Global warming and the phenology of Yard-long Beans (Vigna unguiculata subsp. cylindrica (L.) Verdc.)

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Abstract	A phenomenon in which a temperature difference between the present and the past exists is called Global Warming. Today's temperature is relatively higher than before. This temperature change causes climate change. Climate change due to global warming has caused changes in various areas of life, including plants. One of the plants' most influential physiological processes is the phenology of flower patterns. Studies on the effects of climate change caused by global warming on organisms can be represented by altitude gradients. This study aimed to determine the effect of altitude on the phenology of flower development in Yard long beans (Vigna unguiculata subsp. Cylindrica (L.) Verdc.). The parameters observed were the vegetative and phenology of plant development, namely the flowering age (Scale N days after planting), the number of flowers per plant, and flower size. The research was conducted in six places with different altitudes, $\tilde{A}, \hat{A} \pm 50$ masl, $\tilde{A}, \hat{A} \pm 200$ masl, $\tilde{A}, \hat{A} \pm 400$ masl, $\tilde{A}, \hat{A} \pm 600$ masl, $\tilde{A}, \hat{A} \pm 800$ masl, and $\tilde{A}, \hat{A} \pm 1,000$ masl. The research period lasted for three months. \tilde{A}, \hat{A} The research was conducted using the survey method. The independent variable used was the difference in elevation gradient, while the dependent variable was the cultivation pattern of yard-long beans. \tilde{A}, \hat{A} The sampling technique is purposive sampling. The data obtained were analyzed using One-Way analysis of variance (ANOVA) and regression correlation analysis. The analysis showed that altitude affected flowering time, number of flowers, and flower size. Yard-long beans grow and develop optimally at 50-400 meters above sea level.
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