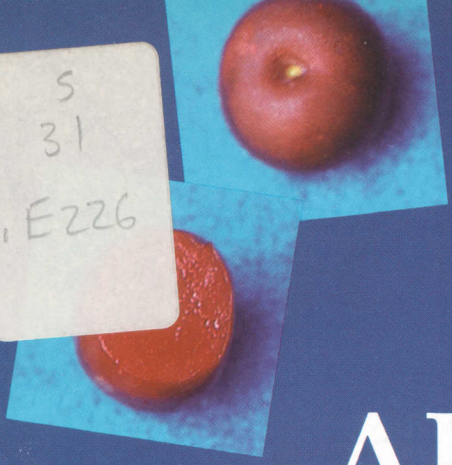
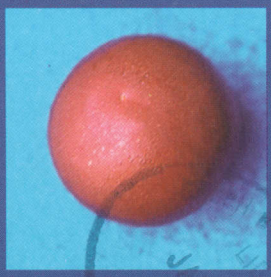
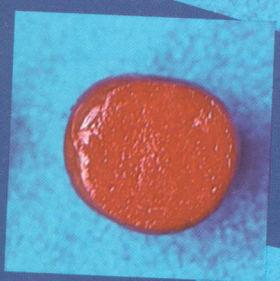


AU-Cherry





Plum Cultivar Developed for Home Garden Production

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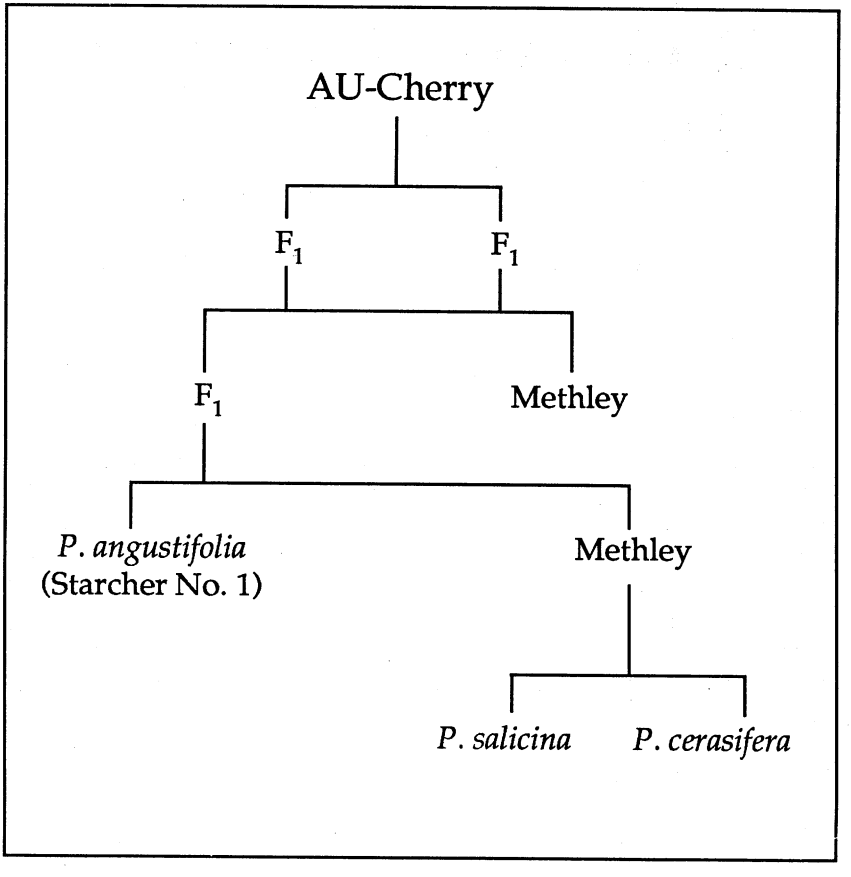

Pedigree of AU-Cherry

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Cover photos by Roy Roberson, Department of Research Information

AU-CHERRY PLUM CULTIVAR DEVELOPED FOR HOME GARDEN PRODUCTION

J. D. Norton, G. E. Boyhan, D. A. Smith, and B. R. Abrahams[1]

INTRODUCTION

AU-CHERRY is a new plum cultivar developed by the Alabama Agricultural Experiment Station, Auburn University, for growing in areas receiving at least 700 hours of chilling temperature below 45°F. The new cultivar was selected from a cross of Methley and Starcher No. 1 (*Prunus angustifolia*) followed by backcrossing and sibbing of selected seedlings, as shown by the pedigree on page 2. It was developed to meet the need for disease-resistant cultivars. Such resistance is particularly important in the Southeast where prevalance of certain diseases and susceptibility of commercial varieties has discouraged plum production.

CULTIVAR DESCRIPTION

Trees of AU-Cherry are upright with dark green leaves. In test orchards in Alabama, the trees were vigorous, disease resistant, and long lived. The plant is self-fruitful, flowers profusely, and sets a heavy crop. The cultivar has proven its ability to produce high yields of excellent quality fruit where certain fruit and tree disease problems occur. It is a mid season cultivar that matures fruit 2 weeks after Methley, table 1.

DISEASE RESISTANCE

AU-Cherry is highly resistant to bacterial canker (*Pseudomona syringae*, Van hall), bacterial fruit spot [*Xanthomonas pruni* (E. F. Smith), Dows], bacterial leaf spot (*X. pruni*), black knot [*Apisporina morbosa* (Schw.) Ark.], and plum leaf scald (*Xylella fastidiosa*, Wells et al.), table 2.

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[1]Respectively, Professor, Research Associate, former Associate Professor, and Technician of Horticulture.

TABLE 1. BLOOM AND HARVEST DATES AND YIELD OF PLUM CULTIVARS

Variety	Auburn		
	Bloom date	Harvest date	Yield[1]
AU-Cherry	3-24	6-24	5
AU-Rosa	3-24	6-22	5
AU-Rubrum	3-22	6-19	5
AU-Amber	3-17	5-30	5
AU-Producer	3-20	6-27	5
AU-Roadside	3-22	7-4	5
Bruce[2]	3-20	6-29	2
Crimson	3-22	7-14	5
Homeside	3-20	7-5	5
Methley[3]	3-22	6-10	3
Morris	3-22	6-17	5
Ozark Premier	3-20	7-10	4
Purple	3-24	7-20	5
Santa Rosa[4]	3-24	7-5	3

[1]Yield index: 0 = 10, 1 = very low, 2 = low, 3 = fair, 4 = good, and 5 = excellent.
[2]Trees short lived due to ring spot virus.
[3]Trees short lived due to black knot and bacterial canker.
[4]Trees short lived due to bacterial canker.

TABLE 2. DISEASE RESISTANCE OF PLUM CULTIVARS IN EXPERIMENTAL PLANTINGS AT AUBURN, SHORTER, AND CLANTON, ALABAMA

Cultivar	Disease index[1]					
	Bacterial fruit spot	Bacterial leaf spot	Bacterial canker	Black knot	Brown rot	Plum leaf scald
AU-Cherry	0	0	0	0	0	0
AU-Rosa	0	0	0	0	0	0
AU-Rubrum	0	0	0	5	2	1
AU-Amber	0	0	0	1	2	0
AU-Producer	0	0	0	0	2	1
AU-Roadside	0	0	0	0	2	1
Bruce	0	0	0	0	4	4
Crimson	0	0	0	0	1	3
Homeside	0	0	1	1	3	1
Methley	3	5	5	5	3	4
Morris	1	2	2	5	2	2
Ozark Premier	0	1	1	1	3	4
Purple	0	0	0	0	3	5
Santa Rosa	5	5	5	0	3	5

[1]Disease index: 0 = 0, 1 = 1-10, 2 = 21-40, 3 = 41-60, 4 = 61-80, and 5 = 91-100 percent of fruit, leaves, and trees infected. Ratings were taken in years when injury from diseases was severe on susceptible cultivars.

FRUIT QUALITY

Fruits of AU-Cherry have dark red skin (scarlet red, HCC 44A)[2] and dark red flesh (scarlet red HCC 44B)[2]. Fruit quality is excellent for fresh market, which makes AU-Cherry adaptable for home use. How-

[2]Horticulture Color Chart; Royal Horticulture Society, London.

TABLE 3. FRUIT CHARACTERISTICS OF PLUM CULTIVARS

Cultivar	Fruit Set	Flesh color	Skin color	Size	Shape	Flavor	Firmness	Stone freeness	Texture	Soluble solids
				In.						*Pct.*
AU-Cherry	5[1]	dark	dark red	1-1¼	5[1]	5[1]	4[1]	cling	5[1]	18.0
AU-Rosa	5	yellow	dark red	1⅜-2¼	5	5	5	cling	5	17.6
AU-Rubrum	5	dark red	dark red	2¼-2½	5	5	5	cling	5	15.6
AU-Amber	5	yellow	dark red	1¾-2	5	5	4	cling	5	19.2
AU-Producer	5	dark red	dark red to purple	1¾-2	5	5	5	free	5	16.5
AU-Roadside	5	dark red	dark red	2-2½	5	5	4	semi-cling	5	17.2
Bruce	5	orange to red	orange to red	1¾-2	5	3	2	cling	3	9.4
Crimson	5	crimson red	crimson red	1½-1¾	5	5	5	cling	5	16.3
Homeside	5	cream	orange to light red	2¼-2½	5	5	4	cling	5	18.8
Methley	5	dark red	dark red to purple	1-1¼	5	5	3	cling	5	18.5
Morris	5	light red	light red	1¾-2¼	4	3	5	cling	5	13.4
Ozark Premier	5	cream	red to purple	2-2¼	5	5	4	semi-cling	5	15.7
Purple	5	cream	dark red to purple	2¾-2	5	5	5	semi-cling	4	14.8
Santa Rosa	4	red	dark red to purple	1¼-1½	5	5	5	cling	5	16.7

[1]Rating index: 5 = excellent; 4 = good, 3 = fair, 2 = poor, and 1 = very poor.

ever, it lacks size and firmness for handling, packing, and shipping to commercial markets, table 3. Fruits were rated acceptable in canned fruit tests, table 4.

TABLE 4. MEAN QUALITY EVALUATIONS[1] OF 12 CANNED PLUM CULTIVARS

Cultivar	Color	Texture	Flavor	Overall quality[2]
AU-Cherry	9	8	9	8.7
AU-Rosa	8	8	8	8.0
AU-Rubrum	8	8	8	8.0
AU-Amber	8	9	9	8.7
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	7	7.7
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

[1]Numerical scores as follows: 9 or 10 = highly acceptable, 7 or 8 = acceptable, 5 or 6 = barely acceptable, and below 5 = unacceptable. Mean scores of an expert panel (3-4 panelists) were obtained on the canned plums after at least 6 weeks warm-storage.

[2]Overall ratings are the means of all the panelists' three quality ratings.

YIELDS

The cultivar has been in trials as Methley C-50 at five locations in the Alabama Agricultural Experiment Station and in grower trials. AU-Cherry compares favorably with other cultivars in yield, table 1. It has produced high yields at two locations in central and southeast Alabama and at Byron, Ga. Average yields of marketable fruit per tree in Alabama were 40 pounds, 70 pounds, 90 pounds, and 100 pounds, respectively, from 3-, 4-, 5-, and 6-year-old trees.

STORAGE

Fruits of AU-Cherry store as well as AU-Amber, AU-Roadside, and Methley and better than Bruce, Ozark Premier, and Homeside, table 5.

TABLE 5. PERCENT MARKETABLE PLUM FRUIT AFTER STORAGE AT 32° F

Cultivar	Marketable, by weeks of storage				
	3	6	9	12	14
	Pct.	*Pct.*	*Pct.*	*Pct.*	*Pct.*
AU-Cherry	95	70	20	0	0
AU-Rosa	100	85	65	10	5
AU-Rubrum	100	85	65	10	5
AU-Amber	95	70	20	0	0
AU-Producer	100	90	65	30	15
AU-Roadside	95	70	20	0	0
Bruce	20	5	0	0	0
Crimson	100	90	65	30	15
Homeside	95	65	15	0	0
Methley	95	70	20	0	0
Morris	100	90	65	30	15
Ozark Premier	90	65	15	0	0
Purple	100	85	55	25	8
Santa Rosa	100	80	45	20	5

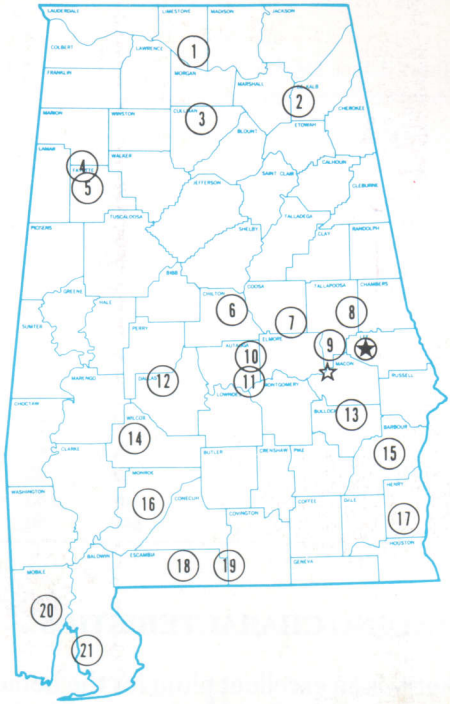
OUTSTANDING CHARACTERISTICS

AU-Cherry is an excellent plum for the home garden. Tree vigor and tolerance to plum leaf scald are the primary improvements of AU-Cherry. Trees of AU-Cherry are vigorous and show no evidence of plum leaf scald, whereas trees of susceptible varieties grow much more slowly and show obvious symptoms of plum leaf scald. Tree vigor is a primary selection criterion in the Southeast, and the relationship of plum leaf scald to phony peach disease makes resistance important.

Another improvement of AU-Cherry is the increased tree longevity of AU-Cherry. In test orchards in Alabama, 10 years after planting, trees of AU-Cherry were in vigorous condition.

Alabama's Agricultural Experiment Station System
AUBURN UNIVERSITY

With an agricultural research unit in every major soil area, Auburn University serves the needs of field crop, livestock, forestry, and horticultural producers in each region in Alabama. Every citizen of the State has a stake in this research program, since any advantage from new and more economical ways of producing and handling farm products directly benefits the consuming public.



Research Unit Identification

★ Main Agricultural Experiment Station, Auburn.
☆ E. V. Smith Research Center, Shorter.

1. Tennessee Valley Substation, Belle Mina.
2. Sand Mountain Substation, Crossville.
3. North Alabama Horticulture Substation, Cullman.
4. Upper Coastal Plain Substation, Winfield.
5. Forestry Unit, Fayette County.
6. Chilton Area Horticulture Substation, Clanton.
7. Forestry Unit, Coosa County.
8. Piedmont Substation, Camp Hill.
9. Plant Breeding Unit, Tallassee.
10. Forestry Unit, Autauga County.
11. Prattville Experiment Field, Prattville.
12. Black Belt Substation, Marion Junction.
13. The Turnipseed-Ikenberry Place, Union Springs.
14. Lower Coastal Plain Substation, Camden.
15. Forestry Unit, Barbour County.
16. Monroeville Experiment Field, Monroeville.
17. Wiregrass Substation, Headland.
18. Brewton Experiment Field, Brewton.
19. Solon Dixon Forestry Education Center, Covington and Escambia counties.
20. Ornamental Horticulture Substation, Spring Hill.
21. Gulf Coast Substation, Fairhope.