

The Rediscovery of 'Noel's Special' Passion Fruit

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'Noel's Special', a vegetatively propagated yellow passion fruit (*Passiflora edulis* Sims f. *flavicarpa*) with unusually bright orange-colored juice and tolerance to alternaria brown spot (*Alternaria passiflorae* Simmons) was released in 1978 (Ito, 1978).

The original 'Noel's Special' was selected in 1968 from open-pollinated seedlings of a single plant grown in an abandoned farm in Hilo, Hawaii. According to Ito (1978), 'Noel's Special' produces $\leq 88\%$ marketable fruit in a single season. Fruit were round and yellow and weighed between 56 to 102 g. The pulp color was deep orange, with 43% to 56% juice recovery; total soluble solids concentration (SSC) ranged between 15.0% to 19.8%. The selection was named after Noel Fujimoto, a deceased graduate student who brought attention to the original plant (Ito, 1978). However, 'Noel's Special' was lost for >10 years.

Origin

In Dec. 1993, cuttings and three fruit were collected from a vine in the backyard of Philip and Barbara Williams of Puueopaku, Hawaii, and designated as N94-18. Eight cuttings of N94-18 were rooted and field-planted in May 1994 in two plots at the U.S. Dept. of Agriculture, Agricultural Research Service (USDA-ARS), National Clonal Germplasm Repository, located at the Univ. of Hawaii, Waiakea Agriculture Experiment Station, Hilo. The station is 9.7 km outside of Hilo, with an elevation ranging from 175 to 227 m. Mean air maxima and minima were 28 and 16°C. Annual

rainfall averaged 4445 mm and was most abundant during October to February. The soil consisted of an extremely stony Papai muck, with organic soils formed over mostly fragmental a'a lava (U.S. Soil Conservation Service, 1985).

A small crop was harvested from these vines during Oct. 1994 to Jan. 1995. Between 1 Oct. and 11 Dec. 1994, we recorded 1731 mm of precipitation.

Description

Fifty randomly harvested fruit were examined between 7 Dec. 1994 to 18 Jan. 1995. Fruit were oval, with average length and width at 6.1 and 5.5 cm, respectively (Fig. 1). Mature fruit were orange-yellow; average Hunter L* (value), a* (hue), and b* (chroma) readings were 69.89, 7.44, and 61.14, respectively (model CR-200; Minolta chromameter, Osaka, Japan). Fruit weight ranged from 56 to 160 g and averaged 119 g. Juice recovery was as high as 47% and averaged 39%. Juice was

bright orange, with average L*, a*, b* values of 42.66, 11.46, and 30.7, respectively. Total SSC ranged between 13% to 15.5% and averaged 14.4%. Total acidity averaged 2.61%. The extracted juice retained a bright-orange color, even after being frozen and thawed.

Alternaria and anthracnose fruit spots were present on some mature fruit, and many of the fruitlets that set during the extremely wet period dropped. In addition to the high rainfall, Waiakea station is also a severe infestation zone of the oriental fruit fly (*Dacus dosalis* Hendel). N94-18 fruit showed none to mild fruit fly damage. Some fruit had slight to moderate ovipositing scars and slight distortions. The pulp quality was not affected.

As with most *P. edulis* f. *flavicarpa*, N94-18 is self-incompatible and needs pollination from other vines to set fruit. It should be interplanted with passion fruit seedlings or other clones to ensure cross-pollination.

N94-18 is released as 'Noel's Special', because the fruit characteristics are almost identical to those published earlier (Ito, 1978).

Availability

Limited quantities of 'Noel's Special' cuttings are available through the USDA-ARS, National Clonal Germplasm Repository-Hilo, P.O. Box 4487, Hilo, HI 96720. The materials have not been tested for viruses or other diseases.

Literature Cited

- Ito, P.J. 1978. 'Noel's Special' passion fruit. *HortScience* 13:197.
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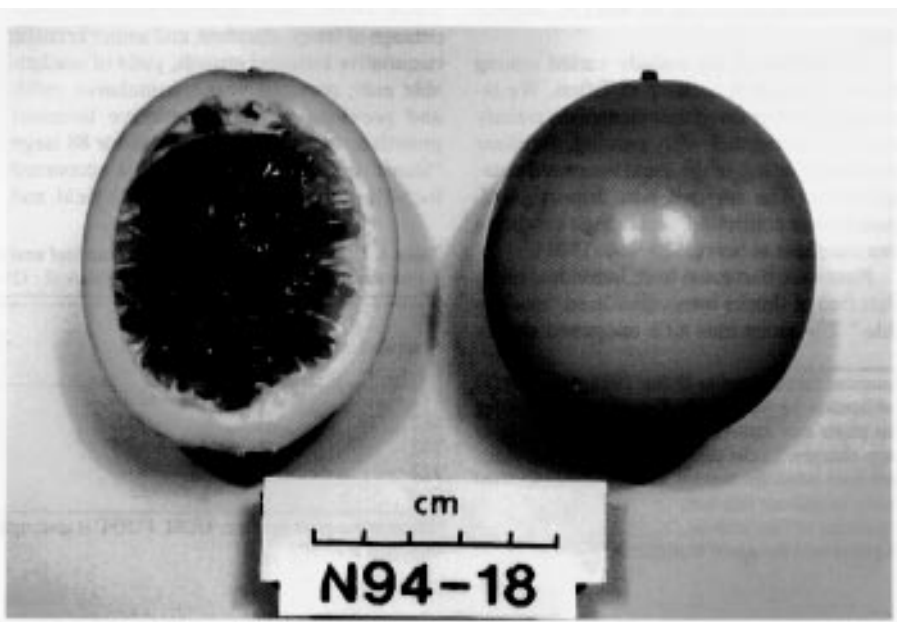


Fig. 1. 'Noel's Special' (N94-18) passion fruit.