

'Siletz' Parthenocarpic Tomato

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'Siletz' is a parthenocarpic slicing tomato (*Lycopersicon esculentum* Mill.) that was developed for use by home gardeners and local fresh-market growers in cool summer areas. 'Siletz', which is named after a western Oregon river, was developed at Corvallis and released jointly in 1994 by the Oregon and Idaho Agricultural Experiment Stations and the Washington Agricultural Research Center as a public cultivar. It was introduced to complement 'Santiam' and 'Oregon Spring', parthenocarpic slicing tomatoes released from the same breeding program (Baggett and Kean, 1986). 'Siletz' matures a few days later than 'Santiam' but has much larger fruits and is usually higher yielding. Yields of 'Siletz' are similar to those of 'Oregon Spring', but 'Siletz' has greater average fruit mass, which could be advantageous to fresh-market growers currently using 'Oregon Spring' for early spring production.

Origin

'Siletz', tested as OSU 165, originated as an F₇ inbred from the cross 'Oregon Spring' x 'Pikred' (Fig. 1). 'Pikred' is a proprietary F₁ hybrid developed by the Harris Moran Seed Co. 'Severianin' was the original source of parthenocarpy in our breeding program.

Description

'Siletz' plants are determinate, typically spreading to 1 m when well grown. Fruit set is early and relatively unaffected by low spring temperature. When transplanted 15 May at Corvallis, the first fruits ripen 5-10 Aug. The seasonal production pattern (Fig. 2) indicates

that 'Siletz' is almost as early as 'Santiam', with production sustained longer in the season. Yield of usable fruit in small-plot trials

ranged from 64-84 t·ha⁻¹ and was about equal to that of 'Oregon Spring' in 1991-94 trials (Table 1).

Immature fruits have green shoulders, but will ripen to a fairly even red. Fruit shape varies from oblate in the larger sizes to near globular in medium and small fruits (Fig. 3). Fruits are multilocular and "meaty," with a fruit wall ≈0.5 cm thick. Fruit firmness is only fair, but adequate for home garden and local market use. Blossom scars are typical of multilocular tomatoes and seldom result in conspicuous "catfaces." Cracking susceptibility is average. The large early fruits can be 6 to 7

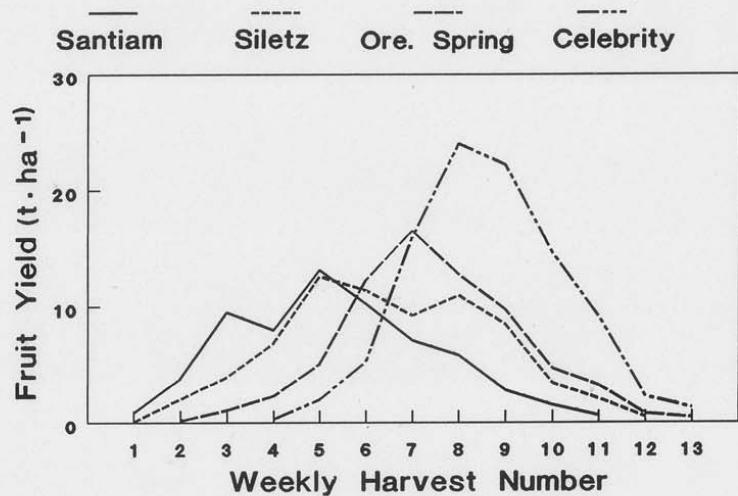


Fig. 2. Harvest pattern of 'Siletz' and three other tomato cultivars, showing average fruit production per week [data combined for 1991 (11 harvests), 1992 (11 harvests), 1993 (13 harvests), and 1994 (9 harvests)].

Table 1. Fruit yield and fruit mass of tomato cultivars grown at Corvallis, Ore.^a

Cultivar	(Yield t·ha ⁻¹)					Avg fruit mass (g)				
	1991	1992	1993	1994	Avg	1991	1992	1993	1994	Avg
Siletz	71.5	84.4	64.6	72.7	73.3	195	175	149	175	174
Santiam	59.6	64.9	50.5	79.4	63.6	126	102	89	123	110
Oregon Spring	70.8	81.4	54.1	70.8	69.3	141	127	104	116	122
Pikred	91.8	110.0	---	---	---	218	206	---	---	---
Celebrity	111.1	119.6	80.2	78.0	97.2	208	202	161	219	198
Early Girl	---	---	79.0	73.0	---	---	---	95	118	---
LSD (P = 0.05)	16.8	18.1	10.9	NS	---	20	33	15	31	---

^aIn each year, data were derived from 5-plant plots, replicated four times in randomized complete blocks, and hand harvested weekly. Harvest was suspended due to cold weather or severe fruit rot on 31 Oct. in 1991, 9 Oct. in 1992, 28 Oct. in 1993, and 30 Sept. in 1994.

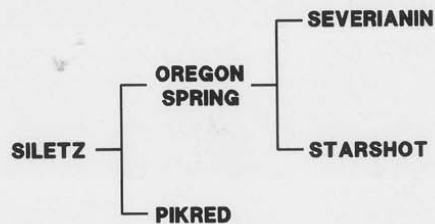


Fig. 1. Pedigree of 'Siletz' tomato.

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Fig. 3. Immature and mature fruits of 'Siletz' tomato.

cm deep × 9 to 10.5 cm wide, and weigh more than 400 g, but typical fruits are ≈ 7 cm deep × 8 cm wide and weigh ≈ 260 g. Seasonal average fruit mass in replicated plot trials has ranged from 149 to 195 g (Table 1).

An informal panel in 1993 judged fruit flavor to be very good (better than 'Early Girl',

'Celebrity', 'Oregon Spring', and 'Big Beef', but not as good as 'First Lady'). In 1993 tests, the pH of 'Siletz' fruits was 4.4, about the same as that of 'Oregon Spring'.

'Siletz' is resistant to Race 1 of *Verticillium dahliae* Kleb. as determined by greenhouse tests and confirmed by field observations.

Availability

Requests for trial seed and inquiries about stock seed should be sent to J.R.B.

Literature Cited

Baggett, J.R. and D. Kean. 1986. 'Oregon Spring' and 'Santiam' parthenocarpic tomatoes. *HortScience* 21:1245-1247.