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POMOLOGICAL TRAITS OF 'SU' CHERRY LAUREL

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Abstract

This study was carried out to determine the pomological traits of 'Su' cherry laurel (*Prunus laurocerasus*) as grown in Trabzon (Turkey) province in 1999, 2000 and 2001. Cluster weight, number of fruit per cluster, fruit weight, stone weight, soluble solids, pH and titrable acid content were determined as 46.75 g, 9.85, 4.89 g, 0.37 g, 15.92 %, 4.55 and 0.29 %, respectively. 'Su' is promising cultivar for the province as table cultivar due to its pomological characteristics. This cultivar is better than others because of it is very juicy and attractive color for skin and flesh.

Introduction

Compared to the surface area of the world, Turkey is very minute. However, there is great variation in the ecological conditions within Turkey which allows for a very wide range of horticultural crops to be grown. Turkey is between 36-42 North latitudes and 26-45 East longitudes.

In the coastal area of the Black Sea Region (Northern Turkey), there are many different local fruit species and varieties. In the Trabzon province, the annual precipitation is 833.8 mm, which falls through out the year. The relative humidity is 74.67 %. Annual mean temperature is 14.6 °C, and there is not freeze (2). Trabzon province has 4685 km^2 area.

One of the centers of origins of cherry laurel is the Eastern Black Sea Region (3). Cherry laurel is consumed fresh, dried, in jams, marmalades, canned or pickled. The leaves and seed of this fruit species are

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used in pharmaceuticals. Also, the trees are valuable for ornamentation as a evergreen plant (4).

Cherry laurel is native crop in Trabzon province within the Eastern Black Sea Region. There are fifteen cultivars in this province. These trees are generally found singly or in border rows. Mature trees are vigorous in habit. It is propagated by suckers or cuttings, easily. The main crops produced in this province are hazelnut, tea, apple and pear as horticultural crops. Other stone and pome fruits are grown, as well.

'Su' native cherry laurel table cultivar is one of the important cultivars are grown in Trabzon province. The objective of this study was to determine the pomological traits of 'Su' cherry laurel cultivar.

Materials and Methods

This study was performed on 'Su' cherry laurel (*Prunus Laurocerasus*) cultivar grown in Trabzon province (Eastern Black Sea Region of Turkey) in 1999, 2000 and 2001. The origin of 'Su' is Trabzon province.

Maturing dates were 10.07.1999, 25.07.2000, and 15.07.2001. And, at these dates, cluster and leaf samples were collected, then, evaluated for important pomological characteristics.

Figure 1. Fruit cluster and leaf of 'Su' cherry laurel.

The experimental designed was a split plot in a randomized complete design with three replicates. Three trees were used at each replicate. 25 samples of cluster and 25 samples of leaf for each tree were collected randomly from every side of trees that were 25-30 years old and cultivated forms. Of 225 clusters and 225 leaves, 100 for cluster and 100 for leaf of randomly selected samples were evaluated for important characteristics.

The important fruit traits such as cluster length, cluster weight, number of fruit per cluster, fruit weight, fruit width, fruit length, fruit stem length, fruit stem thickness, stone weight, stone width, stone length, soluble solids (refractometer as brix), pH and titrable acid content (as malic acid). Leaf traits measured were leaf width, leaf length, petiole length and petiole thickness were determined. Also, harvest period and full bloom dates were determined.

Results and Discussion

'Su' cherry laurel bears every year, matures early, and has attractive red fruit. 'Su' is suitable for fresh eating in season with superior size and flavor characteristics. Flavor of the fruits is acrid becoming sweet as the fruit matures. Fruits presently are marketed locally with other cultivars. The fruits of 'Su' are used as only fresh consumption in the native location, and are not exported outside Trabzon province.

Date of full bloom varied from 30 March to 5 April, and harvest period from 10 to 25 July in Trabzon province. Therefore, the average number of days from full bloom to harvest is 100-110 days.

Leaves are medium dark green. Leaf blade is 17.83 cm long and 4.67 cm wide, and the petiole is 1.33 cm long and 2.90 mm thick (Table 1).

The shape of fruit is roundish to slightly oblate. Fruit size varies from 1.95 cm (width) to 1.92 cm (length). The skin is smooth, thin and shining red. The flesh is clear pink or cream white, very juicy with a mild flavor. The cluster and fruit weight are 46.75 g and 4.89 g, respectively. 'Su'

Table 1. Important pomological traits in 'Su' cherry laurel (n=100).

Traits	Mean (Three years)
Cluster length (cm)	9,82±0,09
Cluster weight (g)	46,75±0,11
Number of fruit per cluster	9,85±0,13
Fruit weight (g)	4,89±0,08
Fruit width (cm)	1,95±0,08
Fruit length (cm)	1,92±0,07
Fruit stem length (mm)	4,88±0,01
Fruit stem thickness (mm)	1,94±0,02
Stone weight (g)	0,37±0,03
Stone width (mm)	9,44±0,06
Stone length (mm)	9,11±0,06
Soluble solids (%)	15,92±0,12
pH	4,55±0.10
Titrable acid content (%)	0,29±0,11
Leaf width (cm)	4,67±0,13
Leaf length (mm)	17,83±0,14
Petiole length (cm)	1,33±0,11
Petiole thickness (mm)	2,90±0,12

has the highest juice content of all cultivars. Soluble solids content is 15.92 %, pH 4.55 and titreable acid content 0.29 % (Table 1). Fruit is homogeneous in harvest period.

In a report, fruit weight, fruit length, fruit width, soluble solids and pH values in cherry laurel types are grown in Eastern Black Sea region were determined as 5.9 g, 1.91 cm, 2.04 cm, 17.6 % and 4.3, respectively (1). In other studies that were carried out on cherry laurel types grown in Vakfikebir and Akçaabat districts of Trabzon, cluster length, number of fruit per cluster, fruit weight, fruit width, fruit length, stone weight, stone width, stone length were determined as 8-12 cm, 12-25, 2.21-4.35 g, 8-16 mm, 11-20 mm, 0.41-0.61 g, 6-11 mm and 8-16 mm, respectively (5); 9.48-13.88 cm, 16.20-20.00, 2.63-6.22 g, 14.67-18.94 mm, 17.28-21.33 mm, 0.17-0.75 g, 6.89-8.31 mm and 11.03-12.31 mm, respectively (6).

The important pomological characteristics of 'Su' cherry laurel cultivar are similar to results of other studies, generally. But, it is better than other cultivars because it is very juicy and skin and flesh color are attractive.

In conclusion, 'Su' cultivar is recommended for Eastern Black Sea Region and similar ecological conditions as table cultivar. 'Su' is a promising cultivar with desirable pomological traits.

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Apple Watercore

Positive correlation exists between watercore and maximum fruit temperature during late August of 'Orin'apples. Watercore occurred in immature apples long before the increase in ethylene or ACC. Water core followed the increase in membrane permeability. The degree of water core was correlated with firmness, soluble solids, total sugars, fructose, glucose in the inner flesh and sorbitol but not with titratable acidity, starch and sucrose. Seasonal change in sorbital parallel the incidence of water core with correlation coefficients at .88 and .82 for inner and outer flesh. From Yamada et al 2001 J.Japan.Soc.Hort.Sci. 70(4):409-415.