

(1). The climatic conditions of Pangi are similar to that of the Kinnaur region.

It can be concluded from these studies that five seedling trees appear to be promising in respect of fruit quality to that of the existing cultivars and may be even superior in respect of winter hardiness and drought resistance because they are growing under harsh soil and climatic conditions. These seedling trees have been marked to multiply vegetatively for further testing in a well planned experiment.

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A New Tropical Grape Cultivar: 'Valplatinta'

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The first patent ever for a tropical grapevine cultivar was recently granted to 'Valplatinta',² a new and distinct variety which combines desirable attributes from European (*Vitis vinifera* L.) and American (*V. labrusca* L.) grapes for red juice and wine with the adaptation of *V. caribaea* D.C., a species native to the Caribbean basin. 'Valplatinta' was bred by the author in his private research vineyard at Aibo-

nito, Puerto Rico (lat. 18°05'N elevation 600 m.) and was designated W73D-6.

The seed parent, IAC 823-47, is a female vine selected by J. A. Santos-Neto at the Instituto Agronomico de Campinas (IAC) in Sao Paulo, Brazil. Its parentage was recorded as IAC 405-6 ('Moscatel Rosado' x *V. smalliana* staminate) x IAC 570-2

(*V. tiliifolia* x 'Golden Queen'). Inspection of the above mentioned spe-

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²U. S. Patent No. Plant 8,434. October 26, 1993.

³Watlington, F. 1990. Adaptive viticulture in the Caribbean basin. Doctoral Dissertation. University of Florida, Gainesville.

cies indicates that "smalliana" is a misnomer for what is probably a form of *V. caribaea*, (The preferred synonym of *V. tiliifolia*). Fruits of IAC 823-47 are red-black small-medium, ovoid, seedy, acidic and loose in large, compound clusters.

'Esperanza,' the pollen parent, was selected as W66H-4 from the 1966 hybridization of a Puerto Rican *V. caribaea* female with pollen of 'Lake-mont' received from the New York State Agricultural Experiment Station in Geneva. 'Esperanza' produces blue-black, medium size, spheroid, seedy berries in well-filled medium to large clusters. 'Esperanza' was the first promising selection of the author's tropical viticulture research and development program.

The patented hybrid, 'Valplatinta,' produces loose, medium (250 g) clusters of large-medium (2g), blue-black (with light bloom), ellipsoid berries (1.5 cm girth by 1.8 cm axial). Under local (Puerto Rico) conditions, full size clusters number about 100 berries per cluster and fruiting buds produce an average of three grape clusters per cane.

Ripe fruit is juicy and sweet, with a slight tartness. Sugar averages 19%, total acidity 1% and pH 3.3. Seeds average 2 to 3 per berry, weight .05g/seed. Skin is medium thick, highly pigmented and loosely adherent to clear, greenish and juicy pulp. Color of the juice next to the skin, fermented on skin or hot pressed is a deep purple-accented red reminiscent of processed 'Concord' type grape juice.

Early juice and winemaking trials indicate that the pigments of 'Valplatinta' are highly concentrated and relatively stable. Hot-pressed, single strength juice can turn a pale golden juice or wine ruby-red in a dilution of one in four. Because of its neutral flavor, it can be used for adding color to more productive and/or distinctively flavored white varieties. A fine red wine was produced from 'Valplatinta'

in 1987 at the Rama Caida viticultural experiment station in Argentina. Aged for over a year, the wine was similar in color and flavor to a good 'Zinfandel.'

In Puerto Rico, 'Valplatinta' has been a modest producer on its own roots. A mature, two year old vine yields about 15 lbs. of grapes. Fruit clusters tend to ripen evenly, with satisfactory sugar/acid ratio, even when day and night temperatures are high. The fruit is resistant to cracking and rotting in wet weather. The vine itself has shown superior resistance to anthracnose and mildews in hot-humid tropical weather. While the vine performs well on its own roots in heavy soils, it will probably require grafting where nematodes are a problem.

The most critical environmental factor for viticulture in Puerto Rico is the comparatively short daylengths of the growing season (March to September) at latitude 18°N³. The longest day at the summer solstice is only 13 hours and 13 minutes. In contrast, northern Florida reaches over 14 hours and much of the southeastern U. S. up to 15 hours. Most available grape cultivars require considerably longer daylengths than is typical of Puerto Rico for normal growth and productivity.

Because productivity in grapes appears to be directly proportional to summer daylengths over twelve hours, 'Valplatinta' might prove increasingly productive at higher than tropical latitudes. However, there is some evidence that this tropical cultivar is not hardy to temperatures below freezing. Little information is available on the performance of 'Valplatinta' in subtropical locations such as the southeastern United States.

'Valplatinta' is not yet commercially available. Inquiries from viticultural research and development agencies and concerns interested in formal evaluation of the new cultivar may be addressed to: Dr. Francisco Watlington, 1515 Travieso St. Santurce, PR 00911.