

Title Improvement of technological procedure for Vietnamese cashew nut processing

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Abstract

The cashew (*Anacardium occidentale* L.) plays an important role in agricultural development in Vietnam. Since 2006, Vietnam was ranked number one of the world in cashew nut product export. The cashew nut export value in 2008, 2009 were USD 920 million and USD 849 million, respectively and exported to more than 50 countries, accounted for 50% cashew nut consumption of the world. However, cashew nut processing is facing with the issue of input cost increasing such as labour, raw material, quality of final product, environment in processing factories. The Government of Vietnam and Vinacas are trying to improve and upgrade the existing processing system, especial introduce new mechanization system in order to reduce labour cost, increase product quality and maximize the production effectiveness. This paper presents some initial research results of treatment cashew before two operation stages are shelling off whole nut and peeling testa layer of nut kernel. Whole cashew nut was moisturized and steamed at pressure from 0.2 - 0.5 bar with temperature from $100\text{ }^{\circ}\text{C} \pm 2^{\circ}\text{C}$ during 20-40 minutes, depending on the size and initial moisture content of nut, then natural dried within 30-36 hours before going to automatic shelling machine. The kernel was remoisturized to increase moisture content from 2.6-3% to 3.5-4.5%, then dried at temperature $12\text{ }^{\circ}\text{C} - 15\text{ }^{\circ}\text{C}$ for 2-3 hours before going to automatic testa peeling machine. The results indicated that with new technological improvement, the breakage percentage of kernel was reduced 3-5% compared the old processing system, processing time was also reduced significantly and ensure the environment requirement in processing factory from the Government.