it does appear to offer significant benefits in fruit improvement.

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'Brandywine' — A New Purple Raspberry Cultivar

DONALD K. OURECKY[1]

'Brandywine', formerly tested as NY 905, is a new purple raspberry cultivar released by the New York State Agricultural Experiment Station, Geneva, N.Y. This cultivar is recommended for home gardens and commercial trial because of its superior vigor, productivity, large fruit size and good processing qualities compared to the cultivars shown in Table 1.

'Brandywine' was selected from a cross between New York 631 (a purple-fruited raspberry) and 'Hilton' (a red raspberry) (Fig. 1). Seven selections were made in 1966 from the original population of 172 seedlings. A second test planting was established in 1967 where it has consistently given good performance. It has been tested in New York, Ohio, Massachusetts, Wisconsin and parts of Pennsylvania where it is rapidly becoming the most promising purple cultivar tested.

Canes are erect and vigorous (up to 2-3 m in length and 12-25 mm in diameter), seldom bending under the weight of the fruit (Table 1). Basal fruiting laterals are profuse and highly productive, frequently touching the soil so that a straw mulch should be used to prevent soil from splashing on the fruit. The plants do not sucker but form well-defined hills of 6-10 canes. In most plantings 'Brandywine' canes are pruned like red raspberries but some modification of cultural practices may be made to take advantage of the vigorous growth, for example, pruning at a desired height to stimulate branching. 'Brandywine' is propagated by tip-layering. Because of the erect growth habit, layers should be made in late

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Table 1. Characteristics of 'Brandywine' purple raspberry compared with standard cultivars.

Cultivar	Vigor[1] cane diam. (mm)	Fruit size (g/fruit)	Yield[2] (kg/ha)	Avg. July ripening date
Brandywine	17.5 b	5.9 b	6633 c	24 c
Clyde	12.5 a	3.9 a	5251 ab	19 ab
Sodus	13.2 a	3.7 a	4832 a	15 a
Marion	13.0 a	3.7 a	5129 ab	17 a

[1]Avg. cane diam. 30 cm above soil line
[2]Based on plot yields

August and early September so that the canes can be arched without breaking. For more rapid propagation, primocanes may be topped in summer to encourage many strong laterals from which cuttings may be made. Cuttings root readily under mist-propagation.

Plants do not perform well on heavy, poorly drained soils. 'Brandywine' is slightly more tolerant to verticillium wilt (*Verticillium alboatrum* Reinke & Berth) and other root rot organisms than are most black raspberries. While under test, 'Brandywine' has not been observed to be susceptible to spur blight (*Didymella applanta* (Niesse) Sacc.), powdery mildew (*Spaerotheca humuli* (DC) Burr. or anthracnose (*Elsinoe veneta* (Burkh.) Jenkins. 'Brandywine' is not immune to the raspberry aphid (*Amphorophora agathonica* Hottes). Plants once virus infected are not long lived. Plants are considered relatively winter hardy, having withstood field temperatures of −23°C. Plant injury has been observed but attributed to fluctuating temperatures in early spring.

Young primocanes are green with moderate bloom but during the winter they turn deep red in color. Canes characteristically have stout reddish-brown prickles, moderate in number. Foliage is primarily 3-foliate, slightly rugose, pinnate and spreading.

A large percentage of the fruit is borne in non-compact terminal clusters with 3-5 fruits per leaf axil or 15-30 fruits per fruiting lateral (Fig. 2). Fruits are large (5-6 g) (Table 1), round to slightly conic, slightly coarse, and uneven druplets, reddish-purple with a moderate pubescence. They

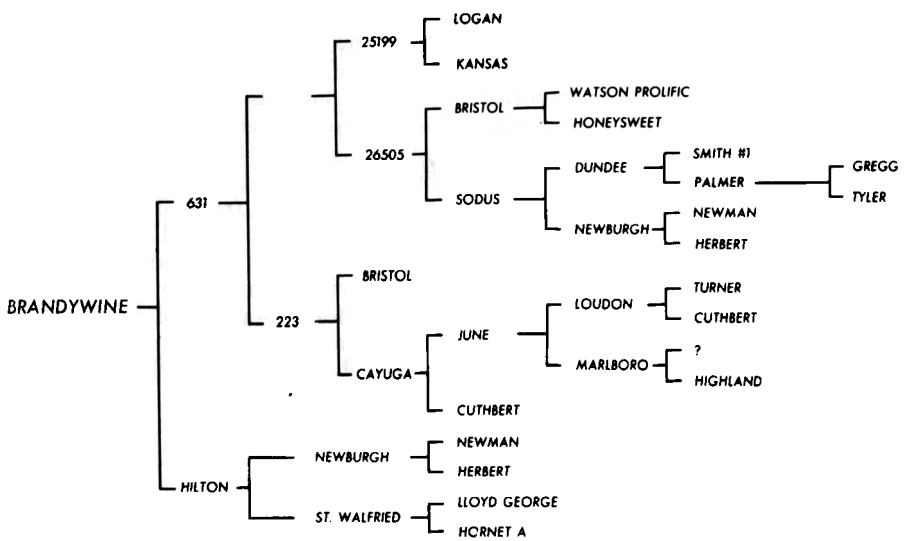

Fig. 1. Pedigree of the 'Brandywine' purple raspberry.

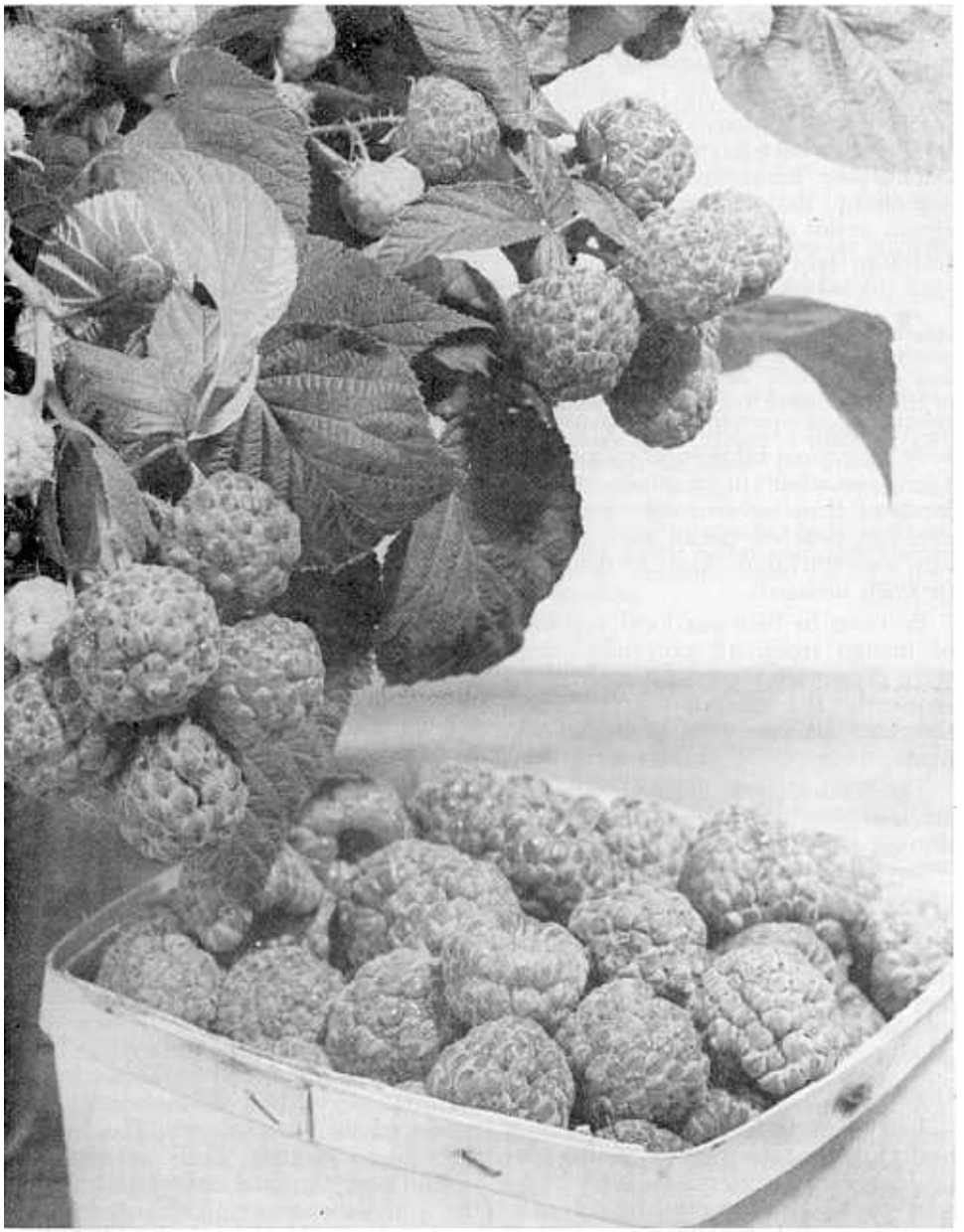

Fig. 2. Fruit of the purple raspberry, 'Brandywine'.

are coherent, have large druplets and are of very good quality. Fruits are tart, which is desirable for culinary purposes. In frozen and preserve tests at Geneva, 'Brandywine' produced one of the best flavored jams. It is one of the latest ripening cultivars, extending the fruiting season. It ripens about the last week in July at Geneva, N.Y.

'Brandywine' plants are available from the New York State Fruit Testing Cooperative Association, Geneva, N.Y. 14456, and from Mr. Ed Makielski, Makielski's Berry Farm, Ypsilanti, Michigan. This cultivar has been submitted to the virus-indexed propagation program from which foundation, registered and certified plants are available.

'Rosica' — A New Mango Variety Selected in Ica, Peru

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Ica is situated in 14° S. Lat. and 75° 40 W. Long. Its climate is dry with very infrequent rains, mild winter and sunny weather in summer. Many kinds of fruit trees: mangoes, avocados, figs, peaches, pecan nuts, grapes, etc., are cultivated. Most of them are in small orchards.

Previous to 1940 our local varieties of mango trees, all polyembrionics, were propagated from seeds and consequently the offspring reproduced the same characteristics as the mother plant.

The main defects of local varieties are irregular bearing and the production of small seedless fruits called "cuaresmeros" in Spanish and pulp containing abundant fibers.

Since about thirty years ago with the introduction of new mango varieties, such as 'Haden', 'Davis Haden' and others, mango trees are produced in nurseries from seeds and later grafted.

Origin

This new variety originated on a bud mutation of a branch of 'Rosado de Ica', a local variety. In 1966, budstick were taken from this branch and grafted on 50 trees in the mango orchard of the Departamento de Frutícultura de la Estabión Experimental Agrícola "San Camilo" of Ica.

Description

The description given hereafter is based on observations of more than 15 years of the original sport and about 10 years of a group of budded trees. This new variety was named 'Rosica' from the words Rosado and Ica, formerly named 'Subtanjalla'.

Tree: Size medium to large, exhibits good lateral branching.

Leaves: Abundant leaves slightly drooping; mean length 23 cm, breadth 5.7 cm; flat; shape of the leaves lanceolate acute apex; emerging leaves light green with slight brick-red tinge.

Shoots: The main period of the emergence of new shoots is from December to March. Under our conditions during this time the tree produces one to three flushes with a 8.6 cm long average. Stray shoots may appear during October to December.

Inflorescence: Conical shape, multiple, average size 26 x 17.5 cm without leaves; the color is yellowish green with coral red on branches; glabrous. Fruit bud differentiation is produced on terminal new shoots or directly in axillary buds of shoots which bore terminal inflorescence in the previous season, with no intervening vegetative growth. Besides the panicles may arise directly from the axillary buds of the shoots which flowered, but did not set fruit.

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