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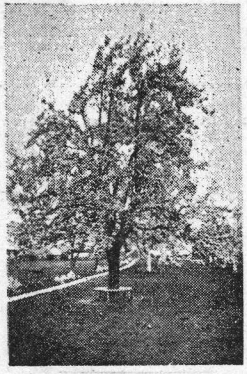

HORTICULTURE.

FRUITS AND VEGETABLES.

Notes on the Comparative date of Blooming, and Pollen production of varieties of Apples, Pears, Plums, and Cherries.

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FRUITS.

POLLINATION.

GEORGE COOTE.

The first step towards successful fruit culture is an orchard wisely planted. The several varieties must be so located that each may assist in the pollination of one another. This can only be done by a careful study of the different varieties as to their time of blooming and amount of pollen produced by each variety.

Very careful observations and notes were taken on all varieties on the college farm. It will be understood that all varieties of fruit trees do not have the same power of producing pollen. If a large number of trees of a single variety be planted which are shy pollen producers the lack of pollen will undoubtedly cause a failure in the crop of fruit; and this danger of failure will be greatly increased if the weather is damp at the time of blooming.

The pollen is conveyed from flower to flower by bees and other insects. Their object is the discovery of honey; and whilst searching the recesses of the flower they unintentionly cover their bodies with pollen which they convey to the next flower and unadvoidably deposit it on its stigma. If the amount of pollen produced be small there will be but a small amount to be distributed and the fertilization of each flower would be either a failure or imperfect. This shows the necessity of planting trees which are shy producers of pollen along with those rich in pollen. Hence to arrange the trees in an orchard it is necessary to know the pollen producing powers of each variety.

It will be seen that the list of varieties in the following tables is comparatively small. But it must be remembered that this is but a beginning of a work which must be continued through a series of years. We have many other varieties on the college grounds which have not yet come into bearing, and hence are not reported.

As soon as a report of all varieties can be made, a classification will be made and published for the benefit of all interested in such work. The following table shows the date of blooming and pollen producing power of each variety.

Comparative Notes on the Date of Blooming, and Pollen Production of Varieties of Fruit.

CHERRIES.

No.	NAME.	Date of first bloom.	Date of full bloom.	Date of Pollen maturing	Date of stigma receptive
1	*Black Republican	4.13	4.18	4.20	4.20
2	†Bigarreau (Rockport)	4.17	4.20	4.21	4.21
3	†Bing	4.18	4.21	4.21	4.21
4	*Black Tartarian	4.19	4.23	4.24	4.24
5	*Coe's Transparent	4.19	4.27	4.28	4.28
6	*Centennial	4.13	4.19	4.20	4.20
7	*Early Purple Guigne	4.22	4.24	4.25	4.25
8	*Elton	4.11	4.20	4.21	4.21
9	*Governor Wood	4.16	4.19	4.20	4.20
10	*Great Bigarreau	4.14	4.18	4.20	4.20
11	†Kentish	4.21	5.05	5.06	5.06
12	†Knights Early Black	4.19	4.25	4.26	4.26
13	*Lincoln	4.18	4.24	4.25	4.25
14	†Late Duke	4.20	5.07	5.08	5.08
15	†Lewelling	4.14	4.23	4.23	4.23
16	*Leibe	4.16	4.19	4.20	4.20
17	*Major Francis	4.18	4.24	4.20	4.20
18	‡May Duke	4.20	5.03	5.04	5.04
19	*Royal Ann, Napoleon Bigarreau	4.17	4.23	4.23	4.23
20	*Williamette	4,18	4.21	4.21	4.21
21	†Yellow Spanish	4.14	4.18	4.21	4.21

PLUMS.

1	*Chabot	3.31	4.02	4.02	4.04
2	†Coe's Golden Drop	4.08	4.10	4.12	4.12
3	*Columbia	4.14	4.24	4.24	4.24
4	‡Botan or Abundance	4.10	4.19	4.21	4.21
5	‡Myrobalan	3.23	3.31	4.02	4.02
6	*Jefferson	4.06	4.09	4.10	4.10
7	*Goliath	4.06	4.10	4.11	4.11
8	‡Satsuma or Blood	3.25	4.16	4.26	4.26
9	†McLaughlin	4.06	4.10	4.11	4.11
10	†Imperial Gage	4.09	4.11	4.18	4.18
11	†Washington	4.09	4.13	4.15	4.15
12	‡Ickworth	4.11	4.19	4.20	4.20
13	†Quackenboss	4.11	4.19	4.20	4.20
14	*Peach Plum	4.13	4.20	4.21	4.21
15	†Sherman	4.13	4.21	4.22	4,22
16	†Walling	4.12	4.16	4.17	4.17
17	‡Yellow Gage	4.08	4.11	4.12	4.13
18	*Rhine Claud	4.07	4.12	4.14	4.14
19	*Smith's Orleans	4.07	4.18	4.19	4.19
20	†Masu	4.14	4.20	4.21	4.21
21	†St. Julian	4 19	4.23	4.24	4.24
22	‡Orange	4.07	4.10	4.12	4.12
23	†Yellow Jap	4.09	4.16	4.17	4.17
24	‡Royal Hative	4.06	4.18	4,25	4.25
25	†Simon Plum	3.22	4.04	4.06	4.06
26	*Petite Prune	4.11	4.19	4.20	4.20
27	†German Prune	4.13	4.19	4.19	4.19
28	†Italian	4.19	4.25	4.28	4.28

PEACHES.

No.	NAME.	Date of first bloom.	Date of full bloom.	Date of Pollen maturing	Date of stigma receptive
1	*Clements	4.02	4.09	4.10	4.10
2	⁒Austin Cling	4.08	4.15	4.16	4.16
3	†Alexander	4.10	4.20	4.21	4.21
4	†Bishop's Early	4.07	4.13	4.15	4.15
5	†Corvet	4.05	4.09	4.10	4.11
6	*Ellson	4.07	4 12	4.14	4.14
7	†Elberta	4.07	4.12	4.14	4.14
8	*Miss Lola	4.06	4.09	4.10	4.10
9	*Ulates	4.02	4,09	4.10	4.10
10	⁒Late Crawford	4.03	4.11	4.12	4.12
11	*Mother Porter	4.06	4.09	4.10	4.10
	PEARS.				
1	*Bartlett	4.20	4.25	4.26	4.26
2	*Beurre Gifford	4.12	4.18	4.19	4.19
3	†Beurre 'd Anjou	4.13	4.17	4.19	4.19
4	†Duchess 'd Angouleme	4 10	4.19	4.20	4.20
5	⁒Keiffer's Hybrid	3.29	4.04	4.05	4.05
6	†Pound	4.16	4.23	4.24	4.24
7	⁒Idaho	4.13	4.17	4.18	4.18
8	†Barry P	4.14	4.24	4.24	4.24
9	*Beurre Clairgeau	4.16	4.23	4.24	4.24
10	†Seckel	4.18	4.22	4.22	4.22
11	*Winter Nellis	4.18	4.24	4.25	4.25
12	*Summer Doyenne	4.09	4.17	4.19	4.19
13	⁒Osborn's Summer	4.19	4.22	4.23	4.23
14	*Le conte	3.31	4.06	4.10	4.10
	APPLES.				
1	*Baldwin	4.24	5.04	5.05	5.05
2	†Charlotenthaler	4.24	5.03	5.03	5.03
3	*Domini	4.24	5.01	5.01	5.01
4	†Early Harvest	4.23	5.07	5.08	5.08
5	*Fall Pippin	4.26	5.07	5,08	5.08
9	†Grimes Golden	5.01	5.09	5.10	5.10
7	†L. Romanite	5.11	5.22	5.23	5.23
8	†Missouri Pippin	5.01	5,06	5.07	5.07
9	†May of Myers	5.07	5.11	5.12	5.12
10	†Oldenburgh	4,30	5.06	5.07	5.07
11	*Pumpkin Russet	5.03	5.07	5.07	5.07
12	*Oregon Crab, (Lewelling)	4.19	4.25	4.26	4.26
13	⁒Rambo	4.26	5.08	5.09	5.09
14	†Rome Beauty	5.13	5.22	5.23	5.23
15	*Tetofsky	4.24	5.07	5.08	5.08
16	†Transcendent, Crab	4.20	5.02	5.03	5.03
17	⁒Winesap	4.28	5.10	5.11	5.11
18	†Waxen	4.21	4.30	4.30	4.30
19	*Whitney No. 20, Crab	4.26	5.06	5.06	5.06
20	†Martha, Crab	5.03	5.11	5.11	5.11
21	*Hyslop, Crab	4.25	5.04	5.05	5.05
22	*Yellow Siberian, Crab	4 23	4.30	4.30	4.30

N. B.—Varieties marked with a * are abundant in pollen; those marked with a † are medium: those marked thus ⁒ are scant of pollen.

Experiments in Pollination of the Peach.

When the peach is grown in glass houses, and forced by artificial heat out of its season, it is necessary to pollenize the stigma of each flower by artificial means either by a small brush or some other process. The use of the brush is expensive and tedious and is not always successful; much of the fruit dropping at the stoning period.

To save labor in transferring the pollen some trees were sprayed when in full bloom with warm, and others with cold water. This proved very unsatisfactory, more fruit dropping at the stoning period than in the case of trees pollenized with the brush.

As a further experiment a hive of bees was placed in the house when the trees commenced to bloom. This was in November, and a heavy fog prevailed for fifteen days, and although the flowers were constantly opening not a bee showed itself. During the night of the fifteenth the fog lifted and the next morning was bright and clear, causing the pollen to burst Then the bees came from the hive and kept up their work for eight or nine days. The result was that not a single peach was observed to drop at the stoning season. So great was the amount of fruit on the trees that it was necessary to thin it. One tree in the house was securely protected, so that bees could not gain access to it, and all of the fruit dropped at the stoning period.

These facts show the value of bees to the horticulturist, and no fruit grower should be without them

Varieties of Apples Tested.

The experimental orchard was planted in the spring of 1891. The soil is a basaltic loam. It had been in wheat and oats for many years without the application of fertilizers of any kind. Before planting the trees the soil was plowed and subsoiled. Cultivation of the soil has been kept up all through the growing season; under this treatment the trees are making rapid growth. So far but few have fruited. There are now one hundred and thirty varieties of apples, and nine of crabs growing on the ground and others will be added as fast as means will premit.

NOTES ON VARIETIES OF APPLES AND CRABS PLANTED 1891, (ONE YEAR FROM THE GRAFT, WHEN SET.)

HYSLOP CRAB.—Fruit large, borne in clusters of three to four, roundish to egged shaped; color a dark, rich red; covered with a thick blue bloom. Flesh yellowish, good for cooking. Tree, a strong grower; spreading. A long keeper. Productive.

WHITNEY NO. 20 CRAB.—Fruit light yellow; skin glossy, streaked with carmine; flesh tender, juicy, pleasant flavor. Matured the 26th of Aug. Leaves dark green, glossy. Tree of uniform growth. Very productive. Not a long keeper.

MARTHA CRAB: Fruit large, yellow shaded and streaked with light red, good quality; good for eating out of hand. Ripened Sept. 28th. Tree makes a medium growth.

YELLOW SIBERIAN CRAB.—Color, bright yellow. Fruit inclined to oval in shape, somewhat larger than the common Siberian; good for preserves and jellies. Matured Sept. 6th.

YELLOW TRANSPARENT CRAB.—Pale yellow, medium to large, flatten-

ed, slightly conical. Flesh white, tender, juicy; slightly sub-acid. Matured Aug. 15th. Tree an upright grower; vigorons and productive. Will keep but a few days.

TETOFSKY.—A Russian variety; early, productive. Tree spreading, forming an open head. Trees are susceptible to injury by frost. Fruit of medium size; oblate,conical, often nearly round; yellow, striped with red and covered with a whitish bloom. Flesh white, juicy; slightly acid. Matured Aug. 15th.

OLDENBURGH.—Origin, Russia. Tree a vigorous grower; upright spreading head; producing when quite young. Fruit valuable for cooking, large, regular in form; roundish, oblate. Skin smooth, faintly splashed and streaked with red on a golden yellow ground. Calyx rather large, nearly closed, set in a wide, even basin. It has a faint blue bloom on the fruit. Flesh juicy, slightly sub-acid. Matured Aug. 27th

MAY OF MYERS—Tree of medium growth producing when quite young. Fruit medium size, roundish, conical, pale greenish yellow, streaked with carmine in the sun; flesh white, very fine grained, firm. Not very juicy. Flavor mild sub-acid. Good Feb. to June.

LITTLE ROMANITE.—Tree hardy, vigorous grower; bears quite young. Fruit, medium in size, roundish oblong. Skin smooth, streaked with deep red and yellow. Stalk short, deeply inserted; basin deep. Flesh yellow, firm, juicy and rich. Very good. Season: Feb. to May.

Cherries.

BING.—Fruit very large, heart shaped, slightly angular, surface glossy; color, dark crimson to black. Cavity broad, stem rather long, broad suture, slightly depressed at apex. Skin thick; firm, sweet. Flavor good, and of excellent quality. Matured July 6th

LATE DUKE.—Fruit large, roundish, heart shaped; stalk from 1½ to 2 in. in length. Color, bright shining red. Flesh amber, tender, juicy and rich. More acid than May Duke. From its color and softness is apt to be gathered before maturing, which would be for this locality the second week in Sept. The tree makes a vigorous growth, with a spreading habit, while the May Duke is quite the opposite, the latter making an erect growth.

MAY DUKE.—Fruit large, roundish, stalk long and slender. Color, dark red, when fully exposed to the sun. Flesh tender, juicy, rich. The tree may be readily distinguished by its upright growth. Matured June 30.

ELTON.—Fruit large, heart shaped; less obtuse than that of the Bigarreau It has a longer and more slender stalk, being from 2¼ to 2½ inches in length. Skin of a pale waxy yellow on the shaded side; mottled and streaked with red next to the sun. Flesh whitish, firm, sugary and very rich. Matured July 20th. Tree makes a strong spreading growth, branches dark brown; shoots speckled with a silvery epidermis on a ground of chestnut brown. Leaves very large.

BIGARREAU NAPOLEON, (Royal Ann.)—Fruit large, heart shaped; light yellow, spotted with deep red and dark crimson, flesh firm, juicy, flavor good. Tree makes a vigorous growth. Matured July 15th.

Plums.

BOTAN OR ABUNDANCE.—Medium in size, quite pointed, and in many cases oblique, Color yellow, slightly covered with red on the sunny side; flesh deep yellow, juicy. When fully matured is of good quality. Tree a strong upright grower; leaves narrow. Matured Sept. 5th. Cling.

SATSUMA OR BLOOD.—Size medium to large. Conical and quite pointed.

Deep suture; color dark red; flesh dark blood red. Coarse, slightly acid, of fair quality, clinging to the stone quite firmly. It blooms early, and is often killed by late frost.

GOLIATH.—Fruit large, roundish oblong, a little depressed. Stalk downy; skin purple, covered with a rich bloom. Flesh greenish yellow, firm, coarse; adhering to the stone: only medium in richness. Good for cooking.

ROYAL HATIVE.—Fruit, medium size, roundish, rather widest near the stalk which is about ½ in. in length; but little depression at its insertion. Skin purple, netted with yellowish brown. Flesh yellow, rich and delicious. Productive. Matured Aug. 12th.

ORLEANS.—Fruit, medium to large, depressed at apex. Stalk ½ in. in length. Ground color of the skin is a dark purplish red, with pale red specks; covered with a good bloom giving it a blue color. Flesh, yellowish green, firm; very small free stone. Good for cooking.

Grapes.

CENTENNIAL.—The vine has made a medium growth; berries not large; skin firm; color very light green, shaded with pink; flesh juicy, sweet. Matured fruit Oct. 10.

ROYAL MUSCADINE.—Syn. common Muscadine, White Chasselas.—Bunch medium size, tapering, occasionally shouldered. Berries of medium size, sound; skin thin. When fully matured assuming an amber tint. Flesh tender, rich and sugary. Very productive, sets very evenly. One of the best in cultivation.

TELEGRAPH.—Berries large, round to oval; color dark. Failed to mature; is not adapted to this climate. The vine makes a very strong growth.

WILDER.—Bunches large, shouldered; berry large, somewhat globular; quite dark; flesh tender, juicy and sweet. Matured Sept. 29th. The vine is vigorous and quite healthy.

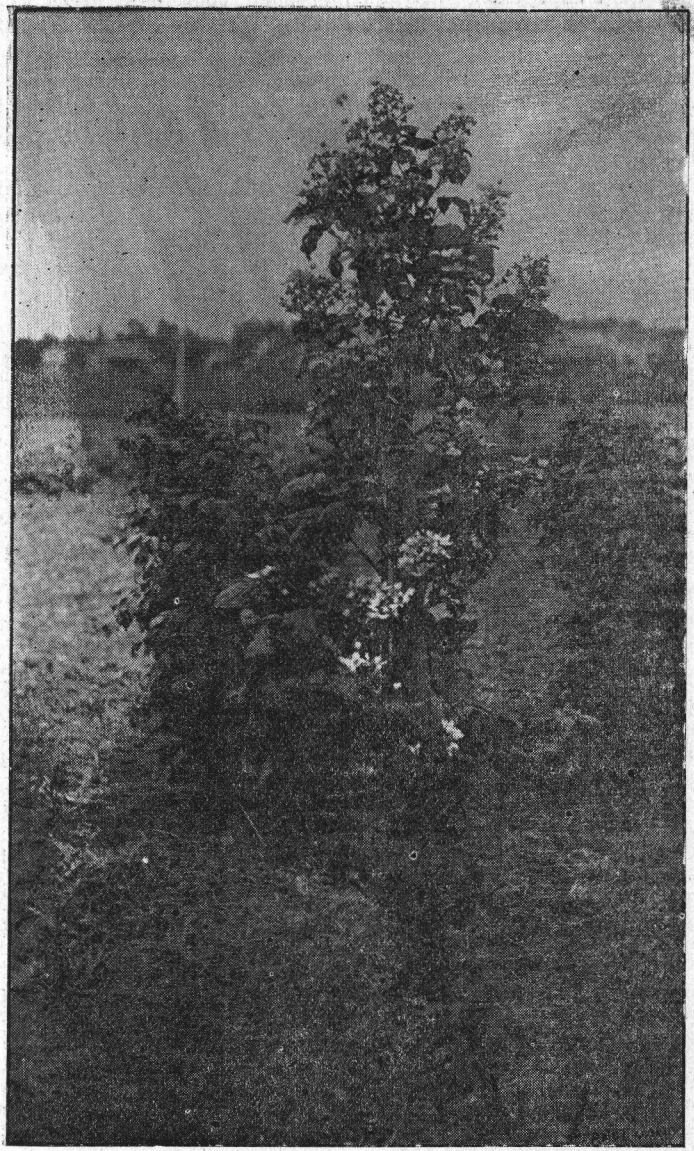
LADY.—Vine makes a small growth. Foliage resembles Concord. Bunches small, quality good. Color light greenish yellow, covered with a heavy bloom; skin very thin; pulp tender, sweet and rich, slightly vinous.

GOETHE, (Rogers No. 1.)—Vine a vigorous grower. Bunches large, of a loose habit, shouldered; berries large, oblong, yellowish green, small red dots on the sunny side; skin thin. A late variety, did not mature.

PRENTISS.—Vine of medium growth, short jointed; large leaves, downy. Bunches medium, not shouldered. Berry round, somewhat inclined to oval. Skin, thick, firm; color light green to pale yellow when fully ripe with a slight pinkish tint on the sunny side: covered with a weak bloom. Matured Sept 29th.

JESSICA.—Vine makes only a medium growth. Small, compact bunches. Berries, medium size; color, a light green changing to amber when matured; skin thin; pulp, tender, very sweet and sugary. Matured Sept. 20th.

GREEN MOUNTAIN.—This variety was received from Steven Hoyt & Co., New Cannan Conn., for trial. It has been in bearing two years and has proved to be a valuable addition to the list of white grapes. It is very productive; matures early; and so far is quite free from disease. It is one of the most valuable varieties for this coast, especialy for the valley districts. Vine a medium grower, close jointed, bunches large sometimes shouldered; compact; skin of medium thickness, rather dark green in color, covered with a whitish bloom. Flesh tender, rich and of excellent quality.



ERIE BLACKBERRY.

SWEET WATER.—Vine short jointed, leaves glossy, and deep green above, pubescent beneath, reddish brown when first beginning to unfold. Bunches quite large, open. Berries large, round; color light green. with a slight brown next the sun; flesh sweet and rich; quite productive. Matured Nov. 2d.

LINDLEY, (Rogers No. 6.)—Vine makes a vigorous growth. Bunches large, shouldered, loose; berries large, round; color brick red; flesh tender, sweet, with a considerable Muscat flavor; fruit drops from the clusters very soon after maturing. Matured Oct. 5th.

WORDEN.—Vine makes a weak growth. Bunch of medium size; shouldered; berry large, black; skin thin; flesh sweet resembling Concord. Matnred Oct. 29th

ULSTER'S PROLIFIC.—Vine, a medium grower. Bunches medium; berries large; thin skin; flesh tender, sweet with a slight flavor of the Muscat. Matured Oct. 4th.

CONCORD MUSCAT.—A very strong vine. Bunches of medium length, compact; berries large, oval; skin thin; color, light green with a small amount of bloom; flesh quite tender; flavor rich and sugary with a strong Muscat flavor. Matured Oct. 1st.

HERBERT (Roger's No. 44).—The vine makes a vigorous growth, healthy; producing medium sized bunches, often shouldered; slightly compact; berries of medium size, color black; flesh quite tender and sweet, of excellent quality; matured Oct. 29th.

Blackberries.

For the purpose of making a comparative test of Blackberries and Raspberries, three plants of each variety were taken, consisting of four canes each. The weight of the fruit was carefully recorded at each gathering.

AGAWAM.—Fruit sweet, melting, medium size; quite black; firm; first bloom opened May 25th, full bloom June 3rd; first picking July 11th, last picking Aug. 27th; three plants producing 7 lbs.; canes are of medium growth.

ERIE.—Fruit quite large; diameter 1 in. circumference 3½; firm, and of excellent flavor; good for shipping. First bloom May 29; full bloom June 6th; first picking July 25; last picking Aug. 27th; three plants producing 16 lb; canes make a very strong growth.

CHILD'S TREE.—Fruit almost round, ¾ by ⅝ inches; flavor good; has not proved productive.

TAYLOR'S PROLIFIC.—Fruit large, and quite glossy; quality good; 1 in. in diameter, 3 in. in circumference. First bloom opened May 26th; full bloom, June 3d; first picking, July 11th, last gathering, Aug. 27th: three plants produced 5 pounds.. Makes a strong growth.

SNYDER.—Fruit, medium size: quality, good; diameter, ⅝ in.; circumference, ⅞ in.; firm; first bloom opened May 24th; full bloom, June 2d; first gathering, July 24th; last gathering, Aug. 27th. Three plants produced 5 lbs; canes quite vigorous, producing large leaves.

WILSON JUNIOR.—Fruit large, firm; excellent flavor; diameter ¼ to ⅝ in.; circumfereuce 1¼ in. First ripe fruit, July 24th; last gathering, Aug. 8th. Three plants producing 3 lbs.; cane made a small growth.

EARLY HARVEST.—Fruit good quality, firm; medium in size; first bloom May 27th; full bloom, June 4th; first gathering, July 18th; last gathering, August 6th. The canes make a strong growth. Cannot recomend them for

planting for general cultivation. The canes are not hardy. Much damaged by frost; three plants produced ¼ lb.

KITTATINNY.—Fruit large; diameter 11-16 inches, circumference 2¾; firm, good quality; First bloom, May 28th; full bloom, June 6th; First picking, July 25 th; last picking, Aug. 22 nd; three plants produced 12 lbs.; canes extra strong, a good market variety.

OREGON EVERGREEN.—*Rubus laciniatus*, Willd.—Fruit large; medium in quality; juicy. If grown without irrigation the seeds are quite hard; is very productive; strong growing; quite hardy. This variety when properly cultivated needs to be irrigated, the fruit will be of better quality and much more productive. The plants in question were grown without water. The first gathering was made Aug. 4th; last gathering Sept. 20th; product of three plants, 120 lb.

Raspberries.

GOLDEN QUEEN (Childs).—Fruit, yellow; large, measuring 1½ to 2½ in. in circumference; of good flavor; firm; good shipper; very attractive when mixed with the red, for desert. First bloom opened May 23d, full bloom, June 4th; first ripe fruit, June 30th, last picking, Aug. 1st; three plants produced 5 lb; canes made a vigorous growth; long jointed. Produce suckers very freely.

CHILDS ALL SUMMER (Childs,).—Fruit dark red; large; circumfrence of fruit, 2½ to 2¾ in; quality good; an excellent berry for market. First bloom, May 1; full bloom, May 24; first ripe fruit, June 30; last picking, Sept. 8; three plants producing 10 lbs. canes vigorous, short jointed; leaves large, quite dark in color.

CUTHBERT—Fruit, bright red; moderately firm; of good quality; circumference of fruit, 2½ to 3⅓ in.; flavor sweet and lucious; a good shipper. First bloom opened May 11th, full bloom, June 2d.; first ripe fruit, June 29th; three plants broducing 12 lb; last picking, Aug. 17th; the best red raspberry for all purposes tested here. Canes make a medium growth; quite healthy.

TURNER.—Fruit red; above medium size; circumference 1½ to 2½ in.; flavor not of the best; good shipper; first bloom opened May 14th; full bloom, June 3d.; first picking, 23d.; canes not strong; 3 plants produced 5½ lbs; last picking, July 27th.

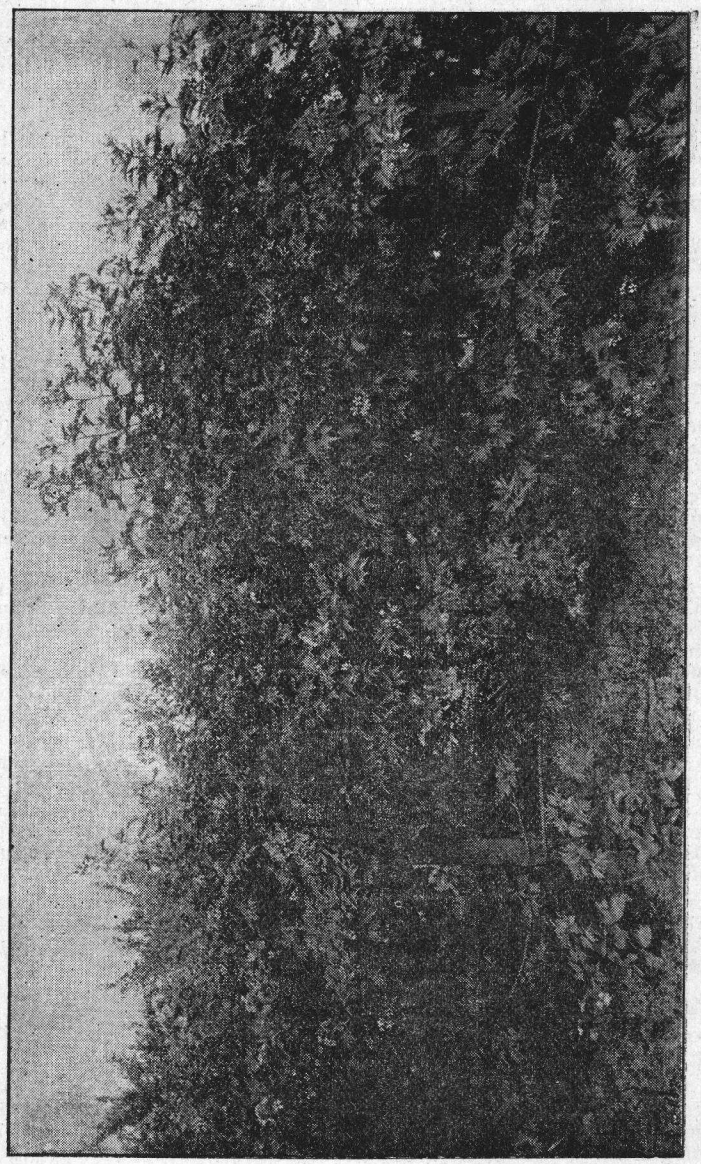
CRIMSON BEAUTY.—Fruit red, small; does not adhere to the stem well. Not a success this season. First bloom May 20, full bloom June 1; first picking June 27; three plants producing 3 lbs. Canes quite short; leaves small, turning yellow by Juue 30th.

MARLBORO.—Fruit red; medium in size, 2½ in. in circumference quality good; firm; first bloom opened, May 27; full bloom, June 6th; first picking July 2; three plants produced 5 lbs.; last picking, July 31. Canes strong, long jointed.

SHAFFERS COLOSSAL;—Fruit, dull purple; large, 2¼ in. in circumference, ⅝ in. in diameter; flavor good. First bloom opened, May 21; full bloom, June 5; first picking, July 2; last, July 27; one plant prodnced 1 lb. 1 oz; canes small, not in good condition for bearing.

EARLY PROLIFIC.—Fruit red; firm; 2½ in. in circumference. ⅝ in. in diameter; flavor good; first bloom, May 21, full bloom, June 2; first picking, June 26, last picking, June 25; three plants produced 4½ lbs. Canes of medium growth.

HANSELL.—Fruit very red, firm; 2½ in. in circumference, ⅝ in. diameter; quality fair; first bloom, May 12, full bloom, May 29; first picking; June 26, last picking, June 27; three plants producing five lbs. Canes not over strong.



EVERGREEN BLACKBERRY.—(*Rubus laciniatus,*) Willd.

Black Caps.

DOOLITTLE.—Fruit a dark purple; 2 in. in circumference, 9-16 in. diameter; flavor sub-acid; much esteemed for cooking. First bloom, May 22; full bloom, June 3d; first picking, June 30; last picking, July 27; three plants producing 6 lbs 3 oz. Canes quite strong.

NATIVE VARIETY (*Rubus lucodermus.*)—Fruit, quite large; diameter ⅝ in., circumference 2½ in.; flavor excellent; first picking, July 9th; three plants producing 5 lbs. 3 oz. Canes very strong growing.

SOUHEGAN.—Fruit, quite dark, having a large amount of bloom; diameter, ⅝ in., circumference, 2½ in.; quite a pleasant flavor; firm; first bloom, May 23; full bloom, June 2; first ripe fruit, June 26; last picking, July 25; three plants producing 10 lbs. Canes very strong.

JAPAN WINEBERRY.—Fruit dark red; diameter ⅝ in.; circumference 2⅛ in.; first bloom, July 16; first picking, July 30; last picking, Aug. 22; three plants producing 7 lbs.; the calyx is covered with a glutinous substance. Canes are set very thickly with small dark red spines.

Cherry or Pear Slug, (*Selandria cerasi.*—Peck.)

On July 4th, the slug commenced to attack the Pear and Cherry trees. They were found in greater numbers on the latter. The trees were liberally dusted with air-slacked lime. It was thrown from the hand into the trees, the operator taking care to stand to the windward side, so that the lime might be better distributed among the branches.

The slugs being naturally moist the lime readily adheres to them, and the smallest particle seemed to make them commence to curl up, and to cause them to fall to the ground.

As an experiment, earth dust was used on a few trees. Two days after these applications, the orchard was inspected. It was found that trees that were treated with the lime were comparatively free from the slugs, while those receiving the application of earth dust were badly infested.

The lime should be applied early in the morning before the dew is off. After the treatment the trees put on a very healthy appearance.

NOTES ON VEGETABLES.

A number of novelties, and standard varieties of vegetable seed were received from Atlee, Burpee & Co.; also from Possen & Son, for the purpose of comparing them upon our Experiment ground. These plats have been heavily fertilized with stable manure so that the soil has become better suited to this work.

Peas.

RENOWN (Burpee.)—Vine, medium strength; 2 to 2½ feet high; slightly branched; color, dark green; leaflets 4 to 6; good quality; evenly filled. Pods 3¼ x ⅝.

ECHO (Burpee.)—Vines of medium growth, 2 to 2½ feet high; 4 leaflets; color, dark green; paired; pod 3¾ x ⅞; number of peas in pod, 5 to 6, well filled and of excellent quality.

VICK'S PERFECTION (Bowen,)—Vines strong, 2 to 2½ feet high; not

branching; color dark green; leaflets 4 to 6. Pods paired; 5 to 8 peas in a pod; 2½ x ½ in.

BLUE PETER (Possen.)—Vines 10 to 12 in, high; strong growth; early, prolific; color dark green. Pods 3 x ⅝ in.

EARLIEST OF ALL (Bowen.)—Vines make a slender growth, 16 to 24 in. high; Color light green; leaflets 4; 3 to 6 peas in a pod, 2½ x ½. An early variety.

Radishes.

GOLDEN DRESDEN.—A new variety, introduced by Atlee, Burpee, & Co. Philadelphia. Seed was sown in open ground April 23d.; marketable maturity, May 24; thirty-two days from time of sowing; producing large well formed roots; color, light golden brown; flesh quite white and crisp; of good flavor; a valuable addition to the long list of varieties.

NEW IMPERIAL FRENCH BREAKFAST RADISH (Burpee.)—Seed sown in open ground April 23; producing very attractive roots; red tipped with white; olive shape; tender and crisp; an excellent early variety.

Corn.

EARLY FORDHOOK SWEET CORN (Burpee.)—A very early, dwarf growing variety; quite productive; maturing from three to four medium sized ears to the stalk; is of the finest quality; a valuable early variety; maturing five days in advance of Cory; height 3 to 4 feet.

Lettuce.

ICE-BERG (Burpee.)—A quick growing variety, producing large solid heads; crisp and tender; stands a long time before going to seed; good quality.

FERRY'S EARLY PRIZE HEAD (Posson.)—This variety produced well during the summer; head quite large, the tips of the leaves changing to a bronze color; quite tender and crisp; average weight of head 11 oz.

BIG BOSTON (Henderson.)—A variety resembling Boston Market, with the exception that it grows larger in size; six to eight days later in maturing; head weighing from 8 oz. to 1¼ lb.; medium quality, good for market purposes

NEW CELERY LETTUCE, Trianon, (Henderson,) Syn; Paris white Cos.—Large pale green leaves which fold over at the top so that they close over and blanch without tying; heart very white and crisp; excellent quality; continued growing longer than any other variety on the grounds. It proved to be one of the best summer varieties grown here the past season.

NEW WHITE GIANT, COS (Burpee.)—Resembling the above; is strong growing; standing a long time before going to seed; produces large white hearts; tender, crisp and of good quality.

WHEELERS TOM THUMB (Burpee.)—Forms a small hard head; produces but few outer leaves; can be planted much closer than other varieties; excellent quality; quite hardy in the Willamette Valley; can be highly recommended for planting out in the fall for early spring use.

EARLY WHITE SELF-FOLDING (Posson) Syn.—Paris white.

PRICKLY SPINACH (Posson.)—A variety for autumn sowing; and may be readily distinguished by its seeds being quite prickly; it is much hardier

than the round or summer spinach. If sown the middle of August, the plants will produce frequent gatherings all through the Winter months and early Spring. The soil should be well drained for the production of Winter spinach.

Victoria Spinach (Burpee.)—A strong growing and productive variety; remaining in season a long time, leaves quite large; good quality,

Bloomsdale Spinach (U. S, Dept. Agri.)—Made a good growth; remaining in use but a short time; went to seed early; marketable maturity, July 6th; ripening seed, Aug. 10.

Beans.

Extra Early Refuge (Posson.)—Vines 8 to 10 in. high, erect; bushy; pink bloom; pods 3 to 4½ in. long, ⅜ in. wide; color green, with a few purple specks; leaves medium size; two to four beans in a pod, not filled to the end.

Golden Wax (Posson.)—Vines 10 to 12 inches high; strong, erect; dark green; leaves medium in size; flower white; pods yellow; 3 to 4½ in. long, ½ in. broad, flat; 3 to 5 beans in a pod; very prolific.

Golden Champion (Possen.)—Pole; vine of medium strength; leaves light green; flowers pink; pods 4 to 6 in. long, ⅜ in. wide; roundish; string slightly developed; prolific,

Speckled Wax (Posson.)—Plant 6 to 10 in. high, erect; leaves small, light green tinged with yellow; flowers pink; pods 3 to 5 in. long, ½ in. broad; yellow, spotted with red; slightly curved; 3 to 5 beans in a pod; first picking July 25th.

Burpees Bush Lima (Burpee.)—Plant, 10 to 14 in. high, of medium strength; leaves medium size; flowers white; pod 3 to 5 in. long, 1 to 1½ in. broad; one to three beans in a pod; of excellent quality.

Burpee's New Stringless Green Pod Bush Lima (Burpee.)—Plant 10 to 12 in. high, erect, leaves medium size; flower white; Pods 3½ to 5 in. long ½ in. broad; producing from 2 to 5 beans in a pod; color green; without strings; prolific; maturing July 17th.

Willow Leaf Lima (Burpee.)—Vine strong growing, 5 to 7 feet high; flower white; prolific, season late; pods 3 to 3½ in. long, ⅝ wide; producing from 3 to 5 beans in a pod.

Horticultural Lima (Possen.)—Pole; leaves large, dark green; flowers white; pods 4 to 5 in. long, ⅝ broad, splashed with red when nearing maturity; 3 to 6 beans in a pod.

Early Black Lima (Burpee.)—Pole; 4 to 7 feet high, of medium strength; season late, prolific; flowers white; pods 2½ to 3½ in. long, ¾ wide; 2 to 3 beans in a pod.

Southern Prolific (Bowen.)—Pole, 6 to 8 feet high; pods borne in clusters; very prolific, valuable late variety; producing pods of the best quality until cut by frost.

Cauliflower.

Burpee's Early Cauliflower (Burpee.)—Plants make a compact growth; heads are well protected; producing compact solid heads of excellent quality; quite white; stem short; matures early.

Veitches Autumn Giant (Henderson.)—Heads large, compact; white,

good quality. It is unduobtedly the best autumn cauliflower yet introduced for this locality for winter use. If sown the last week in April or the first week in May, and planted in well manured ground it will begin to mature the last week in October, and continue to do so through Nov., Dec., and Jan., should the weather permit. It has been grown on the Station grounds six years often producing heads from 8 to 9 lbs. in weight.

Pumpkins.

FORDHOOK (Burpee.)—A strong and rapid growing variety of the best quality; prolific; light lemon yellow; good keeper; excellent flavor; skin very thin; highly esteemed for table use during the winter and late fall.

PUMPKIN SWEET SUGAR (U. S. Dept. Agri.)—Strong growing vines; producing large fruit; when young is mottled over with grey spots; ribbed similar to the musk-melon; of fair quality.

Donations in 1894.

Received of Atlee, Burpee & Cc., Philadelphia, 7 pkts. Pansy's, 8 pkts. Sweet Peas, 2 pkts. Mignonette, and one pkt. each of the following: Calliopsis, Dianthus, Coleus sunset strain, Fordhook Balsam, Renown pea, Echo pea, Fordhook squash, Bush Lima bean, Willow-leaf Lima bean, Early Black Lima bean, Early Black Pole bean, Burpee's Bush Lima bean, Burpee's New Stringless bean, New Giant White Cos lettuce, Iceberg lettuce, Wheeler's Tom Thumb lettuce, French Breakfast radish, New Improved French radish, Victoria Spinach, Matchless tomato, White Wonder cucumber, Sure Head cabbage, All Head Early cabbage, Early Fordhook Sweet corn, Burpee's Early Cauliflower, Fordhook Frost Tomato, Early Watermelon.

Received from H. F. French, Corvallis, 1 pkt. each of the following: Victoria onion, Giant White Cos lettuce, New Prizetaker onion.

Received from Northrup, Braslau, Goodwin & Co. 2 pkts. Pansy's, and one pkt. each of the following: Chrysanthemum, Kalamazoo celery, Imperial balsam, Imperial mixed balsam.

Received from J. Briggs, Albany, Linn Co., Or.: collection of Box trees, collection of Roses, 1 doz. Horse-chesnuts, ½ doz. Pyracantha, ½ doz, Cydonia Japonica, 4 doz. Laburnums, Collection of Gladiolus bulbs, Tulip bulbs and Hyacinth.

The following varieties of cions were received from the New York Experiment Station, Geneva N. Y.

APPLES.—Acuba-leaf, Alexander, Buckingham, Chenango Strawberry, Cooper's Market, Count Orloff, Fallawater, Golden Sweet, Grand Sultan, Hubbardston Nonesuch, Jeffries, Ohio, Peck's Pleasant, Pewaukee, Washington Royal, William's Favorite, York Imperial, Longfield, Pumpkin Sweet, Jersey Sweeting.

CRABS.—Blood Red, Chicago, Coral, Lady, Paul's Imperial, Pitca Striata Red Siberian.

CHERRIES.—Aburn Duke, Cleveland Bigarreau, Rostraver, Schmidt, Windsor, Downer late,.

PEARS.—Bordeaux, Bose, Boussock, Brandywine, Danas Hovey, Easter Beurre, Gans, Gifford, Hosenschenck, Late Bartlett, Lawson, Superfine.

PLUMS.—Burbank, Early Red, Field, Forest Garden, French Damson, Free Stone Damson, Sweet Damson, King of Damsons, Garfield, General Hand, Guii, Grand Duke, Lincoln, Ogon, Prince of Wales, Wild Goose, Wolf.