Title Conditions Influencing Design of A Java Apple Fruit Sizing Machine

Author Chanida Bupata, Bundit Jarimopas, Sakda Chantong

Citation Proceedings: Abstract Summary, International Conference on Agricultural, Food and Biological Engineering & Post Harvest/Production Technology, Sofitel Raja Orchid Hotel, Khon Kaen, Thailand, 21-24 January 2007. 204 p.

Keywords Java apple; sizing

Abstract

The purpose of this research was to determine conditions influencing the design of java apple fruit sizing machine. Modelling fruit volume as a function of fruit diameter was presented and mechanical sizing of diverging belt was consequently proposed. Variation of two design conditions, i.e. belt speed S and belt angle A against the performance of the sizing machine was carried out. Testing and statistical analysis were conducted with the experimental sizing machine.

Results showed that S and A significantly influenced the machine performance in terms of mean contamination ratio, sizing efficiency and sizing capacity. The appropriate conditions contributing the best sizing were the belt speed of 12 m/min and the belt angle of 80 degrees.