COMPARISON BETWEEN NONLINEAR GROWTH MODELS ON POPULATION OF CHILI PEPPER IN MALAYSIA

MUHAMMAD SYAZWAN AIMAN BIN MOHAMAD SAYUDI

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College of Computing, Informatics and Mathematics
Universiti Teknologi MARA

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ABSTRACT

Chili peppers are characterized by their hot, pungent flavour, which is caused by the presence of capsaicin, a chemical compound that binds to pain receptors in the mouth. Chili peppers are used in a variety of cuisines around the world, and they are also used in traditional medicine. The purpose of this project is to determine the population growth of chili pepper using three models. The data about chili peppers are collected from secondary data on the website by years. 2009 until 2019 is the year that had been chosen to help this research. The data was collected in metric tons and will be used to determine the growth rate and population growth of chili pepper using four nonlinear models which is Exponential model, Logistic growth model, Gompertz growth model and Von Bertalanffy growth model. The results from the research shown that Exponential model, Logistic growth model, Gompertz growth model and Von Bertalanffy growth model are suitable to use to determine the population of chili pepper in the next years. Logistic Growth Model is the best growth model to used compare to the other four models and had been proved by comparison average of relative error with four models.

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