

New York's Food and Life Sciences Bulletin

New York State Agricultural Experiment Station, Geneva, a Division of the New York State College of Agriculture and Life Sciences, a Statutory College of the State University, at Cornell University, Ithaca

'EINSET SEEDLESS' GRAPE

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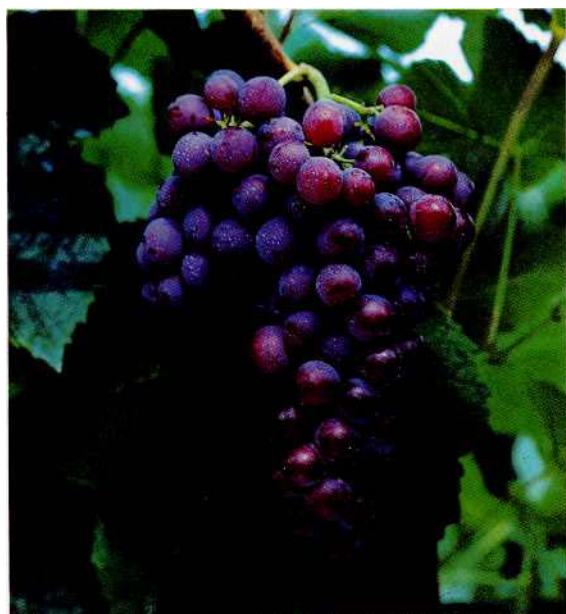


Figure 1. Fruit cluster of 'Einset Seedless'.

INTRODUCTION

'Einset Seedless' is an early-maturing, red seedless table grape (Fig. 1) released by the Department of Horticultural Sciences, Geneva, New York. It follows the previous release (2) of 43 table grape and 2 wine grape cultivars since the onset of grape breeding at the New York State Agricultural Experiment Station in the late 19th century.

This new cultivar is named for Dr. John Einset, one of the outstanding fruit cytogeneticists and fruit breeders of the world. Dr. Einset, now deceased, was a staff member of the New York State Agricultural Experiment Station from 1942 to 1973, including an 18-year period as head of the Department of Pomology. His contributions, inspiration and outstanding abilities were recognized by all associated with him, and his impact upon grape breeding in the United States will be a lasting one.

ORIGIN

'Einset Seedless' resulted from the cross of 'Fredonia' x 'Canner' ('Hunisa' x 'Sultanina') made in 1963 by G.W. Remaily. It was tested as NY 63.878.1. The original seedling was planted in 1965 and fruited in 1967. Own-rooted vines were propagated for further testing and were first planted in 1969.

DESCRIPTION

The berries of 'Einset Seedless' are oval and bright red with a light waxy bloom. The flowers are perfect. The medium soft seed remnant is not usually noticeable. Berries are medium-sized (Table 1) in the absence of gibberellin treatment or girdling. The skin is slightly tough, adherent and resistant to cracking. The flesh is tender to firm and the flavor is fruity with a mild note of labrusca and strawberry character. The grapes are pleasantly sweet with a high brix/acid ratio (Table 1). The shouldered clusters are attractive and medium in size.

In preliminary tests, the fruit responds well to hormone (gibberellin) sprays (1), and when used, precautions should be taken to avoid overcropping. In such cases cluster thinning may be required. Clusters are loose to well-filled and therefore have space for gibberellin-increased berry size.

In storage tests with in-package sulfur dioxide generators, the fruit were rated marketable until late

Table 1. Production characteristics of the 'Einset Seedless' arane.

Harvest date	Yield (t/a)	Cane pruning weight (lb)	Cluster weight (lb)	No. berries/basal cluster	Berry weight (gm)	Brix	Titratable acidity (%)	Brix/% acid ratio
10 Sept. 1982 ²	2.5	2.6	0.35	114	2.3	20.7	0.80	25.9
7 Sept. 1983 ²	3.8	2.2	0.24	58	2.4	20.4	0.69	29.6
17 Sept. 1984 ²	5.7	2.2	0.30	85	2.3	18.6	0.66	28.2
Mean	4.0	2.3	0.30	86	2.3	19.9	0.72	27.9

²Balance pruned 4-year-old vines, 10 + 10 (10 buds for first pound of cane prunings + 10 buds for each additional pound).

³Balance pruned vines, 20 + 10 (20 buds for first pound of cane prunings + 10 buds for each additional pound).

December 1983. When stored in cardboard masters (at lower sulfur dioxide levels) in 1984, the fruit were rated marketable in late November but unacceptable in late December.

Own-rooted vines are vigorous and moderately productive when grown in phylloxera (*Daktulosphairavitifoliae* Fitch) infested soils. The vines are susceptible to powdery mildew (*Uncinula necator* [Schw.] Burr.) and resistant to botrytis bunch rot (*Botrytis cinerea* Pers.). A more rigorous spray schedule than required to control powdery mildew on 'Concord' is necessary for 'Einset Seedless' in New York. Downy mildew (*Plasmopara viticola* (Berk. and Curt.) Berl. & deToni) has appeared on the fruit clusters in some years. Resistance to black rot (*Guignardia 6/crWell/7*[Ell.]Viala and Ravaz) has not been determined since black rot has not been troublesome at Geneva.

Trunk injury due to cold has been very rare. The original seedling, planted in 1965, was injured in 1968 and 1970. No other trunk injury has been recorded in any Geneva planting. Crown gall (*Agrobacterium tumefaciens* (E.F. Sm. & Towns.) Conn.) has not been observed. Winter hardiness of buds ranks with the best of the seedless table grapes. Following the severe winter of 1980-81, 'Canadice', 'Remaily Seedless' and 'Einset Seedless' had 70 percent, 93 percent and 65 percent shootless nodes. At a nearby but slightly better site, 'Concord', 'Himrod' and Lakemont' had 6 percent, 56 percent and 80 percent shootless nodes,

respectively. At the Vineyard Laboratory (Fredonia, New York), 'Einset Seedless', 'Himrod', 'Lakemont' and 'Remaily Seedless' had 32 percent, 42 percent, 67 percent and 83 percent shootless nodes, respectively, in 1984.

'Einset Seedless' has performed well in plantings at Fredonia and Riverhead, New York. Because it combines early maturity with an extended storage life, and because of its high fruit quality, winter hardiness, and favorable response to gibberellin sprays, 'Einset Seedless' is considered to be an outstanding grape release.

AVAILABILITY

Cornell University has applied for a plant patent on 'Einset Seedless'. Virus-tested stocks are available from the New York State Fruit Testing Cooperative Association, Inc., Geneva, New York 14456, as well as from commercial nurseries.

LITERATURE CITED

1. Lider, L.A. and J. Einset. 1966. Improving berry and cluster size of seedless New York grapes. *Farm Res. (N.Y.)* 31:10-11.
2. Slate, G.L., J. Watson and J. Einset. 1962. Grape varieties introduced by the New York State Agricultural Experiment Station. N.Y. State Agr. Expt. Sta. Geneva Bui. 794.



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