Fruit Varieties Journal 52(1):51-52 1998

'Rojal' Carob

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'Rojal' is a high yielding female carob cultivar (*Ceratonia siliqua* L.). The carob, a dioicious species with some hermaphroditic forms, is an evergreen tree. It is mainly cultivated but also occurs as wild trees in poor and dry soils of the coast of Mediterranean countries. It was introduced into the United States from Spain in 1854 by the U.S. Patent Office and later into Australia and South Africa. The carob tree is not cold-hardy and temperatures below –7°C can be damaging. Spain is the first world producer followed by Italy and Portugal (2). The fruit is a pod or legume which can be mechanically split into pulp and kernel. The pulp is used as fodder for animals and also for human consumption as dietetic products. From the kernels, a highly valued gum can be extracted. This gum is used as natural thickener and stabilizer by the food and pet food industries. The carob tree can also be used as an ornamental in landscaping. Interest in this crop is increasing in recent years (2).

Origin

'Rojal' is a chance seedling of unknown origin. It was found in the "Camp of Tarragona" (NE Spain) and has been cultivated in this area for years. 'Rojal' has a synonym 'Roja' and often is misnamed as 'Valencià' or 'Valenciana.' 'Rojal' was introduced in IRTA's carob collection in 1986, after exploration and collection of carob native resources in Catalonia (1). 'Rojal' was characterized electrophoretically for five isoenzymic systems (PGM, PGI, SDH, AGO and GOT) (3).

Tree

'Rojal' forms a vigorous tree with an upright growth habit. It has wide branch angles, needs little pruning, and it is suitable for mechanical harvesting. Resistance to pod abscission is low. Its foliage is dense and dark green. It has twigs of reddish colour with 4 to 5 pair of leaflets.

Flowers

The tree produces inflorescences with inconspicuous female flowers on shoots at least two years of age distributed through the tree. It forms racemes 4-6 cm long with around 20 flowers. Its flowering period lasts more than two months between September and November. 'Rojal' flowers earlier than the local cultivar 'Negret' and overlaps with the Yellow and Red male pollinator types of its growing area.

Fruit

The pods of 'Rojal' are of dark red colour, slightly curved, have a smooth surface with distinct creases. The pod averages 18 cm long, 2 cm wide and 1 cm thick. Seed yield is around 10% and seed weight is 0.2 g. Seeds are globose, with a roundness index (length x width) of 0.66. Endosperm content is 56.2 % of seed dry weight.

Commercial Potential

'Rojal' combines two outstanding characteristics, early cropping and moderate alternate bearing. In a non-irrigated comparative yield trial on seedling rootstocks in Perafort (Tarragona), at a planting space of 8 m x 9 m, the first crop was produce in the 4th year after budding. The average annual yield per tree was 9.3 kg the 5th year, 16.7 kg the 6th year and 40.6 kg the 9th year. The accumulated crop in 6 years was 119 kg in comparation to 88.6 kg of 'Duraió,' 87.1 kg of 'Matatafera' and 77.8 of 'Banya de Cabra.' 'Rojal'

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shows low sensitivity to mildew disease (*Oidium ceratoniae* L.). Of the four Spanish female cultivars tested ('Duraió,' 'Matalafera,' 'Negret' and 'Rojal'), 'Rojal' is the most promising for planting of new orchards.

Availability

Limited amounts of budwood for research purposes are available from our Deparment.

Literature Cited

1. Batlle, I. and J. Tous. 1990. Cultivares autóctonos de algarrobo (*Ceratonia siliqua* L.) en Cataluña. Investigación Agraria: Producción y Protección Vegetal, 5 (2):223-238.
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3. Tous, J., Olarte, C., Truco, M. J. and P. Arús. 1992. Isozyme polymorphisms in carob cultivars. HortScience, 27(3):257-258.

Call for Wilder Medal Nominations

The Wilder Medal Committee of the American Pomological Society (APS) invites nominations for the 1998 Wilder Silver Medal Award. All active members of APS are eligible to submit nominations. The Wilder Medal was established in 1873 by the American Pomological Society in honor of Marshall P. Wilder, the founder and first President of the Society. The award consists of a beautifully engraved medal which is presented to the recipient at the annual meeting of APS, held during the ASHS Annual Meeting.

The Wilder Medal is conferred on individuals or organizations which have rendered outstanding service to horticulture in the broad area of pomology. Special consideration is given to work relating to the origination and introduction of meritorious varieties of fruit. Individuals associated with either commercial concerns or professional organizations may be considered as long as their introductions are truly superior, and have been widely planted.

Significant contributions to the science and practice of pomology other than fruit breeding will also be considered. Such contributions may relate to any important area of fruit production such as rootstock development and evaluation, anatomical and morphological studies, or unusually noteworthy publications in any of the above subject areas.

Specific nomination guidelines can be obtained by contacting committee chairperson, Dennis J. Werner, Department of Horticultural Science, Box 7609, North Carolina State University, Raleigh, NC 27695-7609 (phone 919-515-1226, e-mail dennis_werner@ncsu.edu). Please submit your nominations by May 1, 1998.

Thank you.

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Fruit Varieties Journal is owned and published by the American Pomological Society, with publication and business offices located at: 102 Tyson Building, University Park, PA 16802. Frequency of issue: quarterly. Publication number: 0091-3642. annual subscription price: $25.00. Editor: David C. Ferree, Dept. Horticulture, OARDC, Wooster, Ohio 44691. Business manager: Robert M. Crassweller, 102 Tyson Building, University Park, PA 16802.

The average number of copies of each issue printed during the preceding 12 months was 950; total paid circulation, 697; free distribution, 20; total distribution, 717. Office use and left over, 233. The actual number of copies of a single issue published nearest to filing date was 950; total distribution, 717; office use and left over, 233.

I certify that the statements made by me above are correct and complete. R. M. Crassweller, Business Manager. December 30, 1997.