

PLUM CULTIVAR EVALUATION

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Twenty plum cultivars and breeding lines were evaluated in 2002. This planting was in the fourth leaf and this was the first cropping year. There were four selections from the Auburn plum breeding program that out performed other cultivars and selections. These lines were ARC 12-78, Met F1-1, ARC 12-74, and Crimson M-2. The fruit load was not thinned; therefore size was adversely affected. However, fruit size still averaged more than

1.80 inches in diameter. There were many fruit that were more than 2 inches in diameter. The fruit of these selections are firm and crisp in texture. Date of first harvest was June 6 for Methley F1-1 and ARC 12-74, June 28 for ARC 12-78, and July 5 for Crimson M-2. These fruit all have red to purple skin color and red to purple flesh color. The fruit has a range of soluble solids from 14 to 16%. See Tables 1-3.

TABLE 1. DATE OF FIRST HARVEST AND SKIN AND FLESH COLOR¹

Cultivar	Date of first harvest	Chart number	Skin color (observation)	Chart number	Flesh color (observation)
824533	6/6/02	53A/187B	Red - Purple	11A/20/A	Yellow -Yellow Orange
Methley F1-1	6/6/02	185A/187B	Purple	46A/187B	Red - Purple
ARC-12-74	6/6/02	185A/187B	Purple	46A/185A	Red - Purple
Methley F1	6/6/02	53A/187A	Red - Purple	60A/187A	Red - Purple
AU Rubrum	6/6/02	59A/187A	Purple	46A/185A	Red - Purple
F901	6/10/02	17A/21A	Yellow - Orange	15C/21A	Yellow - Orange
Auburn #1	6/10/02	187A	Purple	46A/185B	Red - Purple
AU Producer	6/10/02	187B/187A	Purple	45A/187C	Red - Purple
ARC-12-78	6/28/02	187A	Dark Purple	187D	Light Purple
SRA-11-1	6/28/02	59A/187A	Red Purple - Dark Purple	16C/11A	Yellow - Orange
SRA-11-2	6/28/02	187A/187B	Purple	16B/11A	Yellow - Orange
815570	7/5/02	187B	Dark Purple	185B	Light Purple
CA-15	7/5/02	46A/185A	Red - Purple	45A/53B	Red - Purple
SL-27-60	7/5/02	185A/185B	Dark Purple	150C/12C	Green yellow -Yellow
88M-1269	7/5/02	185A	Dark Purple	46B/59A	Red-Red Purple
Crimson M-2	7/5/02	46A/185A	Red - Purple	46C/46A	Red
CD-122	.	.	.	.	.
Starcher #1	.	.	.	.	.

¹Values derived from fruit harvested in the 2002 growing season.

TABLE 2. EVALUATION OF PLUM CULTIVAR FRUIT SIZE

Cultivar	Length (in)	Width (in)	Total weight (lbs)	Weight per fruit (g)
815570	1.68 ab ³	1.79 a	33.3 abcd	64.03 a
824533	1.51 abcd	1.62 ab	40.5 abcd	39.56 cdef
CD-122	.	.	.	.
CA-15	1.81 a	1.75 a	6.2 cd	52.48 abcd
ARC-12-78	1.67 ab	1.81 a	39.1 abcd	51.98 abcd
SL-27-60	1.69 ab	1.73 a	6.5 cd	46.63 bcd
88M-1269	1.84 a	1.81 a	2.5 cd	52.74 abcd
SRA-11-1	1.49 abcd	1.63 ab	39.7 abcd	38.36 def
SRA-11-2	1.62 abc	1.70 a	68.0 a	41.96 cdef
Methley F1-1	1.79 a	1.81 a	29.2 abcd	55.88 abc
ARC-12-74	1.83 a	1.85 a	20.1 abcd	57.27 ab
F901	1.37 bcd	1.34 b	52.5 abc	24.39 f
Crimson M-2	1.75 a	1.71 a	15.9 bcd	45.53 bcd
Methley F1	1.33 cd	1.36 b	56.8 ab	25.29 f
AUBURN #1	1.72 ab	1.74 a	34.4 abcd	46.67 bcd
Starcher #1	.	.	.	.
AU Producer	1.26 d	1.31 b	8.1 bcd	26.80 ef
AU Rubrum	1.73 a	1.70 a	11.8 bcd	49.02 abcd

¹ Means derived from fruit harvested in 2002.

² Length and width means are the average of 10 fruit.

³ Mean separation within columns by Duncan's Multiple Range Test $p = 0.05$, columns without letters were not significantly different.

TABLE 3. EVALUATION OF PLUM CULTIVAR FRUIT CHARACTERISTICS

Cultivar	Firmness	Soluble solids (%)	Taste	Stone freeness
815570	9.9 a ³	16.6 bc	4.5 ef	4.3 bcd
824533	0.7 f	14.3 ef	6.8 abcd	1.6 de
CD-122	.	.	.	.
CA-15	6.9 bcd	17.8 ab	7.5 abc	3.0 cde
ARC-12-78	6.9 bcd	14.5 ef	3.6 f	3.7 cde
SL-27-60	7.8 ab	17.3 bc	5.3 def	1.3 de
88M-1269	7.2 bc	19.0 a	6.0 bcde	2.0 de
SRA-11-1	4.3 de	15.0 efd	5.3 def	1.7 de
SRA-11-2	3.8 e	14.3 ef	6.7 abcd	3.2 cde
Methley F1-1	5.7 bcde	14.7 ef	7.0 abcd	6.9 ab
ARC-12-74	5.3 bcde	15.7 cde	8.3 a	8.8 a
F901	4.2 de	13.7 f	5.6 cde	1.9 de
Crimson M-2	7.3 bc	13.9 f	6.0 bcde	3.5 cde
Methley F1	0.1 f	13.7 f	7.7 ab	1.0 e
AUBURN #1	5.1 bcde	15.7 cde	7.0 abcd	3.8 cde
Starcher #1	.	.	.	.
AU Producer	5.0 bcde	16.4 bcd	7.3 abcd	2.1 de
AU Rubrum	4.7 cde	15.7 cde	7.0 abcd	5.7 bc

¹ Means derived from fruit harvested in 2002.

² Taste and stone freeness were rated on a scale from 1-10, with 10 being the best.

³ Mean separation within columns by Duncan's Multiple Range Test $p = 0.05$, columns without letters were not significantly different.