

## 'Autumn Seedless' Grape

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### Abstract

'Autumn Seedless,' a late-maturing white seedless grape (*Vitis vinifera* L.) released by the Quality Maintenance, Genetics and Transportation Research Unit of the Horticultural Crops Research Laboratory, Fresno, Calif.

### Origin

'Autumn Seedless' resulted from the cross 'Calmeria' x P64-18 ('Muscat of Alexandria' x 'Sultanina') made in 1958 (Fig. 1). The original vine was planted in 1961 in plots cooperative with California State University, Fresno. The original selection was made by John H. Weinberger and F. N. Harmon. 'Autumn Seedless' was tested as C58-22 in California and Maryland and is currently on trial in Arkansas and New York.

### Description

'Autumn Seedless' matures about 2 weeks after 'Thompson Seedless.' The fruit stores well and has been held successfully in standard commercial storage (SO<sub>2</sub> fumigation) until February. The flowers are perfect and self-fertile. Clusters weigh 0.9 to 1.4 kg, and are conical with 2 to 3 shoulders, medium in length (18 to 24 cm), with well spaced berries that result in

loose to medium compactness of the bunches (Fig. 2).

The berries of 'Autumn Seedless' are large, averaging 19 mm in diameter and 4.0 to 4.5 g in weight without gibberellic acid (GA) treatment or girdling. This is similar to the berry weight of 'Thompson Seedless' that has been girdled and treated with GA commercially. The berries are ovoid, light green with a light white bloom and become yellow when exposed to full sunlight. The skin adheres to the pulp and is of medium toughness with slightly visible veins. The flesh is light green, translucent, meaty and of medium firmness with centers slightly softer than the outer portion. The eating quality is good, with a neutral, sweet flavor. An average of 3 very small soft aborted seeds exist per berry, but these are too small to be noticed when eating.

'Autumn Seedless' is sensitive to GA which causes very poor berry set and loose clusters; therefore, GA treatments are not recommended. Girdling does increase berry size and is a practical commercial treatment. The berry attachment is good with a strong, light green brush. The pedicel is medium in

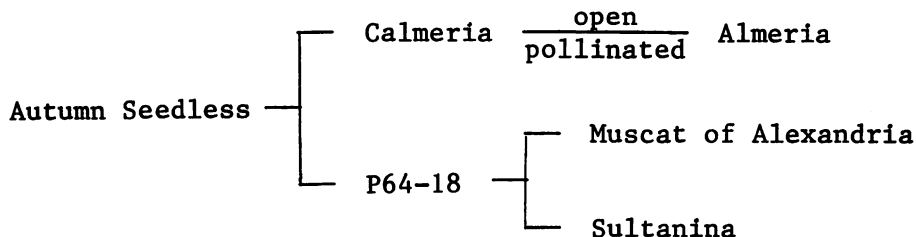


Figure 1. Pedigree of 'Autumn Seedless' grape.

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Figure 2. 'Autumn Seedless' grape.

length and stronger than that of 'Thompson Seedless.' The peduncle is medium in length, strong and of medium thickness. The performance of 'Autumn Seedless' relative to 'Thompson Seedless' is presented in Table 1.

'Autumn Seedless' vines have moderate, although cane growth is variable, producing some weak canes and some bull canes. Productivity has been low in trials when spur pruned and spur pruning is not recommended. Production is increased when vines are cane pruned. In many years, the canes do not mature, making selection of good canes difficult. A 4 year old commercial planting of 'Autumn Seedless'

produced approximately 27 tons per hectare. This is comparable to production of 'Thompson Seedless.' A distinct character of 'Autumn Seedless' is its tendency to produce shoots that are bifurcate, often bearing the cluster on the weaker shoot. This results when the cluster tendril develops as a shoot.

#### Availability

Limited quantities of cuttings may be obtained by writing David W. Ramming, USDA, ARS, Horticultural Crops Research Laboratory, 2021 South Peach Avenue, Fresno, CA 93727.

Table 1. Performance of 'Autumn Seedless' grape in comparison with 'Thompson Seedless.'

Character	Rating <sup>2</sup>	
	'Autumn Seedless'	'Thompson Seedless'
Avg. cluster wt. (kg)	1.2	1.2
Berry wt. (g)	4.0	2.0 (natural)
Avg. no. aborted seeds/berry	2.9	2.5
Avg. aborted seed FW <sup>3</sup> (mg)	4.73	4.33
Berry firmness	6	6
Fruit quality	7	7
Berry color	8	8
Berry pedicel	7	5
Berry attachment	7	5
Rachis	7	6

<sup>2</sup>Ratings were subjective on a scale of 1 (least desirable) to 9 (most desirable).

<sup>3</sup>FW = fresh weight.