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Mathematical Model to Optimize the Scheduling of Animal Harvesting in Livestock Production

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Abstract: Scheduling harvest of animals in intensive production is a topic of great interest in the livestock industry, especially in producers with a large number farms whose main objective is to reach the target of the average weight of the populations (Gordon, 2016). Therefore, it is important to address solutions to help companies to forecast the weight of the animals in order to ensure the correct provision of product to markets. Generally, the average weight of animals depends on many variables such as: gender, facilities, season of the year, age, breed, etc. Hence, mathematical programming is a powerful tool to help solve problems related to harvest scheduling of animals. By the application of Gompertz model, the mathematical model of this work optimization the scheduling harvest of poultry targeting the weight required by the market. The result allows to optimize the harvesting process by the maximization of the quantity of animal at a given weight.

Keywords: scheduling, optimization, livestock production

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