Capsicum annuum L. ‘Tangerine Dream’

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The importance of pepper (*Capsicum annuum* L.) as a vegetable and spice is well recognized. Considerable diversity exists in *Capsicum* germplasm for fruit and leaf shape and size, as well as plant habit. This morphological diversity, together with diverse ripe fruit color and varying hues of green to purple and variegated foliar pigmentation, affords a myriad of opportunities to develop unique cultivars for ornamental applications. Ornamental peppers are morphologically diverse and admired for their ornamental value. Attributes of ornamental pepper include easy seed propagation, a relatively short cropping time, heat and drought tolerance, and excellent keeping quality.

For many years, ornamental peppers were known as “Christmas peppers” in the floriculture industry and were limited to pot plants (Hammer, 1980). Ornamental peppers as a pot plant and a florist crop are still popular today in Europe and increasingly popular in the United States (Armitage and Hamilton, 1987; Bosland, 1999). In addition to the pot plant category of ornamentals, the great diversity of fruit types and plant habit has enabled the ornamental pepper to be used for bedding and garden plants, cut stems and novelty uses. As bedding plants, ornamental peppers offer vibrant fruit and foliage colors through the summer and fall seasons. Ornamental peppers have become a profitable crop for greenhouse pot plant and transplant production and an innovative way for small farmers to produce a high-value alternative crop.

The Agricultural Research Service of the U.S. Dept. of Agriculture announces the release of a new pepper cultivar named ‘Tangerine Dream’. ‘Tangerine Dream’ affords growers a new crop to add to their bedding and landscape plant assortment and is an ideal choice as an edible landscape ornamental.

Origin

‘Tangerine Dream’ was derived from an initial cross between the sweet hybrid bell pepper cultivar Cadice and the open-pollinated

sweet squash-type pepper cultivar Tennessee Cheese. The ‘Tangerine Dream’ ideotype was identified in the fifth generation of a population of segregating open-pollinated field selections, subsequently selected for horticultural quality and stabilized under controlled pollination conditions prior to release at the twelfth generation. ‘Tangerine Dream’ was selected for its prostrate growth habit and sweet, nonpungent erect conical pepper fruit (Fig. 1). Selection in initial generations focused upon growth habit and fruit orientation. Special emphasis in later generations was placed upon fruit flavor and phenotypic uniformity.

‘Tangerine Dream’ was trialed under field conditions in Elburn, Ill. (heat-zone 5) (American Horticultural Society, 1997), Doylestown, Pa. (heat-zone 6), Beltsville, Md. (heat-zone 7), and Apollo Beach, Fla. (heat-zone 10). In these trials, growers noted the plants striking prostrate growth habit and dark green foliage that contrasted well with the brightly colored upright fruit. ‘Tangerine Dream’ is the first in a series of releases to be made available from a cooperative research and development agreement with Pan American Seed Co. (Elburn, Ill.) to help develop and screen germplasm,

increase seed, propagate, and market new pepper selections.

Description

‘Tangerine Dream’ is a diploid ($2n = 2x = 24$) herbaceous annual. Roots are fibrous and leaves are lanceolate with an apiculate tip. Leaves and stems are glabrous and glossy. Leaves are simple, entire, symmetrical, and average 8.7 cm in length (range: 8.1–9.0 cm) and 4.8 cm in width (range: 4.5–5.0 cm). Foliage is dark green (137B; 8.0GY 2.9/3.6) (Royal Horticultural Society, 1966; hue value/chroma, Munsell Book of Color, Nickerson, 1946). Plant habit is prostrate and growth is fasciculate with branches ending in a fruit cluster. Plants average 69.8 cm in diameter (range: 45.7–86.4 cm) and 30.3 cm in height (range: 22.9–43.2 cm) (80 d post-transplanting).

Flowers are self-compatible, hermaphroditic, pentamerous, and hypogynous. Flowers average 1.5 cm in diameter (range: 1.2–1.7 cm) and have white filaments and styles. Anthers are yellow with purple margins. Fruits are produced in upright clusters of three to four fruit per cluster. Immature fruits are green (141A; 7.4GY 4.2/6.5) and mature to orange-red (32A; 9.8R 5.4/14.5). Fruits have a pointed apex, contain two to three locules and average 7.6 cm in length (range: 5.0–9.0 cm) and 2.8 cm shoulder width (range: 2.3–3.5 cm). Fruit shape at the pedicel attachment is slightly cordate. Average fruit pericarp thickness is 0.4 cm (range: 0.2–0.5 cm).

‘Tangerine Dream’ produces a flush of mature fruit in ≈ 70 d after transplanting under good growing conditions (see culture section). Additional fruit will continue to develop and ripen over a subsequent 4- to 6-week period. Twelve members of the scientific and sup-

Fig. 1. ‘Tangerine Dream’.

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port staff at Beltsville and cooperators at Pan American Seed Co. and W. Atlee Burpee and Co. independently rated fruit as sweet and nonpungent. Although Scoville units were not measured for 'Tangerine Dream', 0–100 Scoville units are characteristic of comparable tasting, sweet, nonpungent bell and banana-type peppers (Univ. of California, 1998). Although edible, ornamental peppers are typically very pungent and are grown for their unusual pod shapes or for their dense foliage and colorful fruits (Bosland and Votava, 2000). The unique plant habit and nonpungent fruit of 'Tangerine Dream' make this new cultivar suitable for ornamental and culinary applications.

Culture

'Tangerine Dream' is best suited for use as a bedding plant where its spreading prostrate growth habit and brightly colored erect fruit provides an attractive ornamental display. 'Tangerine Dream' does not require pinching or application of growth regulators to maintain its prostrate growth habit. Similar to peppers grown solely for culinary use, 'Tangerine Dream' is a warm-season crop requiring minimum daytime temperatures of 18 to 21 °C. The base growing-degree day temperature for pepper is 18 °C. Optimal growth is achieved at higher temperatures up to 32 °C. Plants are

very frost susceptible and grow poorly in the 5 to 15 °C range (Bosland, 1999). Plants are best established from transplants produced in a warm greenhouse. Typical of most peppers, seedling emergence occurs in 10–12 d at 21–24 °C and is markedly delayed at reduced temperatures (Love, 1987). Plants suitable for transplanting (15–20 cm tall) are ready in six weeks from seeding. Plants prefer a well-drained sandy loam or loam soil with some organic matter and a pH range of 7.0–8.5. Satisfactory drainage reduces the chance of infection by soil-borne diseases such as phytophthora root rot.

'Tangerine Dream' performs well in high-light bedding conditions, but is not recommended for production as a potted crop in greenhouses. In winter/spring greenhouse tests to determine the suitability of 'Tangerine Dream' as a pot plant, plants exhibited a more upright growth habit with reduced fruit production.

Availability

Seed of 'Tangerine Dream' may be obtained from Pan American Seed Co. via W. Atlee Burpee and Co., 300 Park Avenue, Warminster, PA 18991. Seed of 'Tangerine Dream' has been deposited in the National Plant Germplasm System. 'Tangerine Dream' is not protected

and may be utilized for research purposes, including development and commercialization of new cultivars. It is requested that appropriate recognition be made if this germplasm contributes to the development of a new breeding line or cultivar.

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