New Blackberry

Boysen variety, shiny type, has flavor resembling a high quality wild berry

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Studies by the Division of Pomology at Davis, to determine the value of blackberry varieties for commercial planting—their promise as parental material in a breeding program—includes the new shiny type of the Boysen variety here described for the first time.

The new shiny type Boysen variety was first reported in commercial plantings of Boysen berries near Denair in 1947.

It probably is a type of bud mutation—periclinal chimera—of the Boysen. Evidence for this is the fact that berries of the true Boysen and of the shiny type have been found on the same fruit cluster.

Apparently the shiny type arose spontaneously as a periclinal chimera on vegetable portions of a Boysen plant. Tip layers from such vegetative portions resulted in the propagation of plants of the shiny type. These plants appear to be identical with those of Boysen on the basis of vegetative characteristics. For this reason, mixtures of the types were inadvertently distributed by commercial nurserymen.

Berries of the shiny type differ from the Boysen in the following important characteristics:

The fruit of the shiny type is sparsely pubescent and glaucous; it is more definitely reddish in color even in the ripe berries.

The drupelets are more cylindrical, apparently due to the fact that they are not crowded on the core; they are more definitely acute than those of Boysen, tapering to the base of the style. All drupelets are arranged nearly at right angles to the core.

The fruit of the shiny type is smaller than that of Boysen and more roundish in shape.

The flavor is somewhat more pleasing than that of Boysen, resembling more closely that of a wild blackberry of high quality. Production is slightly less due to the fact that the berries are smaller. The picking season is the same as that of Boysen.

Boysen

The Boysen variety of blackberry is grown more extensively than any of the other blackberries in California. It is reddish in color. Most of the berries are 1¼ inches long and one inch in diameter; a few attain the length of 1½ inches. The taste is sweet and the aroma is abundant.

There are 11–12 drupelets around the core at the calyx end of the fruit. The drupelets are large, appressed, acute, and the base of the style is set in a slight depression. Production is heavy.

In the central coast area the picking begins in June and extends into August. In the central valley the picking season may begin during the latter part of May, and in some years it does not last more than three of four weeks, but usually extends to the first week of July. Yields vary from three to 10 tons per acre throughout the state.

Young Berry

This variety was developed in Louisiana. It is a cross between the Phenomenal and the Mayes Dewberry.

It was first grown in California in 1925 and ranks next to the Boysen in commercial importance in the state.

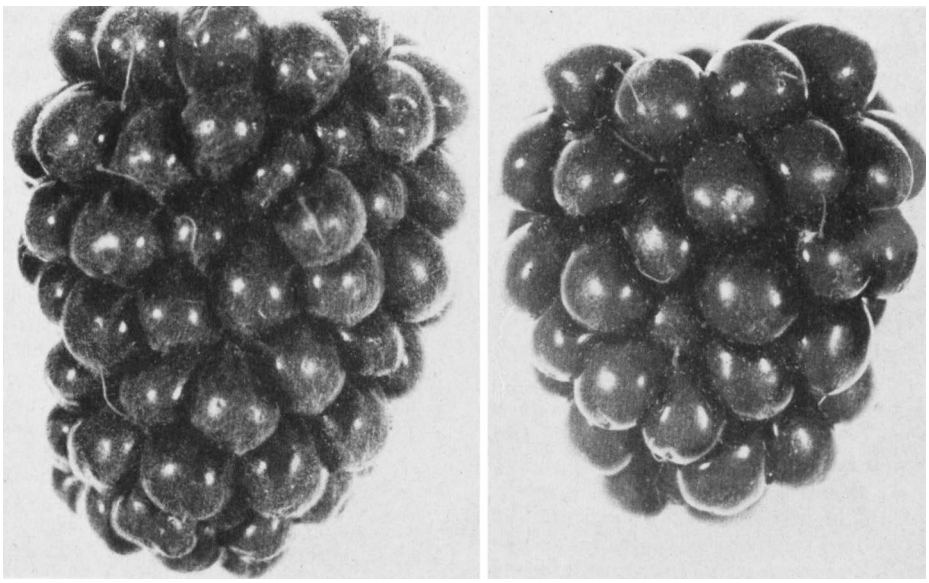
It has been included in many commercial plantings because it ripens as much as ten days earlier than the Boysen and thus spreads out the picking season. However, it is gradually being discarded by commercial growers because it produces less than the Boysen.

The Young berry has a similarity to the Boysen variety, shiny type, especially in size, but differs in the following characteristics: The foliage is a lighter shade of green. The drupelets of the Young are appressed, not at right angles to the core as on the Boysen. The flavor is less abundant when contrasted with the rich, wild blackberry flavor of the Boysen variety, shiny type.

Rossberry

The Rossberry was introduced at Stephenville, Texas in 1945. Contrasted with the Boysen it is sparsely pubescent, glaucous, predominately black in color; the drupelets are not acute; the base of the style is generally set in a deep depression; the flavor is only fair.

The Rossberry fruit is very similar to the Thornless Boysen, differing only in regard to pubescence and flavor. The pubescence of the Rossberry is somewhat shorter than that of the Thornless Boysen and the flavor is slightly more abundant. Production is not as satisfactory as that of the Boysen because the berries are smaller. The picking season is approximately the same.



Boysen berries enlarged 2.4 times. *Left* The familiar berry. *Right* The new shiny type berry.

Thornless Boysen

There have been many introductions of the Thornless Boysen. None of them has been accepted by Commercial growers because they produce less than the Boysen and the berries are smaller. All of the introductions have been bud mutations of the Boysen variety.

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WALNUT APHID

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leaflet a month after treatment was 0.27 for the standard lead arsenate-aphicide combination, 0.74 for the DDT-aphicide treatments as compared to 43.07 for the standard lead arsenate spray without an aphicide.

The control obtained was outstanding and the trees receiving the aphicide were in excellent condition as compared to those not receiving the treatment. The leaves of the latter were sticky due to the quantity of honey-dew being secreted by the aphids. So serious was the damage that this portion of the orchard was treated with an aphicide on June 13.

Dusts

Where applied under ideal conditions, nicotine dust can be expected to give excellent control of the walnut aphid. Where treatment occurs during periods of unsettled cool weather, poor kills are frequently obtained, which necessitates retreatment in a short time. Observations indicate that trees covered with an excessive amount of dust are more subject to serious attacks by orchard mites than are those which are covered with only moderate amounts of dust.

The timing of applications is extremely important. Treatments should be applied before the aphid population reaches approximately 10 per leaflet. If treatment is much delayed it may do more harm than good, because the host predator population relationship may be so upset as to allow for a rapid increase in the aphid population.

Treatment appears to have little or no adverse effect upon the host-predator relationship when applied at about the time the aphid population reaches 10 per leaflet. It may actually help in establishing a more favorable host-predator balance.

During the past season many growers attempted to control the walnut aphid with homemade machines that generated tetraethyl pyrophosphate smoke. The tetraethyl pyrophosphate was usually mixed at the rate of one pint of actual material with one gallon or more of diesel oil and the mixture applied to the trees as a white smoke. The results obtained were variable but in some cases they were not highly satisfactory. Failure in many instances was due to the faulty construction of the machines. Many were not able to produce a smoke of the proper quality, or the capacity was not sufficient. To insure control under favorable weather conditions, approximately a pint of 40% tetraethyl pyrophosphate or its equivalent was needed per acre.

In limited experimental testing in early September excellent control of the walnut aphid was obtained when the tetraethyl pyrophosphate-diesel oil mixture was applied with a commercial smoke generating machine.

Where the tetraethyl pyrophosphate-diesel oil mixture was applied so that the amount of actual tetraethyl pyrophosphate was equivalent to 1¼ pints of a 40% material per acre, complete control of the walnut aphid was obtained. Not only were the aphids in the treated area killed, but the smoke drift was lethal to aphids over 20 rows downwind.

Reservations

Although the results obtained were very encouraging, no definite recommendations concerning the use of smoke machines can be made pending further investigations. Even though they continue to prove effective, their use may involve too great a hazard to make it safe to recommend them.

The effect of the smoke upon the operator must be determined. Further, the fact that the smoke drift can not be controlled is bound to result in serious limitations.

Tetraethyl pyrophosphate is a very toxic material and must always be used with considerable caution. If any is ever spilled on an operator, the affected part should be immediately washed with soap and water.

Walnut Aphid Population Trends where Aphicides Were Combined with Codling Moth Sprays as Compared to Codling Moth Spray without the Inclusion of an Aphicide at Linden, 1948

Treatment and date applied	Average number of aphids per leaflet on survey dates given									
	May 10	May 19	June 1	June 10	June 22	July 8	July 22	Aug. 2	Aug. 18	Sept. 7
Standard lead arsenate with aphicide, May 10....0.23	0.00	0.02	0.26	3.29	28.84	9.82	2.40	4.72	0.01	
DDT with aphicide, May 11..0.66	0.01	0.01	0.74	2.76	13.11	14.48	3.80	7.38	1.22	
Standard lead arsenate without aphicide, May 10....	1.95	6.75	43.07	3.96*	6.06	6.08	6.75	5.81	...	

* Plot treated with a nicotine dust on June 13.

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BLACKBERRIES

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The Thornless Boysen fruit is similar to that of the Rossberry but the vines are very different. The Rossberry canes are covered with numerous thorns while those of the Thornless Boysen are almost smooth. Only occasional small prickles occur on the canes of the latter.

Austin Dewberry

This variety is supposed to be a hybrid between a wild dewberry and a common blackberry. The berries are similar to those of the Boysen variety. In some cases the taste of the Boysen is somewhat sweeter and the shape of the berries is more conical. The berries of the Austin Dewberry tend to be elongate.

These differences are evident only when large samples are contrasted. The production characteristics of the two varieties appear to be identical.

Nectar

The Nectar variety is possibly a seedling of the Young and has been considered to be identical with the Boysen. This is not the case. It differs from the Boysen in the following important characteristics: The Nectar is less acid; the diameter of the berries is usually greater; there are approximately nine drupelets around the core at the calyx end instead of 10 to 11; the drupelets are larger and are not acute; the base of the style is not generally set in a depression.

The production characteristics of the two varieties are very similar.

Texas Everbearer

This blackberry variety is an extremely vigorous, erect type. It attains a height of nine feet.

Fruit is produced continuously throughout the season from June through late fall. All of the berries are small and none of them matures in the central coast region where it has been tested. They remain hard and highly acid. Possibly the coastal region is too cool for proper maturity of the fruit of this variety.

In any locality it would be undesirable because of the long, stout, hooked thorns which are numerous on all canes. The small size of the berries and the presence of large thorns would eliminate this variety from commercial consideration, and the flavor is too poor for home gardens.

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