

WINTER-GROWN MUSKMELONS: A BREEDING PROGRAM FOR ADAPTATION IS NECESSARY

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Two experiments were conducted at two locations in winter 1992 in order to compare the yield and quality characteristics of Galia-type hybrids and their parental lines. Although the hybrids yielded more than their paternal parents, yields were low during the cool months. The parents of 'Galia' and 'Gala' were sensitive to the cool season with respect to fruit-set capability. Both parent lines of each hybrid produced small fruits during the winter months, mostly below the minimum commercial threshold of 500 g. Many fruits of 'Galia' and some of 'Gala' were unacceptable at harvest due to breakdown of the fruit flesh, observed as translucent areas, a characteristic which was even more severe in the maternal parents. Shelf-life of Galia-type hybrids did not exceed 7–10 days. Hybrid fruits, similar to the fruits of the maternal

parents, rapidly lost their firmness and thus their commercial value. 'Gala' fruits, similar to those of its male parent, lost almost 10% of their weight during seven days at 20°C. The results indicate that Galia-type hybrids, which were bred for outdoor production, are not adapted to winter greenhouse conditions and each of their limitations can be attributed clearly either to the paternal or maternal parent. The demand for melon production in greenhouses during the winter months requires a specific breeding program in order to improve yield and fruit quality.

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