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### Evaluation of intergeneric hybrid progenies of papaya for PRSV tolerance and fruit quality

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Papaya (*Carica papaya L*) is one of the most important commercial fruit crops of India. It is affected by several diseases and pests, but most widespread and destructive disease in its cultivation is the 'Papaya Ring Spot Virus' (PRSV). All the varieties under *C. papaya* are susceptible to this disease. However, several species of the related genera of *Vasconcellea* are reported to be resistant to this disease. An attempt was made at the Indian Institute of Horticultural Research to incorporate the resistant genes from the wild genera (*V. cauliflora*) into the commercial hybrid Arka Surya after overcoming the incompatibility barrier. The tolerant progenies with good fruit traits were selected, sibmated / selfed to produce advanced generation progenies. These progenies were evaluated for various fruit traits viz., fruit weight, pulp thickness, fruit volume, TSS, acidity, total carotenoids and lycopene coupled with field tolerance to PRSV. Considerable variation was found among the progenies for the characteristics evaluated viz., fruit weight (300 to 900 g), fruit volume (220 to 800 ml), pulp thickness (1.6-3.1 cm), TSS (9.4 to 14.1°B), Acidity (0.057-0.121), Vitamin C (34.76 to 106.64 mg 100 g<sup>-1</sup>), Total carotenoids (6.08-13.09 mg 100 g<sup>-1</sup>), lycopene (0.67-5.04 mg/100 g) and field tolerance. Thus, there is a scope to develop PRSV tolerant types coupled with good quality fruits through selection and sib mating.

#### Biography

C. Vasugi has obtained her Masters' degree from Tamil Nadu Agricultural University and Doctoral degree from Annamalai University in the discipline of Horticulture. Currently she is working as a senior scientist in the division of Fruit crops of the premier Institute, Indian Institute of Horticultural Research, Hesseraghatta. She has 15 years of research experience in the field of Horticulture especially on the crop improvement aspects of fruit crops viz., guava, mango and papaya. She has authored more than 25 papers in reputed journals and more than 25 abstracts in national and international symposium/conference.

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