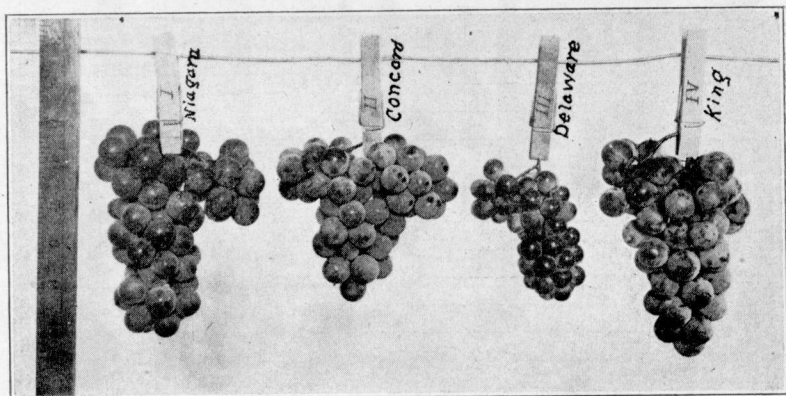
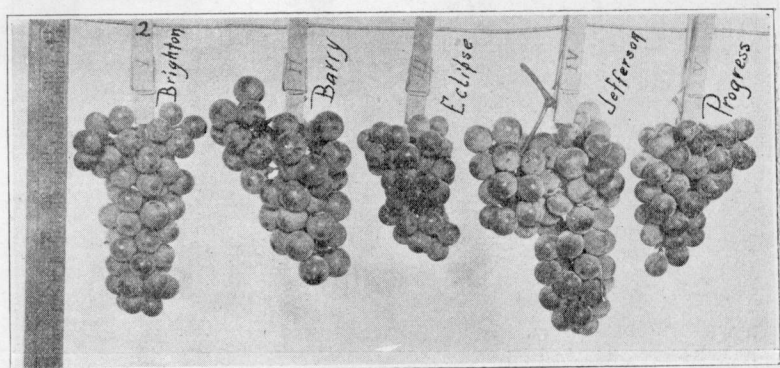
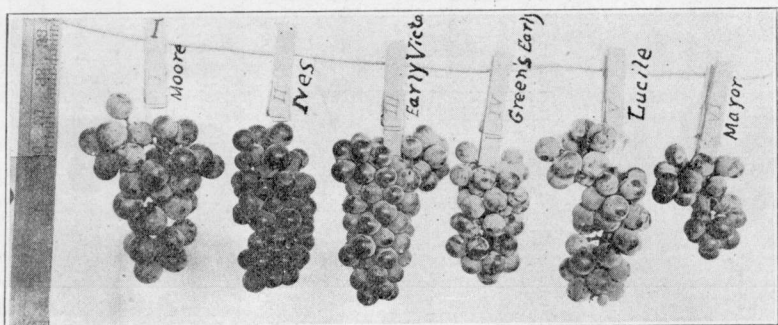
Of the six rotundifolia grapes on trial, each has its good merits; the Scuppernong, a name applied to all greenish white rotundifolia grapes, is especially prized for eating out of hand; the Eden and Misch for their peculiar, musk flavor; the James for its immense size; the Thomas for its extra value for culinary purposes and the Flowers for its late ripening period. This class of grapes has a longer season than the bunch grapes and should be more generally grown. Its season is later than bunch grapes, thus prolonging the period for fresh grapes.

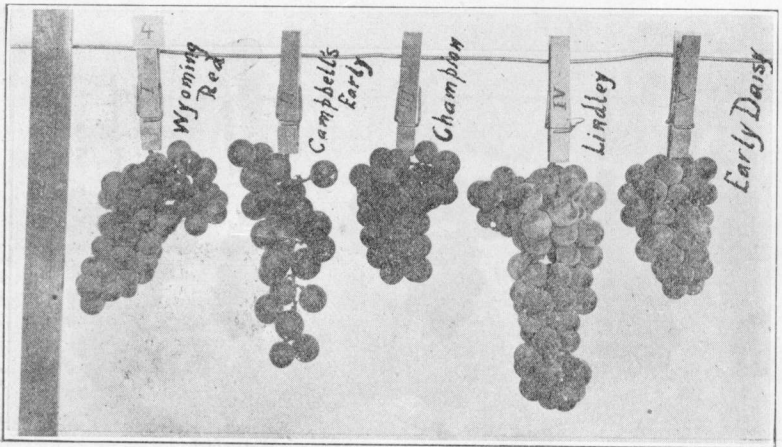
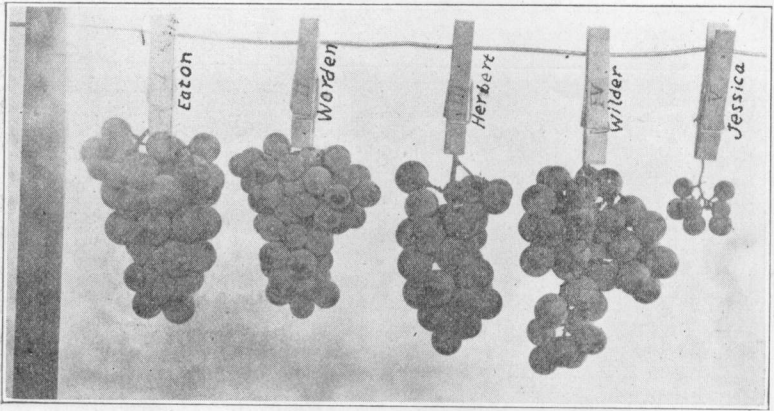
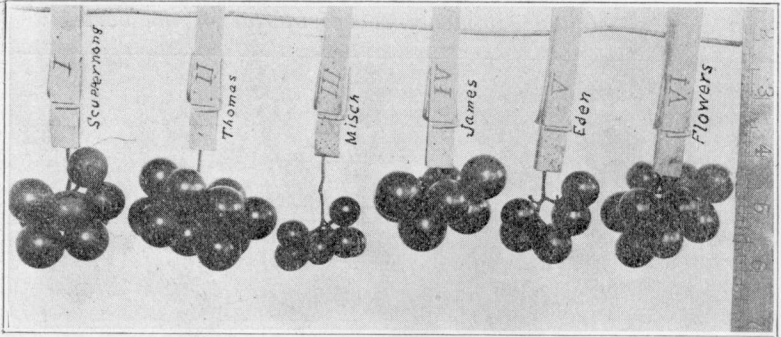
VARIETY TEST OF GRAPES

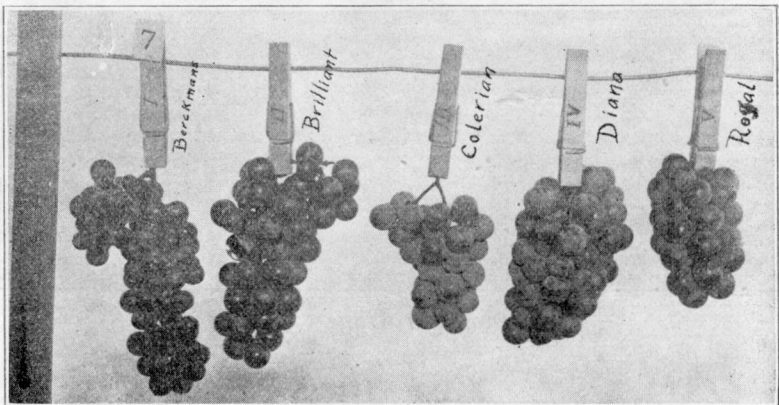
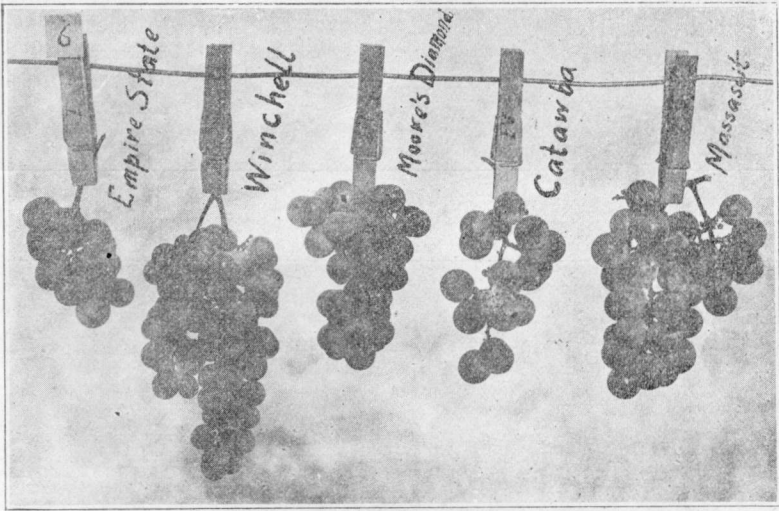
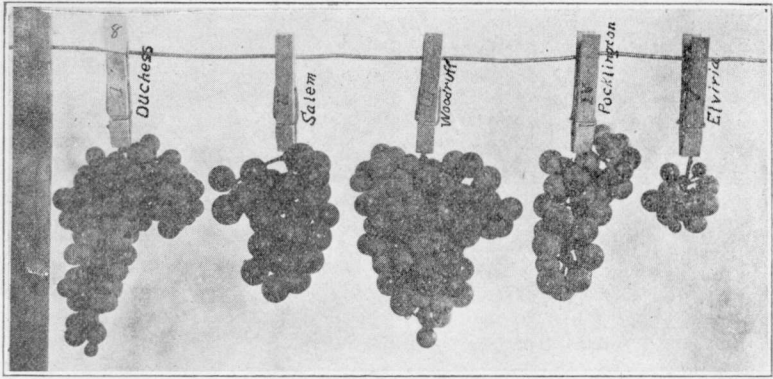
Variety	Date of Harvesting and Yield in Pounds					
	1913	1914	1915	1916	1917	1918
Agawam		7-21 2¼	7-24 1¼	Dead		
Amber Queen			8-21 11	Dead		
Barry	7-28 1	7-21 3½	7-20 13½	7-21 13	Dead	
Berckman		7-21 ½	7-24 9½	8-1 5		Alive
Brighton		7-21 ½	7-24 11	7-21 3	7-21 3	7-17 4½
Brilliant	7-25 ¼	7-16 2	7-27 3½	7-27 8	7-24 2½	Dead
Campbell		7-16 ½	7-14 4½	7-24 4	7-21 2	Dead
Catawba		7-21 1½	8-1 23	7-27 5	8-5 6	8-1 5½
Champion	7-25 ½	7-16 ½	7-15 2	7-18 6½	7-21 6	7-17 7
Colerain	7-25 1	7-26 2½	7-25 4	8-1 5½	Dead	
Concord	7-25 2	7-27 5¾	7-24 13½	7-24 8½	7-24 5½	7-27 8½
Delaware		7-21 ½	7-20 14	7-21 5	7-21 5	7-17 4½
Diamond	7-20 1	7-21 5½	8-6 11	7-27 5	7-24 1½	7-27 14
Diana		7-30 2	7-30 16	8-1 5¼	8-8 3	Dead
Duchess	7-28 2	7-21 6¼	7-20 22½	8-5 8½	8-8 6	Dead
Early Daisy	7-25 1¼	7-15 3¼	7-14 10	7-15 21		Dead
Early Victor	7-25 ½	7-16 ½	7-14 6¼	7-17 3½	7-15 2	Alive
Eaton	8-1 1½	8-1 4	7-28 5½	7-27 6	Dead	
Elvira			7-30 1½	8-8 2	Dead	
Empire				7-27 2	Dead	
Eclipse			7-10 4½	7-21 6	Dead	
Goethe		8-12 2	Dead			
Green		8-16 ¼	7-28 3	7-17 5½	Dead	
Herbert		7-21 3½	7-20 9½	7-27 11	Dead	
Isabella		8-12 2¾	8-3 5	8-8 8	8-5 7	8-9 8
Ives		7-16 2	7-20 14	7-21 12	7-21 8½	7-21 9
Jefferson		7-16 1	7-28 4½	7-25 3½	7-24 ½	Dead
Jessica*		7-21 1	7-21 2	7-27 ¼	Dead	
King	8-1 ½	8-1 ½	7-28 4½	7-24 10	Dead	
King Phillip*		7-16 ¼	7-30 2	7-24 ¼	Dead	
Lady Washington	8-1 1	7-27 3¼	7-28 8½	7-27 19½	7-24 14½	7-27 4
Lindley		7-24 5¼	7-24 10	7-24 14	Dead	
Lucile	7-25 1½	7-21 6¾	7-20 10	7-17 3½	Dead	
Massasoit	8-1 ¾	7-21 4½	7-28 11	7-27 14	Dead	
Moore (Early)		7-16 1½	7-13 7¼	7-17 7	7-21 2¼	7-17 8
Moyer			7-14 2	7-17 1½	7-17 ½	Dead
Niagara		7-20 2	7-24 8	7-17 10	7-30 2	Alive
Progress		7-21 1	7-24 2½	7-21 6¼	7-21 1	Dead
Pocklington*			Never	Ripened		Alive
Regal			8-1 9	8-1 10	Dead	
Salem			8-6 11	8-10 12		Alive
Ulster*	--		Dead			
Vergennes*			8-7 7½	Dead		
Wilder	7-25 1	7-21 2¾	7-20 5	7-21 11		Dead
Winchell	7-25 1	7-16 1½	7-14 9	7-27 11	7-24 9	7-21 6
Woodruff		7-21 1½		8-5 6½	8-8 5	Dead
Worden		7-27 1¼	7-30 9½	7-27 10½	8-8 10	8-1 3
Wyoming Red			7-20 5	7-24 6	7-24 2	Dead

*Fruit did not ripen well.

The bunches shown below are representative of the variety:









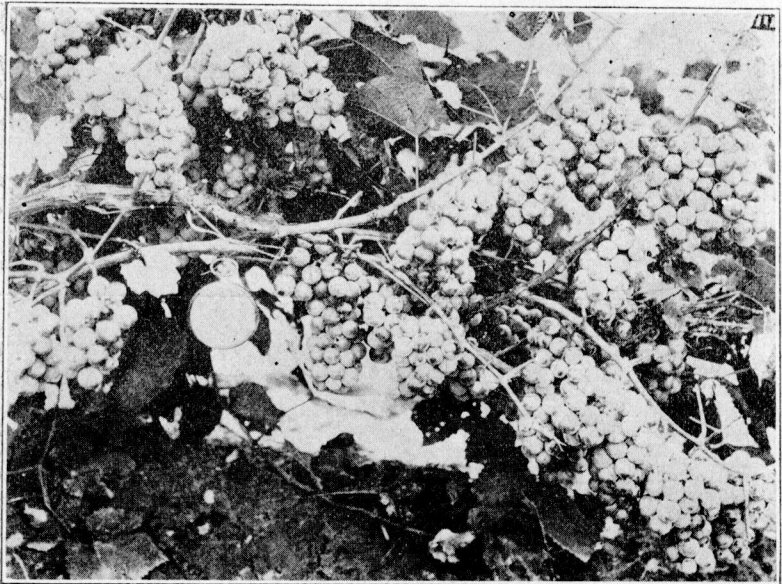
Ives Grape



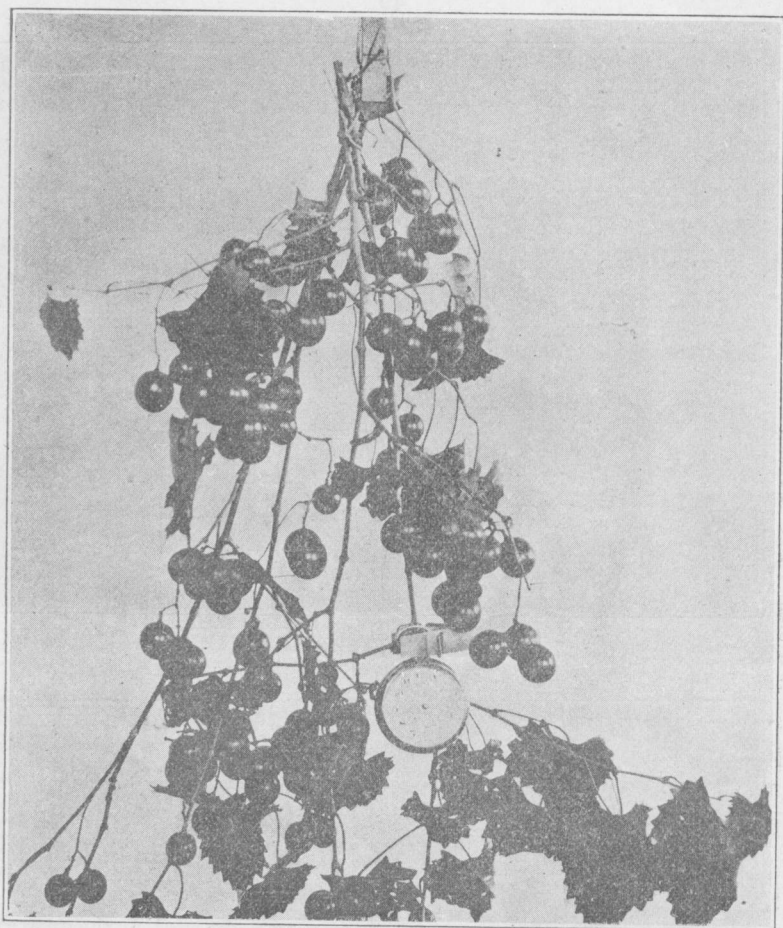
Diamond Grape



Worden Grape



Delaware Grape



Flowers Muscadine



Vineyard at Notasulga sixteen years old. It has borne regular and heavy crops. In 1919 the vines bore from twelve to twenty pounds each (four-hundred vines per acre) and sold for ten cents per pound in nearest cities. Varieties: Concord, Delaware, Ives, and Niagara.