

Dawn is a shy bearer but has been more productive than Magness at Indiana. The large, pyriform fruits mature in late August and are of very good quality—superior to Moonglow, although possibly not as rich or as smooth as Magness. Fruits are practically seedless.

Dawn appears to have commercial possibilities in the Midwest if productivity can be increased. Although its blight resistance is not as high as that of Moonglow or Magness, our results indicate that Dawn may have sufficient resistance to be maintained in the Midwest with proper control measures. In a large scale evaluation

trial under natural infection at Beltsville, Maryland, it ranked very high with regard to resistance (1). Crosses involving Dawn pollen have produced good set, indicating it to be a satisfactory pollinator.

Literature Cited

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Proper Timing Is Vital to Peach Thinning

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The high cost of hand thinning and the availability of chemical thinners on the market have created much interest among Florida peach growers. However, the change from hand thinning to chemical thinning has not occurred because results have been inconsistent.

The success of auxin-type compounds depends on the proper timing of application with cytokinesis, a developmental stage of the endosperm tissue within the seed. Chemical thinning at this stage is usually 4 to 6 weeks after bloom, when the main frost danger has passed and fruit set has been evaluated.

Cytokinesis has been related to seed length and in many peach varieties it occurs at a seed length of 7-9 millimeters. However, the rate of development is not the same for all varieties, thus the seed length when cytokinesis

occurs must be determined for each variety. Failure to make this determination has been one reason for the inconsistent results.

Seed length for eight peach and nectarine varieties grown in Florida has been correlated with the period when $\frac{2}{3}$ of the fruit had endosperm in cytokinesis (Table 1). Since the auxin-type compounds are effective during cytogenesis $\frac{1}{3}$ of the fruit should have endosperms that have completed cytogenesis to be resistant to removal, in order to insure that the total crop will not be removed. Seven of the varieties shown in Table 1 normally ripen their fruit from 60 to 100 days after bloom. The seed length of these short-cycle peaches (11.4 to 13.6 mm) is longer at the best thinning stage than the commonly accepted length (7-10 mm) for most varieties successfully thinned. 'Early Amber'

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has been thinned effectively with auxins during cytokinesis. However, fruit size was not increased with thinning because it was too close to maturity. The development cycle of 'Flordabelle' peach (approximately 110 days) is longer than any of the other Florida varieties examined. Its seed length was also smaller (<10 mm) at the $\frac{2}{3}$ cytokinesis stage and should be more in line with the commonly accepted 7-10 mm.

Those varieties that are hard to thin at 7-9 mm should be examined to determine the seed length at which cytokinesis occurs. Short cycle peaches appear to have a longer than normal seed length at $\frac{2}{3}$ cytokinesis. It may also be that cytokinesis occurs at shorter seed length than 7-10 mm

in extremely long cycle varieties.

Table 1. Peach and nectarine varieties with the seed length (mm) in which approximately $\frac{1}{3}$ of the fruit had endosperms that had completed cytokinesis.

Variety	Year		
	1968	1969	1970
Maygold	12.7	13.6	
Early Amber	12.1	13.2	
Flordasun		13.5	
Sunred Nectarine		13.4	
Sungold Nectarine			12.5
Flordabelle			<10.0
Flordared			13.0
McRed			>12.0

Recent Muscadine Grape Releases from Georgia

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Three new muscadine grape varieties have recently been released by the University of Georgia Agriculture Experiment Station. They were developed by Mr. B. O. Fry, retired Associate Horticulturist, and evaluated by the author. A description of the varieties follows:

Fry—A large-fruited, bronze, pistillate variety of good quality with soluble solids averaging 18.6%. It originated from a 1959 cross between Georgia 19-13 and USDA 19-11. The vines are vigorous and fruit well with fruit ripening in mid-September. The plants are moderately susceptible to black rot and ripe rot. On occasions, plants of this variety have been injured by winter temperatures below 10° F.

Jumbo—A very large, dark-skinned, pistillate variety. It resulted from a cross between Higgins and USDA 19-11. Plants of Jumbo are very vigorous and moderately resistant to common diseases of the muscadine. The fruit of this variety are one inch or more in diameter and have a soluble solids content averaging 15.3%. The fruit ripens around September 25 at Experiment, Ga.

Pride—Originated from a sister plant of Fry and it is also pistillate. The berries are large, purple, and occur in clusters which can be clipped from the vine intact. Ripe berries have averaged 17.9% soluble solids and are of good quality. Fruit ripen over a 3-4 week period with the greatest amount usually occurring the last

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