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Mass Modeling of Sweet Cherry (*Prunus avium* L.) Fruit with Some Physical Characteristics

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ABSTRACT

Horticultural crops with the similar weight and uniform shape are in high demand in terms of marketing value that used as food. The knowledge on existing relationship among the mass, length, width, thickness, volume and projected areas of fruits is useful for proper design of grading machines. A part of this research was aimed to present some physical properties of cherry fruit. In addition, in this study the mass of cherry fruit was predicted with using different physical characteristics in four models including: Linear, Quadratic, S-curve, and Power. According to the results, all properties considered in the current study were found to be statistically significant at the 1% probability level. The best and the worst models for mass prediction of cherry fruit were based on geometric mean diameter and thickness of the cherry with determination coefficients (R^2) of 0.938 and 0.484, respectively. At last, mass model of cherry fruit based on first projected area from economical standpoint is recommended.

KEYWORDS

Sweet Cherry; Physical Characteristics; Mass Prediction

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