Factors Affecting the Improvement of Energy Efficiency of Tea-making Process in Guilan Province

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Abstract A descriptive study was conducted to identify the factors affecting the improvement of energy efficiency of tea-making factories with participation of 40 managers of tea factories in Guilan Province, Iran. First, factors affecting the energy consumption efficiency were identified using a Delphi technique. Final questionnaire was designed according to the interview with experts and a full review of related reports. The factors were categorized in three groups of "technical", "managerialpolicy-making", and "knowledge-skill" factors. Friedman test was employed in order to ranking the factors and categorizing them. The results showed that "correct design of new hot air furnaces", "technical information increase of supervisors of plus, rubbing, fermenting, drying and storage units", and "optimal scheduling of plus operation according to the final status of green tea leaves" were the most important technical, managerial-policy-making, and knowledge-skill factors for improving the energy efficiency of tea-making factories in Guilan Province, Iran, respectively. In this regard, training courses on energy efficiency for tea-making factories managers and supervisors; promoting the technical knowledge and skills of supervisors of plus, rubbing, fermenting, drying and storage units; modernization of tea-making equipments, obligation of factories to observe quality standards; and financial support through allocating low-interest government loans were proposed to improve the energy efficiency of tea factories of Guilan Province, Iran.

Keywords: Energy, tea, efficiency, processing.

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