

**O-45 (92)****EVALUATION OF LOCAL APPLE GERMPLASM IN IRAN: STUDY OF SENSORY AND PHYSICO-CHEMICAL CHARACTERISTICS WITH EMPHASIS ON ACCEPTABILITY**

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Sensory and physicochemical traits of 190 local apple genotypes at Horticulture Research Station of Kamalabad, Karaj-Iran were assessed during two years to determine their effect on fruit acceptability. The genotypes were evaluated for fruit texture, sweetness, sourness, crispness, juiciness, aroma intensity and acceptability based on the 9-point hedonic-sensory scale. The fruits were tasted by 10 trained cooperators. Five physicochemical attributes including firmness, pH, titratable acidity, total soluble solids, and fruit weight were measured. The results of simple linear regression show a significant effect of all studied sensory traits on acceptability ( $R^2=0.77$ ) with the exception of sourness. Fruit texture and acceptability revealed strong correlation ( $r=0.721$ ). All physicochemical traits did not show any significant effect on acceptability. The highest score of texture, crispness and juiciness dedicated to "KA2" and "MN10". These two genotypes along with "RED" were appreciated by panelists in comparison with others. Top score of aroma was assigned to "GO6" and "YA8" genotypes. The "BIG" genotype received the highest score of sweetness.

**Keywords:** Apple, germplasm, local genotypes, sensory and physicochemical traits