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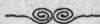
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HORTICULTURE.

GEO. COOTE, Horticulturist.



Comparative Test of Strawberries for 1891.
Meteorological Summary.



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STRAWBERRIES.

The object of the tests of strawberries recorded below, is to determine the varieties that may be grown to the best advantage, on the average soil of the Willamette Valley.

We have experimented, in all, with twenty-seven varieties.

In some instances, we have found many of the qualities claimed by the introducers, while others fall very short of their description. Those that have hitherto failed to meet the requirements, fitting them for general cultivation, will be given another trial, in order to discover such special characteristics as they may possess, as well as to avoid premature condemnation.

To ascertain the difference of yield between the two systems of planting, viz., the hilled and the matted, two rows of each variety, with twenty-five plants in a row were laid off. One row was allowed to mat by letting all runners grow; while from the other row of the same variety, all runners were removed.

Careful notes were taken of the manner of growth, vigor, time of blooming, time of ripening and productiveness.

The soil—a basaltic loam—was well prepared before the plants were set out, it being finely pulverized by continued cultivation and subsequently by supplying a liberal quantity of well rotted stable manure. Owing to the late rains of last spring the crop was materially damaged by mould, resulting from excessive moisture, the injury being made more manifest towards the end of the season.

The fruit produced by the different varieties that have borne

this season has been weighed and a record of the weights will be kept for future reference.

In the table will be found the results of the two methods of culture.

WARFIELD.—Imperfect; berry medium to large; firm, red flesh; one of the best for marketing. The foliage overhangs the bloom which is thus protected from late frosts; a valuable variety.

HAVERLAND.—Imperfect; vigorous grower; productive; fruit medium; berries produced in clusters, needs to be mulched as the berries lie on the ground. If season be wet the fruit becomes very dirty. Fruit is long cone shaped, light red, firm, of fair quality and is more productive than Warfield, an excellent shipping variety.

MICHEL'S EARLY.—Perfect; the earliest variety on our trial ground, this season, but so far a light bearer. Berries not large, of good flavor, color pale red.

MARY KING.—Perfect; plant medium in growth, produced but few runners, ripens early, fruit small, color light red, firm and of good quality. Does not yield largely.

PEARL.—Perfect; berries large, long, and handsome, not a good flavor, ripens at same time as Jessie, produces many runners.

VAN DEMAN.—Perfect; a new variety donated to the Station by Mr. J. C. Bauer, Judsonia, Ark., is very productive. The berries are of fair size and good flavor, ripen a week later than Michel's Early and last well through the season, 218 blossoms were counted on a single plant, 99 per cent. of which produced fruit. The berries are very uniform in size and regular in shape, making it a very good shipping variety.

BOMBA.—Perfect; berry deep red, continues to fruit through the season, a good shipper, very firm, uniformly colored, productive and of large size, a strong grower, and gives many runners.

JESSIE.—Perfect; berries large, an early variety, a little soft, deep crimson, red fleshed, a great pollen producer, good for home use. Produces well.

GLENDALÉ.—Perfect; berries highly colored, shape conical, slightly elongated, plant a strong grower, moderately productive. Season late.

- HAMPDEN.—Imperfect ; berry firm, good flavor, of good form and color, a vigorous grower, foliage of very dark green, and produces many runners.
- BURT.—Perfect ; berries not large, firm, color shades from a deep red at base to almost pink at apex, more productive in matted rows than in hills, midseason. Plant a compact grower with dark green foliage.
- LOUISE.—Perfect ; berry conical, large irregular, flavor good, resembles Pine-apple, suitable for home use, not very productive in fruit, but produces numerous runners.
- MONMOUTH.—Perfect ; berry large, poor flavor, fairly productive, soft, of irregular shape, varying from bright red to nearly white.
- DUTTER.—Perfect ; berry large, good quality, commencing to ripen with "Bomba," lasts well through the season, berries uniform in size, good flavor, many runners.
- ONTARIO.—Perfect ; fruit large, irregular, resembles "Sharples," but rather soft, produces few runners.
- PEABODY.—Perfect ; berry good flavor, soft, not productive, with us has not proved of much value.
- MONMOUTH.—Perfect ; poor quality, produces a great many small berries of little value.
- SUMMIT.—Imperfect ; produced a few good berries, fruit firm, is not reliable, soft, produces many runners.
- CUMBERLAND.—Perfect ; fair quality, season late, fruit rather soft, medium size, not very productive.
- CLOUD.—Imperfect ; failed to mature fruit, plant made a strong growth.
- BUHAW.—Imperfect ; although highly spoken of by many other experimenters, with us it has failed to produce fruit. It grows runners freely.
- GANDY.—Perfect ; plant very vigorous, large berry, good shape, color pale red, well flavored, solid. It is a shy bearer so far, season late.
- PINE-APPLE.—Perfect ; plants of strong growth, with us is a shy bearer, not reliable.
- OHIO.—Imperfect ; berry medium size, very acid fruit, is regular in shape, color pale red, flesh white, good for home use, season late.

HENDERSON.—Perfect; berry fair size, red in color, very good flavor, medium early, not productive of fruit, but produces many runners.

For early berries we would recommend Michel's Early, Warfield, Jessie; May King is also good, but does not fruit freely.

For midseason, Bomba, Hampden, Glendale, Van Deman.

For late, Dutter, Cumberland, and Gandy are recommended.

The following varieties were donated to the station last spring: "Banquet," J. R. Hawkins, Mountainville, Orange Co., N. Y.; "Oregon Everbearing," Emil Berlin, Corvallis, Or., and Seth Winquest, Portland, Oregon. These plants have made a strong growth and will be reported on next season.

Regarding the yield from the two systems of culture—matted rows and hilled rows: In some cases the hilled did best, but on the whole the matted rows produced the finest fruit. The varieties which we have found to do the best in hilled rows are Summitt, (the yield being 19 oz. against 2 oz. in matted rows) Gandy, (9 lb. in hilled row against 5 lb. 8 oz. in matted) Peabody, (10 oz. in hilled row against 5½ oz. in matted row) Bomba gave 9 lb. 6 oz. in matted row against 2 lb. 5 oz. in hilled row, Haverland gave 9 lb. 10 oz. in matted row against 3 lb. 4 oz. in hilled row. But little difference in quality of fruit could be noticed between the two systems.

It must not, however, be forgotten that the hilled system of culture is superior to the matted system in that the ground can be more easily and thoroughly cultivated, and kept clean from weeds in dry seasons, thus thorough and frequent cultivation is the only way of retaining moisture in the ground and saving delicate plants from drying out.

COMPARISON OF YIELDS.—HILLED VS. MATTED ROWS.

VARIETIES.	HILLED.		MATTED.		VARIETIES.	HILLED.		MATTED.	
	lbs.	oz.	lbs.	oz.		lbs.	oz.	lbs.	oz.
Warfield.....	4		6	4	Louise.....	4	7	4	10
Haverland.....	3	4	9	10	Mammoth.....	3	5	10	8
Ohio.....	4	5	6		Dutter.....	2	8	7	3
Michel's Early.....		2½	3		Ontario.....		1		1½
Hampden.....	2	5	5	6	Pineapple.....		8½	4	2
May King.....	2	2	3	6	Gandy.....	9	5	5	8
Van Deman.....	1	12	1	11	Sharpless.....		5		5
Pearl.....	1	5	2		Peabody.....		10		5½
Henderson.....	4	1	6	1	Monmouth.....		14	1	1½
Jessie.....	1	12	3		Summit.....		19		
Glendale.....	1		3	10	Cumberland.....		12	7	1
Bomba.....	2	5	9	5	Cloud.....				
Burt.....	1		11	3	Bubaw.....				

MODE OF PROPAGATING THE STRAWBERRY FOLLOWED ON THE
TRIAL GROUNDS.

At the request of several persons interested in the culture of the strawberry the following hints on its propagation have been prepared :

All runners are removed till the parent plants have matured their fruit. They are then allowed to grow at will. As soon as the runners are advanced enough to become hardened and before the young plants begin to take root, they are taken off from the parent plant and propagated in a bed prepared for that purpose. Care must be taken to leave about two inches of the runner below the young plant so that, in dibbling in, the piece of runner will hold the plant firmly in position. The propagating bed is constructed by placing a twelve inch board the required size of bed at the back, front, and sides ; over this bed is stretched a strip of canvass for a shade from the sun. The young plants being kept moderately moist will take root in about fourteen days, or even less time. The bed is made by placing two inches of rotten leaves at the bottom. Then two inches of river sand over the leaves. By this method of cultivation and propagation the parent plant is not robbed of nourishment by keeping the runners attached until they have developed roots and better crowns are thus formed for the coming year's blooming and fruit.

Varieties of Strawberries Compared During the Season of 1891.

No.	NAME.	SEX.*	BLOOM.	FIRST PICKING.	LAST PICKING.	No.	Weight of 10 Berries.		AV. DIAM. OF BERRY.	AV. LENGTH OF BERRY.	REMARKS.
							HILLED ROW.	MAT'D ROW.			
1	Warfield.....	I	May 3.	May 25	June 26.	1	2 oz.	2½ oz.	1 IN.	1¼ IN.	Vines rather weak, berry firm, good for market.
2	Haverland.....	I	" 6.	" 27.	" 26.	2	3 "	3 "	1 "	1 "	Quite productive, good color, firm, good flavor.
3	Ohio.....	I	" 7.	June 2.	" 27.	3	2½ "	3 "	1 "	5⁄8 "	Medium-sized berry, with roundish form, late.
4	Michel's Early	P	" 6.	May 27.	" 22.	4	2 "	" 2 "	¾ "	¾ "	Resembles the Ohio in growth, very early.
5	Hampden.....	I	" 6.	" 25.	" 23.	5	3 "	2½ "	1 "	¾ "	Large, excellent flavor, very productive.
6	May King.....	P	" 7.	" 26.	" 16.	6	2 "	2 "	1 "	1 "	Berry average, highly colored, not over productive.
7	Van Deman.....	P	" 6.	" 27.	July 1.	7	2½ "	2½ "	7⁄8 "	7⁄8 "	Very prolific, good flavor, a valuable variety.
8	Pearl.....	P	" 9.	" 27.	June 18.	8	2½ "	2 "	1 "	¾ "	A good berry, unproductive.
9	Henderson.....	P	" 6.	" 29.	" 27.	9	3½ "	3 "	1 "	1¼ "	Good flavor, not productive.
10	Jessie.....	P	" 1.	" 28.	" 18.	10	3 "	3 "	1¼ "	1¼ "	Excellent variety, short seasoned, early.
11	Glendale.....	P	" 11.	" 30.	" 26.	11	2 "	2½ "	¾ "	¾ "	Good flavor, promising.
12	Bomba.....	P	" 2.	" 30.	" 29.	12	3 "	2¾ "	1¼ "	1¼ "	A very handsome berry, good flavor, very promising.
13	Burt.....	P	" 10.	" 29.	" 26.	13	2½ "	3 "	¾ "	¾ "	Fairly productive, fruit medium size, of fine color.
14	Louise.....	P	" 12.	" 29.	" 26.	14	2½ "	3 "	1 "	1¾ "	Appears to be the same as Pine-apple.
15	Mammoth.....	P	" 6.	June 5.	" 25.	15	4½ "	5 "	1½ "	1½ "	Largest berry grown here, not productive.
16	Dutter.....	P	" 4.	" 2.	" 26.	16	3½ "	3½ "	1¼ "	1¼ "	Large berry, good flavor.
17	Ontario.....	P	" 13.	" 2.	" 17.	17	2½ "	2 "	1¼ "	1¼ "	Resembles the Sharpless very much, not productive.
18	Pine-apple.....	P	" 8.	" 4.	" 20.	18	2½ "	2 "	1½ "	1½ "	Unreliable.
19	Gandy.....	P	" 8.	" 6.	" 27.	19	3½ "	4 "	1¼ "	1¼ "	A late variety, very productive.
20	Sharpless.....	P	" 12.	" 4.	" 20.	20	2 "	2 "	1 "	1 "	Gathered in two or three pickings.
21	Peabody.....	P	" 10.	" 6.	" 26.	21	2 "	2 "	¾ "	¾ "	Not productive.
22	Monmouth.....	P	" 6.	" 6.	" 25.	22	2 "	2 "	7⁄8 "	7⁄8 "	Produced a few good berries.
23	Summit.....	I	" 10.	" 10.	" 26.	23	2½ "	2 "	¾ "	¾ "	Not reliable.
24	Cumberland.....	P	" 12.	" 4.	July 2.	24	3½ "	4 "	1 "	1 "	A very good berry, very late.
25	Cloud.....	I	.....	.....	.....	25	.....	.....	.....	.....	Failed to fruit this season.
26	Bubaw.....	.....	.....	.....	.....	26	.....	.....	.....	.....	.....
27	Jocunda.....	.....	.....	.....	.....	27	.....	.....	.....	.....	Must have another trial.

* P, Perfect.—Flower having stamens and pistils. I, Imperfect.—Flower having pistils alone.

(9)

Meteorological Summary.

*For Five Months, Commencing March 1st and Ending July 30th, 1891.
Observations taken at the State Agricultural College,
Corvallis, Oregon.*

Average Monthly Temperature of the Soil.

	MARCH.	APRIL.	MAY.	JUNE.	JULY.
At the depth of 2 inches.....	50°	53°	59°	63°	71°
" " " 6 ".....	50°	52°	58°	61°	67°
" " " 12 ".....	44°	50°	56°	60°	66°
" " " 24 ".....	45°	50°	56°	59°	64°
" " " 36 ".....	45°	49°	55°	58°	62°
" " " 48 ".....	46°	49°	53°	57°	60°
Highest Solar Maximum.....	120°	126°	136°	141°	158°
Date.....	30th	11th	23rd	30th	23rd
Lowest Solar Maximum.....	52°	67°	80°	89°	230°
Date.....	9th	6th	5th	10th	10th
Highest Terrestrial Minimum.....	37°	40°	39°	37°	.....
Date.....	20th	27th	25th	15th	.....
Lowest Terrestrial Minimum.....	4°	21°	19°	15°	.....
Date.....	1st	19th	7th	8th	.....
Average Solar Maximum.....	99°	100°	110°	120°	140°
Average Terrestrial Minimum.....	22°	26°	30°	29°	.....
Highest Barometer.....	30.30 in.	30.25 in.	30.30 in.	30.25 in.	30.15 in
Date.....	30th	2nd	28th	28th	6th
Lowest Barometer.....	29.50 in.	29.25 in.	29.55 in.	29.45 in.	29.70 in
Date.....	26th	6th	4th	19th	8th
Highest Thermometer.....	61°	70°	82°	87°	103°
Date.....	24th	29th	23rd	30th	23rd
Lowest Thermometer.....	13°	31°	32°	34°	43°
Date.....	2nd	3rd	8th	9th	9th
Average Thermometer.....	43°	52°	58°	60°	68°
Rainfall for above Months.....	1.33 in.	1.68 in.	2.35 in.	1.84 in.	.....
Greatest Rainfall for 24 hours.....	.30 in.	.35 in.	.80 in.	.45 in.	.....
Date.....	26th	23rd	5th	11th	.....
Prevailing Wind.....	S. W.	S. W.	N.	S. W.	N.
No. of Cloudy Days.....	26	24	14	18	7