

‘Rambling Rose’: A Pink-fruited Cherry Tomato for Hanging Basket Production

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Several determinate and dwarf tomato (*Solanum lycopersicum* L.) cultivars have been developed for retail sales in hanging baskets and containers to be marketed before or at first fruit ripening (Augustine et al., 1981; Crill et al., 1973; Scott and Harbaugh, 1995). Until recently, the cultivar ‘Tumbler’ has been the preferred cultivar among growers in the northeastern United States, but the hybrid seed has been available in limited quantities from suppliers, hindering commercial production of this cultivar (R. Sideman, personal observation). ‘Tumbling Tom Red’ and ‘Tumbling Tom Yellow’ are marketed as replacements for ‘Tumbler’, but in our experiments and in commercial growers’ sites, both cultivars consistently exhibit a moderate percentage of off-type plants that exhibit dense and distorted leaves and a low percentage of blossoms successfully setting fruit. ‘Rambling Rose’ is a cherry tomato with pink fruit and a determinate, prostrate growth habit suitable for production in large (30 cm) hanging baskets. ‘Rambling Rose’ is open-pollinated and has a similar growth habit and yield compared with the red cultivars ‘Tumbler’, ‘Tumbling Tom’, ‘Terenzo’, and other cultivars developed for hanging basket production and retail plant sales.

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Origin

‘Rambling Rose’ originated from self-pollinating a single plant of ‘Tumbler’ F₁ hybrid (Totally Tomatoes, Randolph, WI) grown at the University of New Hampshire in 2009. ‘Tumbler’ was selected as the parent material due to its desirable uniform growth and fruiting habit. Selections were made in subsequent generations using pedigree selection, choosing the best plants from the best families grown in both greenhouse and field settings at the New Hampshire Agricultural Experiment Station in Durham, NH, until uniformity in plant and fruit phenotype was achieved in the F₇ generation. Uniform plants from F₇ and F₈ generations were evaluated alongside commercial cultivars (Table 1). A single F₈ plant was selected and self-pollinated to produce the F₉ seeds that are available for distribution. Our goal was to select plants with attractive and symmetrical branching, uniform leaf canopy, and plentiful fruit set. Because hanging basket tomatoes are grown not only for their yield, ‘Rambling Rose’ was developed with aesthetics of vegetative growth in mind as well.

Description

‘Rambling Rose’ has small leaflets and many symmetrically arranged lateral branches around a short main stem (Fig. 1). Final height of the main stem is ≈24 cm when branches are heavy with fruit. Branches spread to ≈1 m in diameter. Fruits are pink in color, similar to the heirloom tomato cultivar Brandywine. Unripe fruits are uniformly light green, displaying the uniform ripening trait (Bohn and Scott, 1945; Yeager, 1935). Fruits are round in shape, with an average weight of 16 g. When sown in late January, the average number of days from seeding to first ripe fruit after seeding was 78 in 2012 and 86 in 2013, and the fruit yield in both years was over 5 kg of fruit per plant (Table 1).

‘Rambling Rose’ was compared with commercial cultivars in greenhouse experiments in 2012 and 2013. In 2012, the F₇ generation of ‘Rambling Rose’ was grown with the cultivars Lizzano, Terenzo, Tumbling Tom, and Tumbler. In 2013, the F₈ generation was compared with the cultivars Cherry Cascade, Sweetheart of the Patio, Tumbling Tom, and Tumbler.

Seeds were sown in late January in Pro-Mix BX media (Premier Tech Horticulture, Quakertown, PA). About 3 weeks after seeding, single plants were transplanted into 30-cm-diameter hanging baskets (one plant per basket) and received a constant rate of fertilization with 15N–1.8P–12.5K (J.R. Peters Inc., Allentown, PA) to provide 200 ppm nitrogen. Plants were irrigated through a drip irrigation system using one emitter per pot. A Rainbird irrigation controller provided 20-min pulses at least once daily, with the frequency of irrigation increasing as the crop matured. The minimum temperature was set to 20 °C day and night, and no supplemental lighting was used. In each experiment, all baskets were completely randomized in the greenhouse, with six replicates per cultivar in 2012, and five replicates per cultivar in 2013.

Plant height, width, and leaf density were assessed at 88 and 83 d after seeding (DAS) in 2012 and 2013, respectively. Plant height was measured as the highest point on the plant from media surface in the pot. Average width was determined by measuring four evenly distributed branches from the center, summing those four radii and dividing by two. Leaf density was ranked on a scale of 1–5, from least to greatest leaf density. Using this scale, a rating of 1 corresponded to a very open canopy with stems and fruit completely visible, and 5 corresponded to a very dense canopy that completely obscured fruit and stems. For this trait, intermediate ratings were considered desirable. Dates of first ripe fruit were observed and recorded as days to maturity for each cultivar. Fruits were harvested weekly, and fruit characteristics and yields were measured on a per plant basis. Length and width of five representative fruits from each plant were measured. Length was defined as the distance between center of pedicel attachment and blossom scar. Fruits were cross-cut halfway between this distance and fruit width (diameter) was measured. Length to width (L:W) ratio was then calculated. Fruits with a L:W ratio of 1 are perfectly round. Those with ratios greater than 1 are more oblong, and ratios less than 1 are flattened globes. In 2012 only, a hand-held refractometer was used to measure soluble solids content (SSC) of ten fruits randomly selected from each plant.

The effects of cultivar on yield, fruit, and plant characteristics were analyzed by analysis of variance (ANOVA) using SPSS v.22 (IBM, Armonk, NY). When the overall F test was significant ($P \leq 0.05$), differences between treatments were evaluated using Tukey’s honestly significant difference tests

Table 1. Plant and fruit characteristics of ‘Rambling Rose’ and six other cherry tomato varieties for plants grown in the greenhouse during Winter–Spring 2012 and 2013 in Durham, NH.

Variety	Plant traits ^z			Fruit traits ^y				Days to maturity ^x
	Ht (cm)	Width (cm)	Leaf Density	L:W Ratio	Fruit wt (g)	SSC (%)	Yield (kg)	
Spring 2012								
Rambling Rose	23.5 a ^w	94 a	3.0 ab	1.02 b	16.4 ab	4.8 a	5.27 b	78
Lizzano	37.7 ab	156 c	3.3 ab	0.93 a	11.5 a	7.4 d	4.21 a	78
Terenzo	36.4 ab	117 ab	3.8 bc	0.94 a	19.8 b	5.6 b	4.18 a	88
Tumbling Tom	46.4 b	104 ab	4.5 c	0.93 a	16.2 ab	6.6 c	5.02 b	78
Tumbler	33.5 ab	118 b	2.8 a	1.01 b	17.0 ab	5.7 b	5.11 b	76
Spring 2013								
Rambling Rose	24.0 a	115 b	3.6 a	1.02 c	15.9 b	—	7.34 c	86
Cherry Cascade	53.6 c	96 a	3.1 a	0.94 ab	5.94 a	—	3.72 a	89
Sweetheart of the Patio	37.6 b	134 c	2.9 a	0.99 bc	8.08 a	—	3.89 a	86
Tumbling Tom	38.1 b	108 b	4.3 a	0.91 a	16.7 b	—	5.87 b	98
Tumbler	33.6 ab	128 c	3.0 a	1.00 bc	18.2 b	—	6.78 bc	85

^zPlant height, diameter, and leaf density were evaluated 83 d after seeding (DAS). Leaf density was rated on a 1–5 scale, where 1 = very sparse and 5 = very dense.

^yL:W ratio is the ratio of fruit length to diameter; SSC = soluble solids concentration; Yield included the total weight of all ripe and unripe fruits by 120 DAS.

^xDays to maturity = number of days after seeding (DAS) to observing first ripe fruit for each variety.

^wValues within a column for a given year followed by the same letter are not significantly different according to Tukey’s honestly significant difference test at $P \leq 0.05$.



Fig. 1. ‘Rambling Rose’ in a hanging basket 30 cm in diameter, with ripening fruit.

at the $P \leq 0.05$ level. Logarithmic transformation was used to improve normality or homogeneity of variance when data violated assumptions of ANOVA. Original means are presented.

The performance of ‘Rambling Rose’ was comparable to the commercial cultivars grown in both years (Table 1). ‘Rambling Rose’ plants averaged 24 cm tall at maturity, which was shorter than all other cultivars grown. Average plant width was 94 cm in 2012, similar to ‘Terenzo’ and ‘Tumbling Tom’, and 115 cm in 2013, similar to ‘Tumbling Tom’. ‘Rambling Rose’ was more compact than ‘Lizzano’, ‘Sweetheart of the Patio’, and ‘Tumbler’, and less compact than ‘Cherry Cascade’. ‘Rambling Rose’ had intermediate leaf density and a relatively open growth habit.

In both 2012 and 2013, ‘Rambling Rose’ was among the earliest cultivars to ripen (78 DAS in 2012 and 86 DAS in 2013), within 1–2 d of ‘Tumbler’. Depending on cultivar, the time to maturity varied between 8 and 20 d

greater in 2013 than in 2012, possibly because of atypically warm temperatures in Mar. 2012 in comparison with the 2013 season.

Total potential yield of ‘Rambling Rose’ was similar to ‘Tumbler’ and greater than several cultivars, including ‘Cherry Cascade’, ‘Lizzano’, ‘Sweetheart of the Patio’, and ‘Terenzo’.

‘Rambling Rose’ has spherical fruits, with fruit L:W ratio close to 1.0, similar to ‘Sweetheart of the Patio’ and ‘Tumbler’. Other cultivars had more oblong fruits (Table 1). ‘Rambling Rose’ fruit were similar in size to ‘Tumbler’ and ‘Tumbling Tom’, averaging ≈ 16 g in both years. The cultivars Cherry Cascade and Sweetheart of the Patio produced much smaller fruits (6–8 g).

Participants in an informal taste test described the flavor of ‘Rambling Rose’ to be milder than other cultivars, not as sweet or acidic as ‘Terenzo’ or ‘Tumbler’ and the other cultivars. While ‘Rambling Rose’ had lower SSC (4.8%) than other cultivars in

2012 (Table 1), the values reported are typical for fresh market tomatoes.

Use

‘Rambling Rose’ is adapted to greenhouse production in large (at least 30 cm in diameter) hanging baskets during the early spring bedding plant production season in New Hampshire and other states with similar climates. Overall fruit quality, earliness, yield, and growth habit of ‘Rambling Rose’ were comparable to or better than the commercially available cultivars evaluated in 2012 and 2013 at the University of New Hampshire. ‘Rambling Rose’ provides a new attractive pink fruit color not yet available in cultivars suitable for hanging basket production.

Availability

Those interested in commercial seed production should contact the corresponding author, R.G. Sideman, University of New Hampshire, G48 Spaulding Hall, Durham, NH 03824. Small samples of seed for research or trial are available and may be requested from the corresponding author.

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