

P32: USING COMPUTER VISION SOFTWARES IN MORPHOLOGICAL ANALYSES OF EUROPEAN CHESTNUT (*CASTANEA SATIVA MILL.*) GENOTYPES

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It is investigated 20 European Chestnut (*Castanea sativa Mill*) genotypes from the slopes of Vodno and Skopska Crna mountains in northern part of FYROM during 2014-2015. Tools from two image analyzing softwares - Image J and Tomato analyzer are used in measurements. Among the investigated characteristics of Chestnut genotypes it is noted a large level of polymorphism. The Type 15 is characterized with twice as big nut mass as most of other investigated genotypes. The investigated genotypes show differences in the nut anatomy. The Types 12, 7 and 9 are included in the group with large nuts. The Vodno genotypes are larger in average than the genotypes collected from Skopska Crna mountain. According to CIELab color system the nut skin of genotype 15 is characterized with unusually light brown coloration, while the most attractive are the nuts from the Type 8. The investigated genotypes show differences in the nut anatomy, especially the Type 11 which is characterized with significantly higher value for lobedness degree, small seed coat area and seed coat thickness and low percent of hilum presence. Large differences in the leaves dimension and form are also determined.

Keywords: *C. sativa Mill.*, CIELab, genotype, nut, leaf, polymorphism