The 'Spartlet' Pear[1]

ROBERT F. CARLSON*[2]

Due to fire blight and related cultural problems, the growing of pears with acceptable fruit size in Michigan is difficult. The major variety in commercial production is the 'Bartlett.' However, due to the low vigor of trees to avoid blight, inadequate size has caused concern of both growers and processors. Furthermore, since 'Bartlett' does not keep long after harvest (it must be processed or marketed fresh within a month), there is a need for another variety with improved fruit and tree characteristics to supplement the 'Bartlett' variety.

In 1964, Mr. Edward Palacky, fruit grower, Farmington, Michigan, reported a pear tree in his orchard that was different from the rest of the trees. Since then trees propagated from this single tree have been observed and tested in second generation orchards by Michigan State University and Gerber Products Company personnel.

The Original Tree

The original tree, about 25 years old, apparently developed from a shoot of a 'Bartlett' rootstock. It appears that 2 or 3 years after the orchard was planted, this particular tree was damaged, causing a strong shoot to develop from below the graft union. Presumably, the original trees were budded on 'Bartlett' seedlings so that this "new different" pear tree is probably not a mutation, but rather a seedling. The damaged 'Bartlett' tree, which is still there, serves as a comparison to the new tree arising from the same stump.

Name of the Pear Seedling

Since the fruit of this seedling had some 'Bartlett' characteristics it was referred to as 'Bartlett-x' for the first 7 years of testing of second generation trees. In 1971 it was suggested that it be called 'Spartlet,' which has a connotation of 'Bartlett,' and also includes the first syllable of Spartan—the Michigan State University's athletic teams.

Description of 'Spartlet'

Tree Characteristics

Current shoot growth is redish brown with a few large conspicuous lenticles and short pointed buds. Mature branches (3-years and older) turn silvery gray with intermittent brown streaks. Pointed 1-inch spurs are formed on second year growth, and these thicken and develop into fruit spurs on 3 and 4 year old wood. Often, shoots 1 to 8 inches long, with a fruit purse at the end, develop on 4-year and older branches.

Main scaffold branches are spreading with current shoot growth often curving laterally. These growth characteristics produce a spreading tree of medium size and one which requires minimum training and pruning.

The leaves resemble those of 'Bartlett' having fine serrate, nearly smooth margins and shiny leathery appearance and are about twice as long as they are wide.

'Spartlet' trees, to date, have been shown to be comparatively free of fire blight, but not resistant. The parent tree, having been heavily cut for scion wood, has produced vigorous growth relatively blight free as compared to other trees in the same orchard. Pathological blight studies comparing it with other varieties are in progress.

Flower Characteristics

The flowers are large, showy white with large red anthers slightly sub-

*Department of Horticulture, Michigan State University, East Lansing, Michigan.

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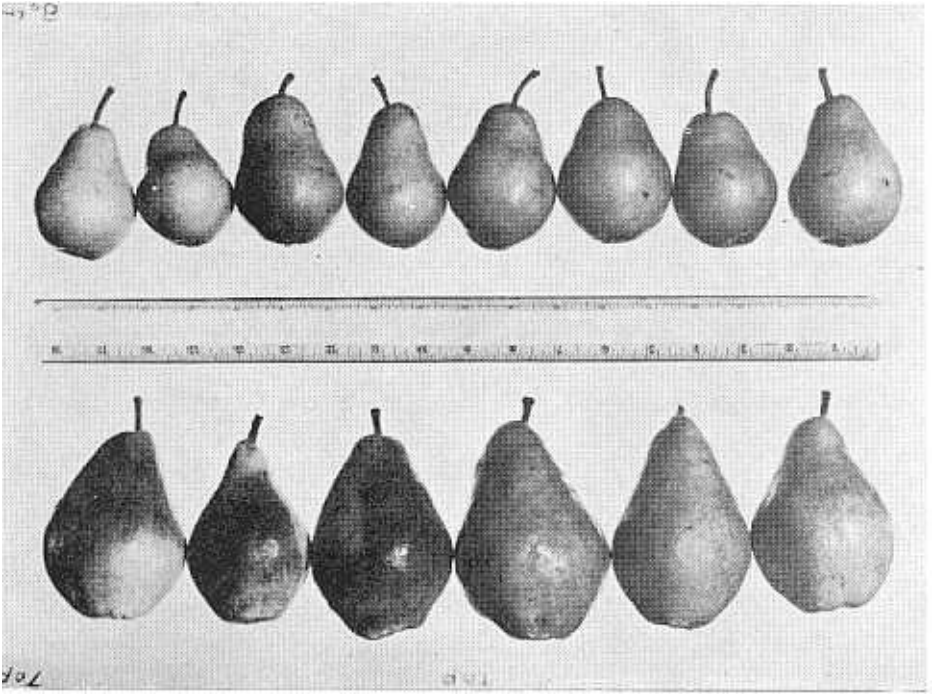

Figure 1. Selected fruit of the two varieties to illustrate a comparison of fruit size and form of 'Spartlet' (top row) and 'Bartlett' (bottom row), 18-inch ruler.

tending the style. Full bloom usually occurs 2 days later than 'Bartlett,' but because all flowers do not open uniformally, there seems to be enough overlap for cross pollination with 'Bartlett.' Since the flowering period of both 'Sparlet' and 'Bartlett' are within each other, each apparently can pollinate the other. Evidence, so far, shows that 'Spartlet' is self fruitful, but requires wind or insect pollen transfer. It is productive, the original tree having borne 6 to 9 bushels annually, and top worked trees starting to fruit in the 3rd and 4th years.

Fruit Characteristics

Fruit, which matures mid-September, about 12 days after 'Bartlett,' is large, reaching 3.3 inches in diameter and 4.2 inches long with a 1-inch stem (Fig. 1). Most fruit have the blocky 'Bartlett' shape; however, some fruit have a narrow neck tapering from the large round calyx end toward the stem end. Fruit with the narrow neck must be picked carefully to avoid breaking of the neck. The skin is smooth, green-yellow at maturity, often with a bright scarlet blush on exposed side, and dotted with numerous pin-pointed russet lenticels. Flesh is somewhat aromatic, fine-grained to granular in non-ripened state, but rather smooth to buttery and slightly fibrous when properly ripened following storage. The fruit quality has been rated closely to 'Bartlett,' but slightly coarser with few fibers of canned product. Core is medium to large and fleshy with very small seed cavities. Seed is small slender, dark brown. Calyx is closed and shallow (Fig. 2).

Fruit Storage Characteristics

Fruit, which matures mid-Septem- in Michigan, has stored well until mid-February at 31°F in regular storage. For eating out-of-hand, the 'Spartlet' fruit must be well ripened under hu-

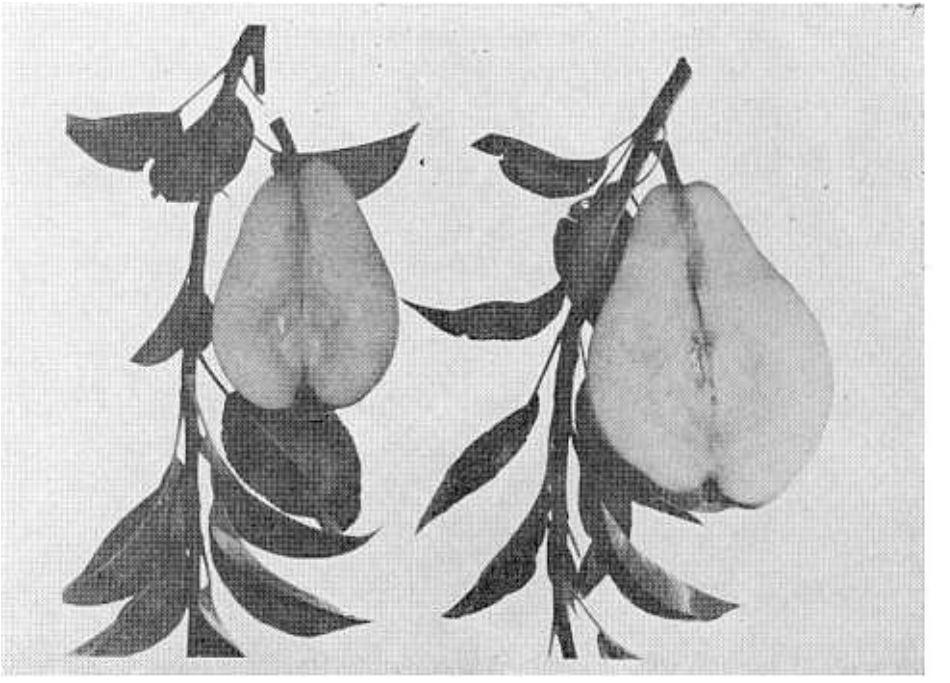

Figure 2. Internal comparison of 'Bartlett' (left) and 'Spartlet' (right). Note fleshy core and shallow closed calyx end.

midity and temperature condition. Its storage quality, large size, and bright blush appearance, suggest that 'Spartlet' may have fresh market value and perhaps use in special gift packages in December.

Because of these favorable tree and fruit characteristics, 'Spartlet' is offered as a complimentary choice to 'Bartlett,' not as an alternative.

'Spartlet' fruit has been processed into puree and sliced canned halves under pilot test in commercial processing plants in Michigan and found to make acceptable packs of these products. A patent on 'Spartlet' has been applied for by a Michigan nursery and some trees will be available in 1974.

Bregger Essay Award for 1973-74

University students, both graduate and undergraduate, are eligible to enter essays for the annual Bregger award of the American Pomological Society.

Essays on some phase of fruit variety improvement through fruit breeding or other means are now being accepted for the 1973-74 academic year. The deadline for these essays is February 1974. They should be sent to the award commitee % Dr. John Bregger, Box 192, Clemson, South Carolina, 29631.

Three prizes, consisting of $50.00, $30.00 and $20.00 will be awarded.