nurseries under a royalty agreement with the Minnesota Nurseryman's Research Corporation. Trees will be available to the public in 1986. Experiment station researchers may obtain limited amounts of budwood by contracting J.J. Luby, Dept. of Horticultural Science and Landscape Architecture, Univ. of Minnesota, 1970 Folwell Avenue, St. Paul, MN 55108.

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'Tambel-2' Bell Pepper

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The major disease responsible for the decline of profitable pepper (*Capsicum annuum* L.) production in Texas have been the potato-Y-type viruses. 'Tambel-2' is a sweet bell pepper with multiple virus resistances (MVR) to tobacco mosaic (TMV), tobacco etch (TEV), potato Y (PVY), and pepper mottle (PeMV).

Origin

Resistances to local isolates of TEV, PVY, and TMV were found in 'Agronomico 8', a small, conical, sweet bell pepper from Brazil, and recovered in progeny from hybridization of 'Agronomico 8' with 'Grande Rio 66', the most popular bell pepper grown in south Texas. A single F_3 MVR plant was crossed to another bell cultivar, TB 400. Subsequently, another MVR, F_3 bell type, was backcrossed to 'Grande Rio 66'. An MVR F_7 line from this cross was hybridized with 'Keystone Resistant Giant #3' in the last cross. Resulting lines (F_4s) yielded MVR progeny, including resistance to PeMV. All virus inoculations were made by rubbing leaves with a known virus suspension; seeds were harvested from selected, hand-pollinated, resistant plants. Individual plants were selected after each cross from horticulturally desirable plants in inoculated, resistant F_2 and F_3 segregating progenies. An individual F_4 bell pepper plant from the last cross was selected and increased under isolation; the F_5 progeny from this plant was screened for reaction to the 4 viruses and seeds from the best virus symptomless plants were bulked. The bulked F_6 seed was again grown under isolation and young seedlings were inoculated with the 4 viruses. This process was repeated once more. This bulked F_8 generation became 'Tambel-2'.

Description

Plant, fruit, and other horticultural characteristics of 'Tambel-2' are comparable to 'Grande Rio 66'. In general, the new cultivar is slightly more compact than 'Grande Rio 66' with strong stems and branches that produce a concentrated set of uniform, mature, sweet, thick-fleshed, 3- to 4-lobed, bell-type fruit having a strong pepper flavor and aroma. Fruit are dark green, turning dark red at full maturity, and averaging 10 × 9 cm. Ovary walls are 5 to 6 mm thick (Fig. 1). Mature green fruit are ready for harvest about 35 days after flowering in south Texas. It is resistant to local strains of TEV, PeMV, PVY, and TMV. 'Grande Rio 66' possesses tolerance to some strains of TMV and is susceptible to the other 3 viruses.

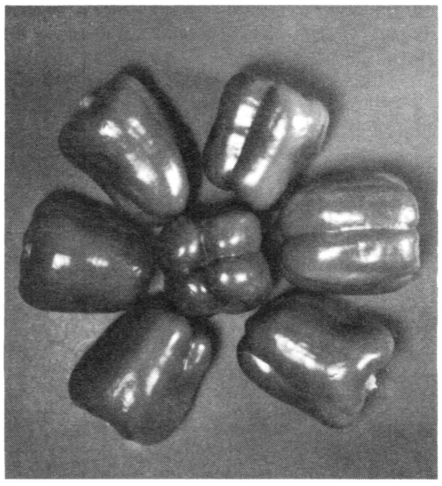

Fig. 1. 'Tambel-2' bell pepper.

Extensive trials with 'Tambel-2' throughout Texas indicated that it yielded well in most areas tested. 'Tambel-2' invariably outyielded 'Grande Rio 66' and other open-pollinated cultivars and, in some instances several new bell hybrids.

Availability

Application for plant protection for 'Tambel-2' is being filed. Seed for commercial field planting and home gardens will be available in 1986 from ARCO Seed Co., 904 Holloway Road, Gilroy, CA 95020; phone 408/848-3773.

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