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Using AHP for selecting the best method for fish processing plant (Case study the Mirod fish processing planet)

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Abstract

The waste produced in the canning industry is very importance because of its high protein content. In Iran, these wastes are reused only by the boiler (fish meal and fish oil) method. Reuse of food waste can be an effective way to reduce waste, stabilizing food waste as well as generating energy, using modern processing methods and less damage to the environment. In this research, using the Analytical Hierarchy Process (AHP) method and identifying some methods for using fish waste, among the alternatives of fish meal, aerated compost, enzymatic hydrolysis and waste incineration using technical, economical, environmental and administration has identified the best way to utilizing waste from the factory for fish canning plant. The results of AHP showed that according to the experts, criteria and sub-criteria of environmental, economical, technical and administration, the best method for using fish waste canning was fish meal with a score of 0.459. The enzymes hydrolysis, aerobic compost and waste incinerators were rated at 0.256, 0.189 and 0.097, respectively. Ultimately, sensitivity analysis was carried out toward the general purpose. The overall inconsistency rate was also 0.07, which indicates the reliability of the evaluation results and the validity of the model. Regarding the studied conditions and sensitivity analysis, fishmeal was recognized as the best method for managing and using fish waste canning plant in the industrial zone of Miroad.

Keywords: AHP, Fish waste canning, Waste manegment