Robusto — A New Vigorous and Precocious Plum for the Southeastern United States

J. M. Thompson and V. E. Prince[1]

The Agricultural Research Service, USDA, has recently released a new diploid hybrid plum, Robusto, that is adapted to most areas of the southeastern United States where native and native × Japanese hybrid plums are grown. The name refers to two outstanding characteristics of this new cultivar, its extremely vigorous tree growth and its precocity of bearing. Fruits of Robusto are similar in appearance, taste, and marketing procedures to Bruce, the most important southeastern jam and jelly cultivar, except that Robusto, by virtue of its later bloom and longer development time (Table 1), matures approximately one week later than Bruce. Thus, Robusto is expected to extend the jam and jelly season.

The pedigree of Robusto appears in Fig. 1. This cross was made in 1967. The original seedling, designated BY 68-317, was hybridized and grown by Mr. Victor Prince at the Southeastern Fruit and Tree Nut Research Laboratory at Byron, GA., from a cross of By 4-1537 (Queen Ann × Barstow) × an undesignated seedling from a 1964 hybridization of Ozark Premier × *P. angustifolia,* the native Chickasaw plum. BY 68-317 was selected for propagation and additional testing by J. M. Thompson in 1973 and was evaluated at Byron and in Alabama, Arkansas, and Georgia.

The determinant-growing parent, Ozark Premier, has rather large internodes while *P. angustifolia* is only partially determinant with short internodes. In Robusto, relatively large internodes coupled with a somewhat indeterminant growth pattern has resulted in a clone whose trees are particularly vigorous in the horizontal growth component. Therefore, the unmodified tree shape is somewhat globose, but with a relatively low crown. Fruits are borne terminally and laterally on second year and older wood. Because of its combination of precocity, earliness, and rapid growth, Robusto is a candidate for trials in

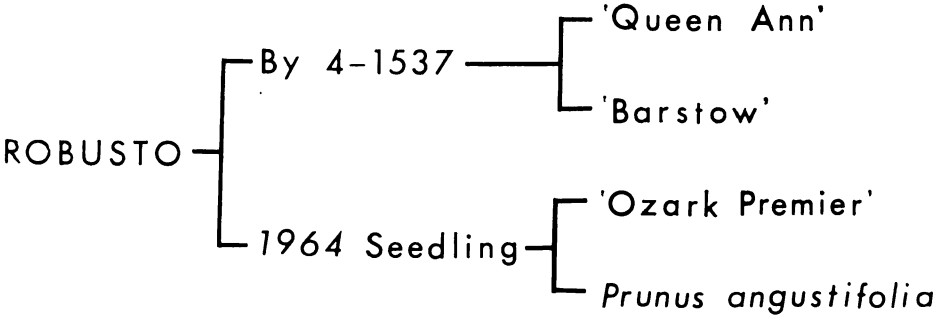

Fig. 1. The pedigree of Robusto plum.

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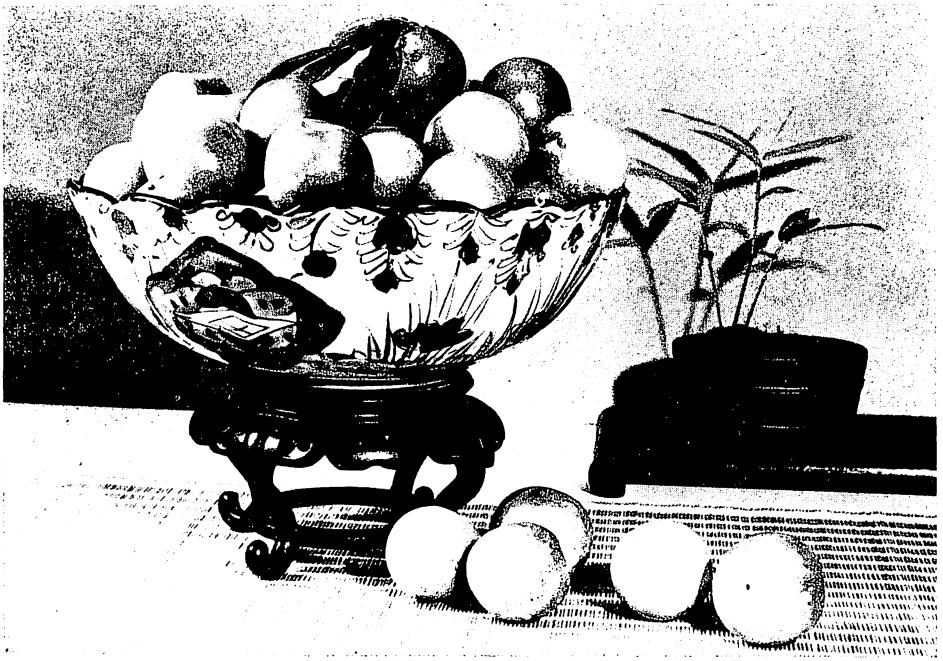

Fig. 2. Fruit of Robusto during the ripening process. Fruit were picked green with orange showing on the suture and had been held in cold storage at 3°C for three days when this picture was taken. They proceeded to ripen and turn red in two days at room temperature.

"meadow orchards." It has also been suggested, though not tested, that standard sized trees of this cultivar might be ideal for situations where mechanical pruning and training are utilized. On the other hand, with hand pruning and in conditions of high fertility, Robusto should be lightly pruned in late summer in order to avoid the necessity of making too many heavy, and thus invigorating, pruning cuts in winter.

Flowers of Robusto are borne profusely in large clusters. The flowers are self-incompatible, requiring pollenizers. The odiferous nectar attracts numerous pollinating insects. The tendency to overset is so pronounced that heavy thinning must be practiced almost every year. Pollen production is scant, but Robusto's contribution to the pollen budget of the orchard is considerable because of its profuseness of bloom and the attractiveness of these blooms to pollinating insects.

The fruit of Robusto may be picked when they are green with the first detectable orange trace along the suture (Fig. 2). When picked at this stage and held in cold storage at 3°C for three days, they can then be expected to ripen to a solid bright red skin and

Table 1. Comparison of the characteristics of Robusto with those of several other early plum cultivars of the southeastern United States.

Cultivar	Bloom date relative to Methley	Days from bloom to maturity	Skin color	Flesh color	Normal fruit Size (mm)	(in)
Six Weeks	+2	74	Red	Yellow/red	38	1.5
Bruce	−1	84	Green/orange/red	Yellow/red	43	1.7
Methley	0	88	Dark red	Very dark red	38	1.5
Wade	+2	88	Red	Yellow/red	43	1.7
Robusto	+3	88	Green/bright red	Red	41	1.6
Santa Rosa	+3	100	Red	Yellow/red	48	1.9

red flesh (Table 1) in two days on the shelf. Plums of the native hybrid type are often grown overcropped for maximum tonnage and achieve a size of only 1⅝ to 1¾" (41-44 mm). On the other hand, Robusto's potential fruit diameter with proper thinning is 1⅞" (48 mm) or better. Quality is rated quite good by those who appreciate the wild southern "Chickasaw" plum. The flesh clings tenaciously to the seeds.

Robusto has shown marked resistance to both bacterial leafspot (*Xanthomonas pruni* [E. F. Sm.] Dows.) in its leafspot, fruitspot, and twig canker/dieback phases, and to bacterial canker (*Pseudomonas syringae* van Hall). Robusto has thus far shown good resistance to the plum leaf scald associated with the presence of a rickettsia-like bacterium. Robusto is thought to possess good resistance to Prunus black knot (*Apiosporina morbosa* [Schw.] Arx) and the brown rots (*Monilinia* spp), but has not yet been adequately challenged in either case. Our trees were recently indexed free of necrotic ringspot and prune dwarf viruses.

Budwood from recently virus-indexed trees is currently available, though in limited quantities, from USDA-ARS, Southeastern Fruit and Tree Nut Research Laboratory, P. O. Box 87, Byron, GA 31008-0087, U.S.A.

The Gilbert Strawberry

F. A. GILBERT[1]

The Gilbert strawberry was released by the University of Wisconsin in 1982. This cultivar (tested as WI 7028) originated from a cross of Cyclone × Badgerglo at the Peninsular Experiment Station, Sturgeon Bay, Wisconsin.

The fruit of Gilbert is very large (maintaining relatively large fruits throughout a rather long harvest period), moderately firm, attractive red throughout the berry, attractive calyx, and the fruit quality is considered fair-good. The fruit picks easily but is slightly difficult to find due to the dense foliage.

The plants are vigorous, produce an abundance of runners which root readily and during the years it has been tested, it appears to be quite

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