



Plum and Prune  
**XII Symposium**

Zlatibor, Serbia

**XII International Symposium on Plum and  
Prune Genetics, Breeding and Pomology**

**PROGRAMME AND BOOK OF  
ABSTRACTS**

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## **PI-03**

### **SUCCESS RATE OF INDIVIDUAL POLLINIZERS TO EUROPEAN PLUMS**

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Fruit set and yield optimization in orchards depend on the success of pollination and fertilization. There is a wide variation in the self-fertility among European plum genotypes from self-fertile to completely self-incompatible requiring compatible pollinizers with overlapping flowering times. Thus, for the successful cultivation it is necessary to determine the best pollinizers in order to obtain high yields. The aim of this investigation was to find the most suitable pollinizers for the cultivars 'Edda', 'Mallard', 'Reeves' and 'Jubileum', which are well adapted to the production in the Nordic climate, and in order to recommend to the producers which cultivars should be planted within the same orchard to provide large and stable, annual yields. The phenology of flowering of these plum cultivars was monitored during the springs 2018 and 2019 at different plum growing regions. Pollen viability, cross pollination with different pollinizers included open- and self-pollination, pollen tube growth and pollen-pistil incompatibility reactions were investigated. The dynamics of pollen tube growth (third, sixth and ninth day after anthesis) in the style (upper, middle and lower third) and parts of ovary in different crossing combination were observed by fluorescent microscopy over the same two years in relation to fruit set. Overview and preliminary results from the different experiments will be presented.

**Keywords:** *Prunus domestica* L., phenology, cross pollination, pollen germination, pollen tube growth, fruit set.