

PRIVILEGE OF SELECTED BIOTYPES OF WILD APPLES (*Malus sylvestris* Miller) FOR THE PRODUCTION OF GENERATIVE ROOTSTOCKS

Gordana Šebek^{1*}

¹University of Montenegro, Biotechnical Faculty, Mihaila Lalica 15, 81000, Podgorica, Montenegro

*e-mail: sebek@t-com.me

Abstract

The aim of this work is to produce the generative rootstocks for the wild apples which will be of moderate denseness but also resistant to drought. The initial material is the population of wild apple (*Malus sylvestris* Miller) in the area of Polimlje.

The study focused on few segments. Very first one included recording of the phenological traits - first flowering, full flowering, end of flowering and harvest period. The other segment comprised pomological, i.e. physical [fruit weight (g), fruit size (mm), mass of dry seed (g), and number of seed in 1 kg of the fruit]. Fruit mass and mass of 100 pieces of dry seeds were determined by measuring via the electric scale Metler 1200. The result is shown in grams with the accuracy of 0.01 g. Fruit dimensions - length and width were measured by vernier scale. Seeds from 9 selected biotypes of wild apples (*Malus sylvestris* Miller) were planted in the nursery and raised seedlings were evaluated for nursery characteristics: germination, seedling verdure, uniformity and branching. Raised seedlings were used as rootstocks for scion cultivar 'Red Delicious'. The dynamics of leaf dehydration per measured interval was determined by method of Eremeev [1].

The results of this research show that the plant height, stem diameter (corpulence), branching and uniformity of one-year old seedlings of selected biotypes of wild apple are genetic characteristics of selected biotypes of wild apple, from which rapid growth and uniformity of scions depend. Biotype 2, 8 and 9 can be suggested for the production of generative rootstocks.

The most interesting are very small fruit: Biotype 9 (8.95 g) and Biotype 8 (12.75 g). The highest water attaining capability had the leaves of selected Biotype 2 of wild apple. Over the monitored time interval (8 hours upon sample taking), leaves taken from the annual twigs of the studied selected biotypes of wild apples lost on average 32.44% of water.

Key words: Growth, Uniformity, Generative rootstock, Selected biotypes, Resistance to drought.