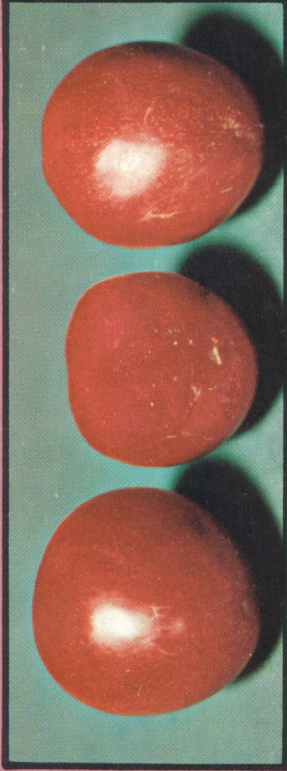
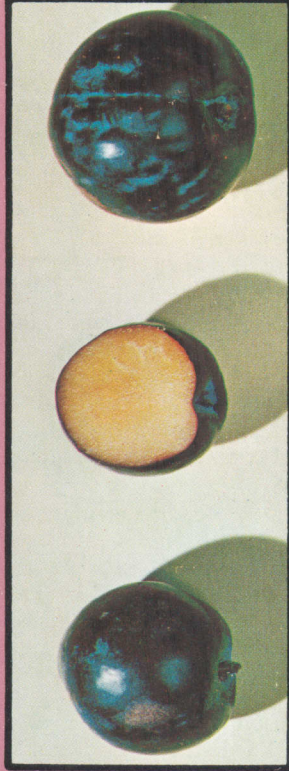


CRIMSON



&

PURPLE-



two disease resistant plums
for the commercial market

CRIMSON and PURPLE¹

Two Disease Resistant Plums For The Commercial Market

JOSEPH D. NORTON²

CRIMSON AND PURPLE are new plum varieties developed by the Auburn University Agricultural Experiment Station for production in central and northern Alabama. The new varieties have proved their ability to make good yields of high quality fruit where bacterial spot, bacterial canker, black knot, ring spot, and green mottle are problems.

The new varieties have high resistance to the above diseases. In addition, Crimson has moderate resistance to brown rot. Such resistance is particularly important in the Southeast where prevalence of these diseases and susceptibility of commercial varieties has discouraged plum production.

Resistance to one or more of the common fungal, bacterial, and virus diseases was present in the parents of the varieties; however, neither parent possessed resistance to all of them.

ORIGIN

Crimson was selected from a cross of Bruce X Methley. It combines the resistance to bacterial and fungal diseases from Bruce with the resistance to virus diseases and high quality fruit of Methley, Tables 1 and 2.

Purple was developed from a cross of Methley X Ozark Premier. It received resistance to bacterial and fungal diseases from Ozark Premier and additional resistance from a combination of genes from both parents, Table 1. Resistance to

virus diseases was secured from Methley and good fruit quality was inherited from Methley and Ozark Premier, Table 2.

Trees of Crimson and Purple are vigorous and disease-free. Growth habit of Crimson is spreading with medium green foliage and trees of Purple are erect with dark green leaves.

FRUIT QUALITY

Fruit of Crimson are crimson red externally and internally. Color develops about 3 weeks before fruit are mature. The fruit are very firm at maturity and of excellent quality at maturity, Table 2. Fruit size is 1½ to 1¾ inches in diameter. The flesh clings to the pit. Purple fruit are dark red externally and cream colored internally at maturity. Color develops about 3 weeks before maturity. Fruit are firm and of good quality when mature. Fruit size is 1¾-2 inches in diameter. The fruit are semicling.

Both Crimson and Purple may be stored for 3 weeks or more to extend the marketing period, Table 3. The firmness of the fruit makes them suitable for handling, storage, packing, and shipping to local and distant markets.

Grown under the numbers Bruce 12-14 (Crimson) and Methley 11-63 (Purple), the two varieties have been in trials at several locations of the Auburn University Agricultural Experiment Station System and in other Southern States. They compare favorably with other varieties in yield and quality. Since they mature later than other varieties the market-

¹ On cover: Parent varieties, Bruce, left, and Methley, right.

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TABLE 1. DISEASE RESISTANCE OF PLUM VARIETIES

Variety	Disease index ¹						Av.
	Bacterial spot	Bacterial canker	Black knot	Ring spot	Green mottle	Brown rot	
Bruce.....	0	0	0	5	5	4	2.3
Crimson.....	0	0	0	0	0	1	0.2
Methley.....	3	5	5	0	0	3	2.7
Ozark Premier.....	0	1	1	3	3	3	1.6
Purple.....	0	0	0	0	0	3	0.5

¹ Disease Index: 0 = No injury, 5 = Severe injury.

TABLE 2. CHARACTERISTICS OF PLUM VARIETIES

Variety	Bloom date	Harvest date	Fruit set	Flesh color	Skin color	Size	Shape	Flavor	Firmness	Stone freeness	Texture	Soluble solids
Bruce	3/20	6/29	5	orange to red	orange to red	1¾-2	5	3	3	cling	3	9.4
Crimson	3/22	7/15	5	crimson red	crimson red	1½-1¾	5	5	5	cling	5	16.3
Methley	3/22	6/10	5	dark red	dark red to purple	1-1¼	5	5	3	cling	5	18.5
Ozark Premier	3/20	7/10	5	cream	red to purple	2-2¼	5	5	4	free	5	15.7
Purple	3/24	7/20	5	cream	dark red to purple	1¾-2	5	5	5	semi cling	4	14.8
Santa Rosa	3/24	7/5	4	red	dark red to purple	¼-1½	5	5	5	cling	5	16.7

¹ Rating Index: 5 = Excellent, 4 = Good, 3 = Fair, 2 = Poor, and 1 = Very Poor.

ing period may be extended, Table 2. Thus, they should help fill the need for commercially acceptable varieties of good quality for production in the South.

Trees of Crimson and Purple should be available for planting in the winter of 1973-1974.

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TABLE 3. MARKETABLE PLUM FRUIT AT 35° F STORAGE

Variety	Weeks of storage				
	3	6	9	12	14
	Pct.	Pct.	Pct.	Pct.	Pct.
Bruce.....	20	5	0	0	0
Crimson.....	100	90	65	30	15
Methley.....	95	70	20	0	0
Ozark Premier....	90	65	15	0	0
Purple.....	100	85	55	25	8
Santa Rosa....	100	80	45	20	5

ture Substation, Cullman, Alabama; and C. A. Brogden, (retired) Wiregrass Substation, Headland, Alabama, in conducting variety trials.

The assistance of growers in conducting commercial grower trials of the material is deeply appreciated.

