'AU-Amber' Plum

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'AU-Amber' was developed in the Dept. of Horticulture and the Alabama Agricultural Experiment Station, Auburn Univ. for growing in areas where 650 hr of below 7°C occurs. It originated from a cross of 'Methley' × 'Starcher No. 1' (*Prunus angustifolia*), followed by backcrossing and sibbing of selected seedlings (Fig. 1). The original cross was made in 1965, and the seedling was selected and tested as Methley 12-10.

Description

'Au-Amber' is highly resistant to bacterial canker (*Pseudomonas syringae* Van Hall), bacterial fruit and leaf spot [*Xanthomonas compestris* pv (Smith 1903) Dye 1978], and plum leaf scald (*Xylella fastidiosa*), but is susceptible to black knot [*Apiosporina morbosa* (Schw) Ark.] (Table 1).

Trees of 'Au-Amber' are similar to those of 'Ozark Premier' in spreading growth habit and dark green foliage, except they are more vigorous, larger, and have greater longevity. 'Au-Amber' has a chilling requirement of ≈650hr below 7°C. The chilling requirement was determined by holding cuttings in a greenhouse at 25°C.

Fruits of 'Au-Amber' have dark red (shrimp red, HCC, 34A; Royal Horticultural Society, 1966) skin and yellow flesh (maize yellow HCC 21B) (Table 1). Fruit quality is excellent for fresh market, which makes 'Au-Amber' adaptable for home, roadside, and commercial markets. Fruits have adequate firmness for handling, packing, and shipping to commercial markets (Table 1). Fruits were also rated acceptable in tests of canned fruit (Table 2). Maturity date is ≈1 week before 'Methley' (Table 1). The plant is self-fruit-

ful, flowers profusely, and sets heavily.

'Au-Amber' has produced high yields at two locations in central and southeastern Alabama and at Byron, Ga. Average yields of marketable fruit per tree in Alabama were 24.0, 53.5, and 58.5 kg from 3-, 4-, and 5-year-old trees. Each planting contained six replications of one-tree plots. It has been a consistent bearer and has produced larger crops than 'Bruce', 'Methley', 'Ozark Premier', and 'Santa Rosa'.

Fruits of 'Au-Amber' store as well at 0°C as 'Homeside' and 'Methley' and better than 'Ozark Premier' (Table 1).

'Au-Amber' yield and fruit quality compare favorably with the cultivars currently being grown commercially and in home and roadside plantings. Furthermore, it is more resistant to bacterial fruit and leaf spot, bac-

terial leaf spot, bacterial canker, and plum leaf scald than are 'Methley', 'Giant Cherry', and 'Santa Rosa'. Therefore, 'Au-Amber' should fill a need for an early cultivar for commercial, home, and local markets for central and south-central Alabama and other areas of similar environment where these diseases are problems.

Outstanding characteristics

Tree vigor and tolerance to plum leaf scald are the primary improvements of 'Au-Amber' over 'Methley'. Trees of 'Au-Amber' are vigorous and show no evidence of plum leaf scald, whereas trees of 'Methley' grow much slower and are highly susceptible to plum leaf scald. Tree vigor is a primary selective criterion in the southeastern United States, and the relationship of plum leaf scald to phony peach makes resistance important.

'Au-Amber' ripens 10 days earlier and is more fully colored at any comparable stage of maturity than 'Methley' (Table 1). Another improvement of 'Au-Amber' over 'Methley' is the increased tree longevity of 'Au-Amber'. In test orchards at two Alabama locations and at Byron, Ga., 9 years after planting, trees of 'Au-Amber' were in vigorous condition, while trees of 'Methley' were either dead or in a severely diseased and weakened condition.

Fig. 1. Pedigree of 'Au-Amber' plum.

Fig. 2. Fruits of 'Au-Amber' plum.

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Table 1. Fruit and plant characteristics of 'AU-Amber' compared to standard *Prunus salicina* cultivars.

Characteristic	Cultivar							
	AU-Amber	AU-Producer	AU-Roadside	Crimson	Homeside	Methley	Ozark Premier	Santa Rosa
Skin color ^a	dR-P	dR-P	dR	cR	Or-1R	dR-P	R-P	dR-P
Flesh color ^a	Cr	dR	dR	cR	Cr	dR	Cr	R
Fruit diam (cm)	3.2-3.8	3.2-3.8	5.1-5.7	3.8-4.5	5.7-6.4	2.5-3.2	5.1-5.7	3.2-3.8
Firmness ^b	4	5	4	5	4	3	4	4
Stone adhesion ^a	C	F	sC	C	C	C	sC	C
Flavor ^b	5	5	5	5	5	5	5	5
Texture ^b	5	5	5	5	5	5	5	5
Shape ^b	5	5	5	5	5	5	5	5
Soluble solids concn (%)	18.2	16.5	17.2	16.3	18.8	18.5	15.7	16.7
Harvest date (Auburn)	5-30	6-27	7-1	7-24	7-5	6-10	7-10	7-5
Yield (Auburn and Headland)	5 ^c	5	5	5	5	3	4	3
Marketable fruit after 6 weeks at 0C (%)	70	90	70	90	70	70	65	80
Disease resistance ^w								
Bacterial canker	0	0	0	0	1	5	1	5
Bacterial fruit spot	0	0	0	0	0	3	0	5
Bacterial leaf spot	0	0	0	0	0	5	1	5
Black knot	5	1	0	0	1	5	1	0
Brown rot	2	2	2	1	3	3	3	3
Plum leaf scald	0	1	1	3	1	4	4	5

^aColor abbreviations: Or = orange, R = red, P = purple, Cr = cream, cR = crimson red, dR = dark red, IR = light red.

^bRating index: 1 = very poor, 2 = poor, 3 = fair, 4 = good, 5 = excellent.

^cStone adhesion: C = cling, sC = semi-cling, F = free.

^wDisease index: 0 = 0%, 1 = 1% to 20%, 2 = 21% to 40%, 3 = 41% to 60%, 4 = 61% to 80%, and 5 = 81% to 100% of the fruit, leaves, and trees infected with bacterial canker, bacterial fruit spot, bacterial leaf spot, black knot, brown rot, and plum leaf scald. Ratings were taken in years when injury from disease was severe on susceptible cultivars.

Table 2. Mean quality evaluations of 11 canned plum cultivars. Means scores of an expert panel (three to four panelists) were obtained on the canned plums after at least 6 weeks at 1 ± 1C.^a

Cultivar	Color	Texture	Flavor	Overall quality ^b
AU-Amber	8	9	9	8.9
AU-Producer	8	8	8	8.0
AU-Roadside	8	8	8	8.0
Crimson	8	8	8	8.0
Giant Cherry	5	6	7	6.0
Methley	8	8	8	8.0
Morris	8	8	8	8.0
Ozark Premier	7	7	6	6.7
Red June	6	8	8	7.4
Sapa	10	8	8	8.6
Starking				
Delicious	8	7	5	6.7

^aNumerical scores as follows: 9 or 10 = highly acceptable, 7 or 8 = acceptable, 5 or 6 = barely acceptable, below 5 = unacceptable.

^bOverall ratings are the means of all the panelists' three quality ratings.

Availability

Trees of 'Au-Amber' are available from wholesale and retail nurseries for planting in Winter 1989-90. A limited supply of budwood may be obtained from J. D. N., Dept. of Horticulture, Auburn Univ., AL 36849-5408.