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JUNE 20-24

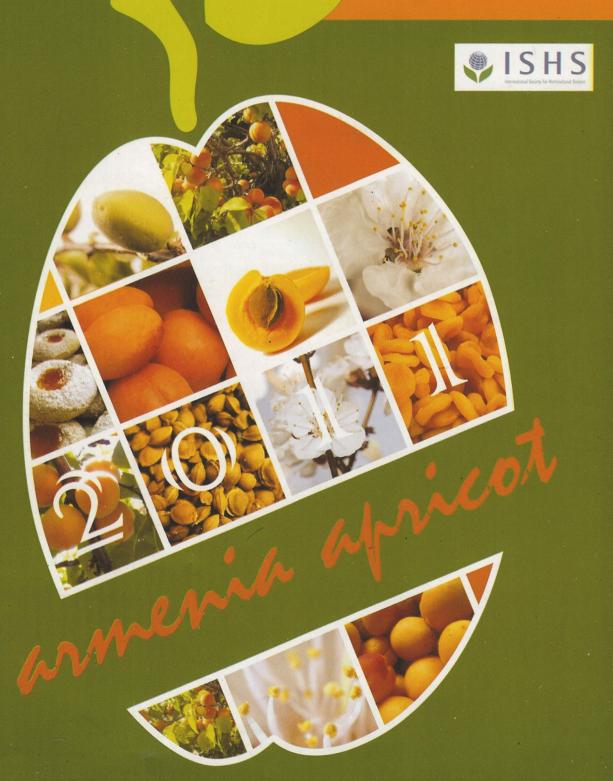# XV International Symposium on Apricot Breeding and Culture

ISHS
International Society for Horticultural Science

2011

armenia apricot

PERFORMANCE OF A MODEL TO PREDICT THE FLOWERING DATE OF APRICOT IN THREE DIFFERENT REGIONS OF SOUTH FRANCE

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In the last years several researches were carried out to study the phenological changes relate to the global warming of climate. In fruit trees changes in flowering date could provoke significant impacts on production as a consequence of an increased susceptibility to the spring frosts and /or a synchronism for pollination. Modelling of dormancy break and post dormancy period allows to release realistic predictions of flowering date. The BRIN model is derived from a sequential combination of two models used for fruit trees: Bidabe model (1965) to calculate the cold action (CA) to achieve the dormancy breaking, and Richardson method (1974, 1975) to calculate the heat action (growing degree hours—GDH) necessary to attain the start of flowering. The BRIN model was calibrate and validate on the database including apricot blooming dates of ten cultivars over a period 1978 to 2010 collected in three regions of the South France. For each experimental site daily maximum and minimum temperatures series were provided by the associated weather station. The BRIN model is able to realistically predict the flowering date in three principal French areas of apricot production. The BRIN model can be, therefore, a suitable tool to simulate the blooming time. In a context of climate change then BRIN model can be usefully utilised to simulate the changes in phenological stage of flowering provoked by global warming impact.

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