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REPRODUCTIVE CHARACTERISTICS
OF SOME ARMENIAN APRICOT CULTIVARS

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Apricot is one of the most important, qualified orchard products of Armenia. One of the three origins of cultivated apricot is the near-eastern Centre that includes Armenia.

Cultivars of gene pool of Armenian apricots (*Prunus armeniaca* Linnaeus, syn. *Armeniaca vulgaris* Lam.) are characterized by long period of maturing and includes more than 80 original local cultivars and hybrids with numerous wild relatives and clones.

Floral biology, male and female sterility of the most valuable local cultivars of Armenian apricots Yerevani (Shalakh) and Spitak were studied and recorded according to UPOV international guideline. Flowers at the FB stage were collected from the Nalbandyan Experimental Station of Armenian National Agrarian University (Armavir province, Armenia) and two farms in Kanaker and Malatia Yerevan's districts. Morphometric features of 100 flowers for each variant were described. Pollen was analyzed on 5000 pollen grains for each sample. For cytoembryological investigation 30 flowers per variant were fixed by FAA fixative (3.7 % v/v formaldehyde, 50 % ethanol, 5 % acetic acid) and stained by Mayer's hematoxylin and eosin. Permanent slides with paraplast-embedded flower's sections were analyzed.

The analysis of the apricot flowers had shown different positions of stigma relative to anthers in investigated cultivars. The pistils with average length from 11.8 mm to 15.8 mm in Yerevani (Shalakh) and from 12.0 to 13.9 mm in Spitak cultivars were developed. Female sterility of investigated cultivars demonstrated low level – from 5.0 to 6.9 % for Yerevani (Shalakh) and from 7.8 to 17.4 %. Almost in all developed flowers the pistils contained one developed ovule with cells of embryo sac and another ovule was degenerated, and high level of pollen sterility was detected. The correlation of female sterility with resistance of different cultivars to yearly climate changes has to be investigated.

Male sterility varied from 19.0 to 51.1 % in Spitak cultivar and 48.9 to 60.9 % in Yerevani (Shalakh) cultivar. The fruit set of Spitak cultivar differed from low to high, depending from investigated site. However, Yerevani (Shalakh) with high level of pollen sterility due to its self-incompatibility is characterized by high fruit set in all investigated sites. Is the self-incompatibility the only reason of such differences, has to be analyzed.

Thus, the study on the reproductive biology of Armenian apricot cultivars causes many questions and their solution can provide valuable information for success of breeding programs.

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