

BRS Tui: a new Brazilian sweet Biquinho-type pepper

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Introduction

Most recent efforts of *Capsicum* breeding program address the development of new, uniform, high yielding, high nutrition, disease resistant orange-fleshed Biquinho type pepper. The Biquinho (little beak) pepper group is very appreciated by Brazilians because of its distinctive aroma and flavor like other *Capsicum chinense* pepper-types, but its fruit is sweet. In Brazil, the Biquinho-type pepper was apparently initially cultivated in Minas Gerais state, but nowadays it is cultivated in several Brazilian regions.

Pedigree

'BRS Tui' was derived from a commercial red-fruit Biquinho pepper segregating for fruit color (CNPH 4162), part of the Embrapa's germplasm collection. Four generations of plant selection and selfing were performed until the progenies showed no segregation. During each generation, selection for horticultural and processing characteristics was undertaken. Selection based on plant height and architecture, fruit shape and size, mature fruit color (orange-fleshed), no pungency, high yield, and disease resistance. 'BRS Tui' has been registered (RNC 36495) and protected by the Brazilian Ministry of Agriculture (MAPA). Breeders' seed is being made available to interested parties in the private sector.

Characteristics

'BRS Tui' plants present intermediate growth habit, approximately 0.7 m height and 1.0 m width. The hanging fruits are pointed, triangular shaped, with smooth surface, light green color when immature and orange-fleshed color when ripe, with 1.8 cm long by 3.2 cm wide and 2.0 mm wall thickness. 'BRS Tui' fruits are extremely aromatic, tasty, and crunchy. In Central Brazil during the dry season, harvest begins around 90 days after seedlings are transplanted to the field.

'BRS Tui' presents field resistance to tospoviruses *Tomato Spotted Wilt Virus* (TSWV) and *Tomato Chlorotic Spot Virus* (TCSV), and to the potyviruses *Pepper Yellow Mosaic Virus* (PepYMV), and *Potato Virus Y* (PVY); resistance to *Meloidogyne incognita*; and intermediate resistance to *Oidiopsis sicula* and *Xanthomonas euvesicatoria* and *X. gardneri*.

Performance

The new cultivar is recommended for open field, as well as protected cultivation. 'BRS Tui' yielded around 30 t ha⁻¹ (23,000 plants ha⁻¹) in field trials in Brasília, DF and three different sites in Goiás. The sweet and orange-fleshed fruits have negligible pungency of *circa* 170 SHU (Scoville Heat Unit) and high content of vitamin C (205 mg 100g of fruit⁻¹).

'BRS Tui' was developed to meet both the fresh fruit market and the processing industries, particularly for production of pepper preserves, in addition to the potential use in many gourmet products such as sauces, jellies, flavored oils and vinegars, or even the ornamental pepper niche. The orange-fleshed fruit differentiates 'BRS Tui' from the other Biquinho pepper cultivars, with great potential to occupy new market niches.



Figure 1. Biquinho pepper plant, cultivar BRS Tui. Brasília, Embrapa Hortaliças, 2015.



Figure 2. Biquinho pepper fruits, cultivar BRS Tui are light green when immature and light orange when ripe. Brasília, Embrapa Hortaliças, 2015.

Seed maintenance and distribution

Embrapa Hortaliças will provide seeds of 'BRS Tui' under contract to interested seed-producing companies.

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