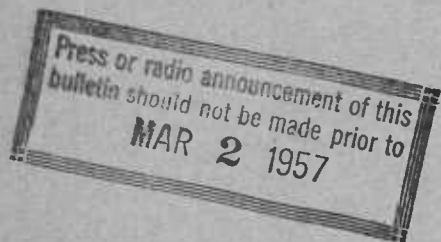




The Marion Blackberry

George F. Waldo



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Marion is a new blackberry that shows promise of meeting some needs of Oregon's small fruit industry not fully met by the most widely grown blackberry varieties, Thornless Evergreen and Boysen. The Thornless Evergreen, now grown more extensively than the Boysen, is satisfactory in many ways, but is late maturing. The Boysen, although its season is much earlier, has not given satisfactory yields. Marion is earlier than Evergreen and yields more than Boysen. In addition, fruit quality has been generally superior to that of both other varieties.

CHARACTERISTICS

The plant. The Marion blackberry plant resembles the Himalaya in general appearance and growth habit. The leaves, however, are somewhat lighter green and larger than Himalaya. Generally there are only a few long canes, often 16 to 20 feet in length. These

few long canes are easy to train. This gives Marion a distinct advantage over Boysen, which has many canes of various lengths. Though the spines of Marion are as large and numerous as the spines of Himalaya, the canes can be easily handled with heavy leather gloves. The Marion canes are usually one-half inch or more in diameter near the base and larger than Boysen which averages only five-sixteenths inch in diameter in the same portion of the cane.

The characteristic growth of Marion makes it possible to use various methods of training. When more canes are needed to conform to a desired training system, a portion of the new cane can be removed. This will force out several branches.

Production. The Marion blackberry is productive even though there are few canes. The buds are relatively close together and the internodes are short. The fruiting branches are long with many flowers and fruits per lateral.

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Table 1. Average Yields of Marion Compared to Boysen and Chehalem

Year	Marion	Boysen	Chehalem
	<i>lbs./acre</i>	<i>lbs./acre</i>	<i>lbs./acre</i>
1954	8,026	7,201	7,072
1955	12,919	7,391	9,529
1956*	4,232	4,063	7,186
Average	8,392	6,218	7,929

*Winter injury resulted from the November 1955 freeze.

These fruiting laterals are strong and extend out from the cane arch fashion. This fruit production habit makes for ease in picking, and spines do not cause pickers as much trouble as do other thorny varieties.

Comparative yields of Marion and Thornless Evergreen have not been obtained, but in 1955 some plots of Marion yielded 6 to 7 tons per acre, which compares favorably with reported yields of Evergreen. Table 1 lists average yields of Marion along with those of Boysen and Chehalem for

three seasons, 1954-56. Winter injury affected Marion as it did Boysen, cutting down the yield in 1956, but Chehalem was not severely injured. The three seasons, however, showed that Marion gave an average of more than 4 tons per acre for each season and exceeded the Boysen yield by more than 1 ton per acre.

Season. Marion has a distinct advantage over Evergreen because its harvest season is much earlier. The harvest seasons of Marion and Boysen are compared in table 2.



Marion blackberries trained to the fan system are shown above. Marion's growth habit means easy training to various systems.

Table 2. Harvest Seasons of Marion and Boysen Blackberries

<i>Date</i>	<i>Marion</i>	<i>Boysen</i>
1954	July 15-August 24	July 12-August 17
1955	July 22-August 23	July 28-August 19
1956	July 12-August 6	July 12-August 6

A comparison of the Marion and Boysen seasons is illustrated in figure 1, which shows that Marion yields remain high for a longer period.

Fruit. Marion berries are of typical round blackberry shape, somewhat longer than wide. Individual drupelets are medium size. Berries are average in firmness. As shown in the following tabulation, seeds are medium size—smaller than Boysen or Evergreen but larger than Cascade or Chehalem.

<i>Variety</i>	<i>Mgs. per seed</i>
Chehalem	1.58
Cascade	2.08
Logan	2.16
Marion	2.27
Himalaya	2.63
Young	3.67
Evergreen	3.74
Boysen	3.92

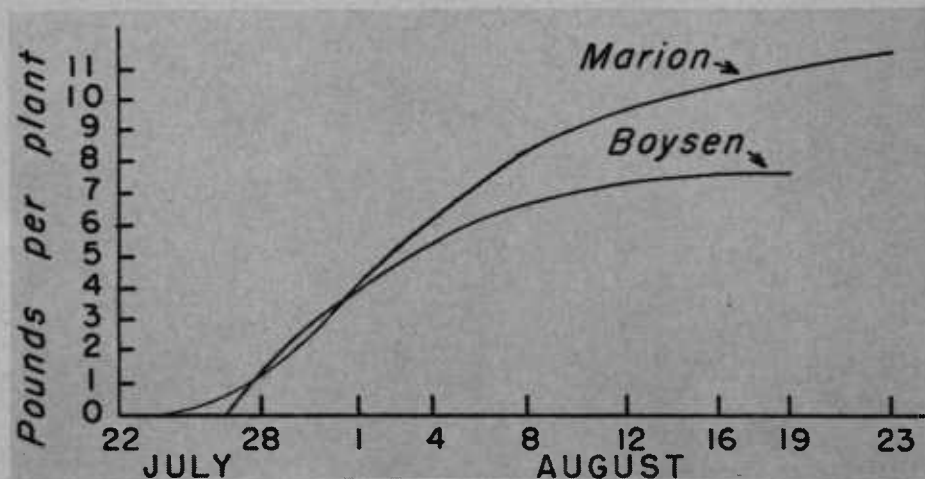
Color, a bright black, is more attractive than Boysen but not as bright as Chehalem or Evergreen. Berry size varies somewhat with growing conditions as in all berries, but size of Marion berries generally averages between those of Evergreen and Boysen:

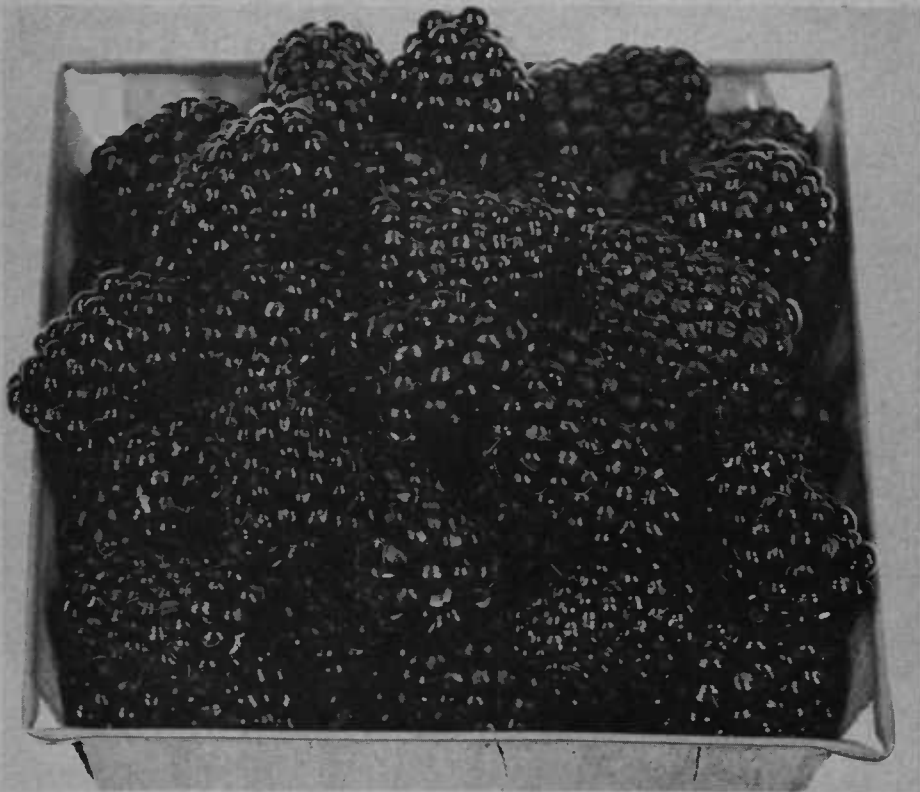
<i>Variety</i>	<i>Grams per berry</i>
Evergreen	4.05
Marion	5.45
Boysen	7.80

COMMERCIAL POSSIBILITIES

Local markets. Quality of the Marion blackberry is particularly adapted for retail stores, roadside stands, and other local markets. Its bright black color is attractive and its size acceptable. The Boysen is larger than the

Figure 1. Cumulative Yields of Marion, Boysen Compared.





Marion's berries are medium-large, an attractive bright-black, yet firm enough for local markets.

Marion but lacks the bright attractive color. Marion's season also is more favorable than Evergreen's. Marion's flavor is generally superior to that of either Boysen or Evergreen. Marion is usually firm enough for retail handling, unless picked very ripe.

Frozen pack. Since many Oregon-grown berries are put into frozen pack, Marion along with many other blackberries has been tested since 1950 by the Food Technology Department at Oregon State College. In each of these seven seasons, Marion has been rated superior to Boysen. It has also been rated equal or slightly superior to Chehalem. Marion, however, may not al-

ways be as bright in appearance as Chehalem.

Pies. Considerable portions of Oregon blackberries are used in pies. The Food Technology Department, therefore, has baked blackberry varieties, which have been eaten and rated by taste-test panels. Berries of Marion were rated best in 1954 and among the best in 1956.

Other purposes. Limited tests show that Marion is satisfactory for canning. Marion has also been found very desirable for ice cream flavoring. Growers have reported also that it has been satisfactory for jams and jellies.

ADAPTATION

Most test plantings of the Marion blackberry have been made on the more fertile soils of the Willamette Valley. These tests indicate adaptability to these soils, which are those where Evergreen, Boysen, and Logan have been most successfully grown. Marion has also grown well on fertile soils of the Oregon coastal region.

Although Marion has grown vigorously in central California, it has not been productive there. Lack of production there indicates it needs more winter cold to induce dormancy. Winter injury similar to that in Boysen, resulting from the November 1955 freeze, was noted at Corvallis. Test plantings of Marion, in the Willamette Valley, however, showed less injury than those of Boysen. In Washington, Marion was severely injured by this freeze along with all other blackberries.

DISEASE RESISTANCE

So far no special disease susceptibility has been observed in Marion. Leaf and cane spot has been seen, but it has never been serious. Good control has been obtained through use of spray treatments suitable for other cane berries. Diseases such as rust, serious in the Chehalem, and crown gall, serious on Boysen, have not appeared in the Marion. California studies on resistance to verticillium wilt show that Marion is very resistant under conditions where Boysen is susceptible.

GROWING AND TRAINING

The growing habit of Marion is similar to that of other trailing berries grown in Oregon. Since it makes long canes, Marion most resembles the Hi-

malaya and Evergreen in growth habit. Propagation is by tip-rooted plants, which are often large. Care is needed in digging and planting to prevent injury to roots and to growing shoots. Planting distances should be similar to those used for the Evergreen rather than to those used with the Boysen. Training systems and trellises should ordinarily be used where long lengths of cane can be allowed to fruit. Close planting may give larger yields if the difficulty in training canes can be overcome to allow the canes to fruit. Time of pruning, training, and other cultural practices such as cultivation, fertilization, and irrigation should be the same as for such blackberries as Boysen, Logan, and Evergreen.



Marion's fruiting laterals hang out from the trellis, which is helpful in picking.

NAMING

The name Marion has been given because this blackberry has been most extensively tested in Marion County and is apparently well adapted to that area. At present Marion County leads in the production of trailing blackberries.

ORIGIN

The Marion blackberry comes from the cooperative breeding program of

the U. S. Department of Agriculture and the Oregon Agricultural Experiment Station, Corvallis. In this program we have tried to incorporate the good flavor of the native trailing blackberry, *Rubus macropetalus* Dougl., into commercial blackberries. This was done in Marion through one of its parents, the Chehalem. Marion is the result of a cross, Chehalem X Olallie, made in 1945. It was selected in 1948 as U.S.-Oregon 928, and tested under this number until its release as Marion in 1956.