

**Reproductive behavior of new South African cultivars of Japanese plum**

M.E. Guerra<sup>1</sup>, C. Casadomet<sup>1</sup>, J. Rodrigo<sup>2</sup>

<sup>1</sup>CICYTEX-La Orden, Badajoz, Spain

<sup>2</sup>Unidad de Hortofruticultura, CITA-Universidad de Zaragoza, Spain

e-mail: mariaengracia.guerra@gobex.es

**Keywords:** Flowering time, pollen viability, pollen tube growth, *Prunus salicina* Lindl., self-incompatibility, S-genotype

**Abstract**

The Japanese plum breeding programme at ARC-Infruitec in South Africa has released a series of new cultivars in the last years that have been introduced worldwide. However, their adaptability to other areas with different climatic conditions is unknown. In this work, the reproductive behaviour of a group of new South African cultivars of Japanese plum is analysed in order to determine their pollination requirements and evaluate their potential for adaptation to the main plum producing areas in Spain. Pollen viability was evaluated through the observation of in vitro pollen germination. Self-(in)compatibility was determined by the observation of pollen tube growth in self-pollinated flowers under the microscope. The identification of the S-alleles of incompatibility was determined by PCR amplification of the S-RNase gene. These results combined with the dates of flowering have allowed the compatibility relationships among the cultivars analysed and the main cultivars grown in Spain to be established.