

EVALUATION OF EFFECTIVENESS OF IMPROVED ATTITUDES OF WORKERS ON USAGE OF WATER AT KEELLS FOODS PLC, PANNALA

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Management of water resource is one of the essential practices in a meat processing factory and it has estimated that the daily water usage at Keells Food PLC is around 108,000 liters. This study was conducted to identify the places where water usage is maximum and to introduce sustainable water management system to reduce the water usage in the processing plant. Water saving project was designed in three stages. The factory was divided into 17 sections. The daily water usage in each section was calculated at the pre-calculation stage. At the second stage, an awareness program was conducted to develop the positive attitudes among the working staff aiming to reduce total water usage in the factory. The multiple choice survey questionnaire was developed and used to evaluate the effectiveness of awareness program using 30 factory workers. Two concepts such as 'reuse' and 'reduce' were practiced in the second stage and modifications and replacements were done to save water. In final stage, total water usage was measured after the awareness program. Data gathered from first and third stages were compared to reveal the success of the awareness programme. Using the difference of water meter readings in each section, the effectiveness of the awareness program was analyzed by paired t-test and sign rank test, respectively using SAS. In the pre-calculation stage, the maximum water usage was observed in station no 6 (packing house). Out of 17 stations, total water usage was significantly reduced ($p < 0.05$) in station no 4 (processing section) and no 6 (packing house) after the awareness. The daily reduction of total water usage in the factory was 19669.92 liters after the awareness. In conclusion, improving positive attitudes among the workers on importance of water saving has a significant effect on reduction of the water usage which leads the financial benefits of the factory.

Keywords: Awareness, Reduce, Reuse, Saving