HortScience 24(5):869–870. 1989.

'Elliot' Pear

Kay Ryugo
Department of Pomology, University of California, Davis, CA 95616

Additional index words. *Pyrus communis, Erwinia amylovora,* fire blight resistance

'Elliot' pear is resistant, but not immune, to the fire blight-inciting bacterium, *Erwinia amylovora*. 'Elliot' fruit has the shape and coloration similar to those of 'Doyenne du Comice' and 'Tyson' (Hedrick, 1921).

Origin

'Elliot' is a hybrid between 'Vermont Beauty' and 'Elliot #4'. 'Elliot #4' was discovered in the 1930s by H.E. Thomas, Plant Pathologist, Dept. of Plant Pathology, Univ. of California at Berkeley on the Elliot Ranch, located in the Sacramento River Delta district. It arose as a sucker from a rootstock of an old 'Bartlett' tree. Because rootstocks of such old trees were derived from seeds imported from France before World War 1, the stock was probably a seedling of *Pyrus communis* L. Thomas inoculated branches of 'Elliot #4' with bacterial suspensions of *E. amylovora* (Burr) Winslow et al., but the bacteria did not spread.

Crosses of 'Elliot #4' x 'Vermont Beauty' and 'Bartlett' x 'Elliot #4' were made in 1964 on the Univ. of California, Davis campus. Seedlings were planted 5 × 5 m and no effort was made to control fire blight. Evaluations made in 1977 and 1978 revealed that several offspring from the 'Elliot #4' x 'Vermont Beauty', including the original 'Elliot' seedling, did not become infected, although they had not been sprayed with an antibiotic during the 20 years of observation. Other seedlings from the same cross became diseased to varying degrees (Ryugo, 1982). All offspring of 'Bartlett' x 'Elliot #4' exhibited light to severe symptoms of fire blight in 1977 or 1978; hence, they were discarded.

Description

The 'Elliot' fruit matures 2 to 4 weeks after 'Bartlett' and stores well up to 4 months if kept at 0C and 80% RH. No data on postharvest shelf life under controlled atmosphere conditions are available.

The ripe fruit has a buttery texture and a flavor reminiscent of 'Beurré Bosc'. The rich-bodied juice will attain a soluble solids content of 18%. Harvest size ranges from 50 to 60 mm in diameter, and the shape varies from pyriform to conical (Fig. 1). Ground color at maturity is yellowish green; surface color is brownish yellow, but 40% to 60% of the skin may be russeted, similar to 'Beurré Bosc'. Fruits exposed to the sun develop a red blush that tends to fade as the fruit matures.

'Elliot' trees grafted on 'Winter Nelis' seedlings have an upright growth habit (Fig. 2). The clone has not been field-tested for winter hardiness, but, because 'Vermont Beauty' is cold-hardy, 'Elliot' is expected to be equally cold-tolerant. 'Elliot' trees bloom at the same time as 'Bartlett', or a few days later. Flowers with white petals and jet-black anthers are subtended by pedicels 15 mm long. Three to five flowers are borne on inflorescences on lateral spurs. 'Elliot' will cross-pollinate with 'Winter Nelis'. The pedicels are thin, so that in windy areas, the weight of the fruit may cause them to break, resulting in a preharvest drop. Leaf shapes vary from ovate to elliptical (Fig. 3). The original 'Elliot' tree and 9-year-old trees

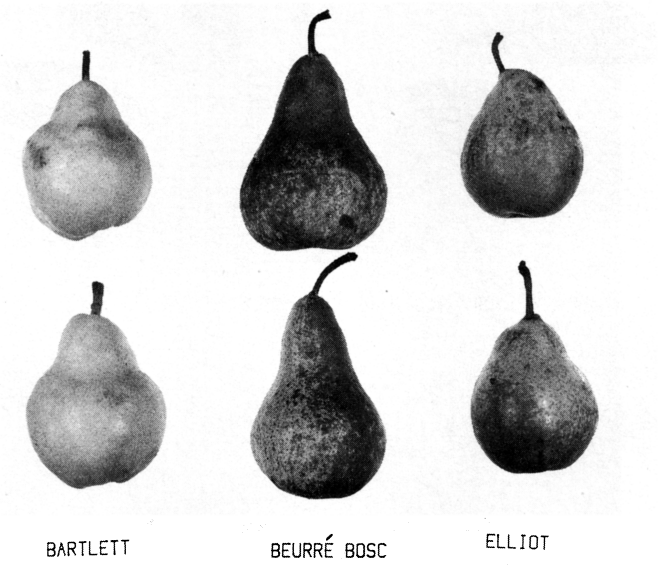

Fig. 1. Comparison of sizes and shapes among 'Bartlett', 'Beurré Bosc', and 'Elliot'.

Fig. 2. Upright growth habit of a 9-year-old 'Elliot' pear grafted on 'Winter Nelis' seedling rootstock.

Received for publication 5 Dec. 1988. The cost of publishing this paper was defrayed in part by the payment of page charges. Under postal regulations, this paper therefore must be hereby marked *advertisement* solely to indicate this fact.

Fig. 3. Leaf variations and spurring habit of 'Elliot' pear.

propagated on 'Winter Nelis' seedlings have not manifested any sign of biennial bearing. 'Elliot' is graft-compatible with 'Old Home' rootstock; it has not been tested on other rootstock species.

When 10 intact flowering 'Bartlett' and 'Elliot' spurs were sprayed with a bacterial suspension (1×10^6 cells/ml) and covered with plastic bags, all 'Bartlett' spurs developed lesions; only four 'Elliot' spurs became diseased. Lesions on the 'Bartlett' branches advanced basipetally 15 to 20 cm, whereas those on infected 'Elliot' spurs extended ≈5 cm.

Scion wood of 'Elliot' may be obtained under a test agreement by writing to Robert Fissell, Univ. of California Patent, Trademark and Copyright Office, 2150 Shattuck Ave., Berkeley, CA 94720.

Literature Cited

Hedrick, U.P. 1921. The Pears of New York. Twenty-ninth Annual Rpt. N.Y. Agr. Expt. Sta., vol. 2, Part II. J.B. Lyon Co., Albany, N.Y.

Ryugo, K. 1982. Breeding resistance to fire-blight bacteria, *Erwinia amylovora* in pears. Acta Hort. 124:33–36.