

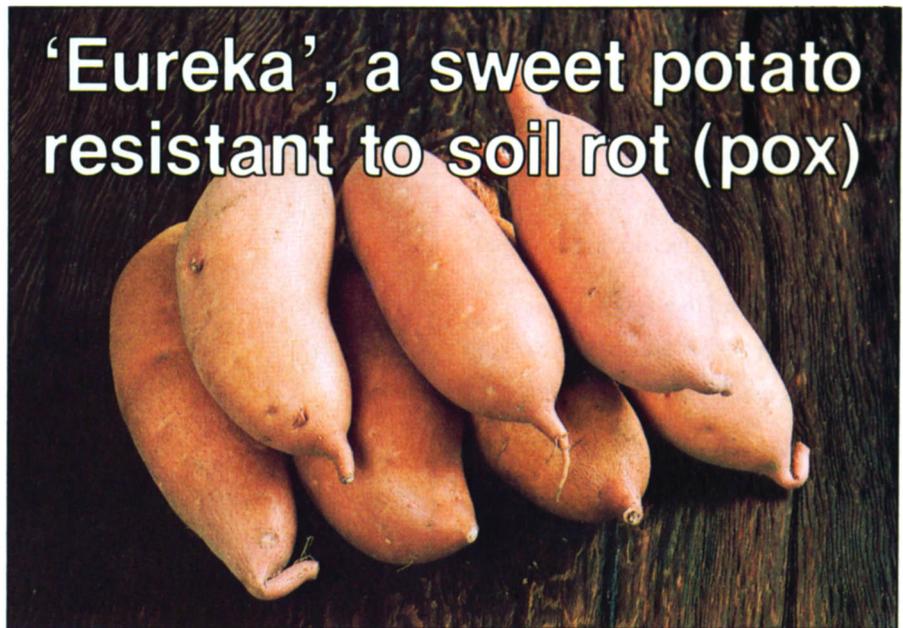


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## 'Eureka', a sweet potato resistant to soil rot (pox)



Jack Kelly Clark

**A** sweet potato cultivar resistant to soil rot (pox) is being jointly released by the Agricultural Experiment Stations of the University of California and Louisiana State University. Formerly tested under the designation L4-131, 'Eureka' was developed by Louisiana State University.

'Eureka' has a copper skin and deep orange flesh, like the 'Jewel' sweet potato cultivar. Roots are well shaped, tapered at both ends, and have a smoother exterior surface than 'Jewel'. The vines are trailing, medium to large in thickness, and up to five feet long. Vines and leaf petioles are purplish in color, with green leaves.

Plant production from the fleshy roots is low but can be improved by preheating the seed roots in storage at 80° to 85° F for three to four weeks before bedding. For maximum yields, a growing season of about 120 days or more is required.

The cultivar was first made available for testing in California pox-infested soils in 1977. Yields of 'Eureka' and 'Jewel' were compared in six replicated trials in Livingston during 1978 through 1980. In soils severely infested with the pox organism, *Streptomyces ipomoea* (Person and Martin) Waks. and Henrici, 'Eureka' consistently outyielded 'Jewel'. Yields were comparable in lightly infested fields (see table). 'Jewel' produces a higher

percentage of jumbo roots than does 'Eureka'.

'Eureka' is considered a good storage cultivar similar to 'Jewel'. It has good baking and canning characteristics and a dry matter content of 26.5 percent, which

is equivalent to that of 'Jewel'.

A major advantage of 'Eureka' is its resistance to the pox organism. It can produce a crop in a field severely infested with pox, where nonresistant cultivars would be complete failures. It also has good resistance to internal cork (virus) and to stem rot (Fusarium wilt), and moderate resistance to root knot nematode (*Meloidogyne* spp.).

Breeder seed will be maintained by Louisiana State University Agricultural Experiment Station.

Yields of 'Eureka' and 'Jewel' sweet potatoes as affected by soil rot (pox), Livingston, California, 1980

Cultivar	Yields (MT/ha)*			Sweet potatoes with soil rot lesions
	U.S. #1	Canners	Total marketable U.S. #1 + canners + jumbo	
<b>SEVERELY INFESTED FIELD</b>				
Eureka	13.8	6.1	25.1	8.2
Jewel	0.06	0.56	0.67	25.7
LSD 5%	4.5	2.4	11.8	7.4
<b>LIGHTLY INFESTED FIELD</b>				
Eureka	20.9	8.6	35.8	0.0
Jewel	19.9	7.6	40.8	4.2
LSD 5%	NS	NS	NS	1.68

\*MT/ha x 0.446 = tons per acre

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