Adaptations of Three Cash Crops to Climate Change

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Author Order	1 of 6
Accreditation	2
Abstract	Climate change is likely to lead to adaptations among important crop species. Elevational gradients can be used to illustrate the effects of climate change on crop adaptation patterns. The research aimed to determine adaptation patterns in crop species across an elevational (and therefore temperature and humidity) gradient. A factorial design was applied with two factors within a simple Randomized Complete Block Design, wherein the primary factor was elevation (10 Ãƒ Â¢Ã¢Â‚Â¬Ã¢Â€Âœ 1,000 m). Three crop species (long bean, common bean, and winged bean) were used as test species. Growth rate and flower number were used as adaptation parameters. The results indicated that these three cash crop species showed different adaptation patterns. Common bean showed the greatest vegetative growth at approximately 600 m in elevation, long bean at 400 m in elevation, and winged bean at 10 m in elevation. The results of this study indicate that the three tested agricultural crops have different adaptation patterns, and these results was the first finding to be published in Indonesia. For agriculture practices, it can be recommended that planting of these cash crops be adapted to the elevation of the planting area.Ãƒ Â‚Ã‚Â
Publisher Name	Department of Biology, Faculty of Mathematics and Sciences, Semarang State University . Ro
Publish Date	2020-08-01
Publish Year	2020
Doi	DOI: 10.15294/biosaintifika.v12i2.23489
Citation	
Source	Biosaintifika: Journal of Biology & Biology Education
Source Issue	Vol 12, No 2 (2020): August 2020
Source Page	247-253
Url	https://journal.unnes.ac.id/nju/index.php/biosaintifika/article/view/23489/10591
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