**MORPHOPHISIOLOGY ANALYSIS OF LOCAL COWPEA VARIETIES**

**FROM SOUTHWEST MALUKU TO DROUGHT STRESS**

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**ABSTRACT**

Cowpea of varieties in the Southwest Maluku is one of diverse local potentials and able to adapt to environmental conditions under drought stress that causes low productivity. Therefore, it is necessary to observe the ability of number of local varities in this area. The purpose of this study was to analyze the morphophysiology of local cowpea varieties from Southwest Maluku to drought stress. The research was conducted in green house using split plot design on 10 variety and drought stress in the form watering of periode. Morphophysiologic characters were observed as much as 17 character in the vegetative and generative phases. Data was analyzed by ANOVA test and were continued as Duncan test at 5% significance level while cluster analysis using Principal Component Analysis (PCA). Results of this research showed 10 day watering periode decreased of morphological characters, relative water content, media water content, while proline content and morphology of root length has increased. PCA analysis showed that V3 varieties is more tolerant variety to drought stress.

**Key words:**, drought stress, local cowpea varieties, morphophysiology character