

ANALYSIS OF COMBINING ABILITY, HETEROSIS EFFECT AND HERITABILITY ESTIMATE OF YIELD-RELATED CHARACTERS IN SHALLOT (*Alium cepa* var. *ascalonicum* Baker)

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Abstract	<p>Low productivity of shallot in Indonesia can be improved through development of high yielding variety. The availability of genetic information related to the character being improved is inevitable for effective breeding program. In this study, seven shallot genotypes were evaluated for their combining ability for yield improvement using half diallel cross. Heterosis effect and heritability estimate was also investigated for yield-related characters. The results showed that there were significant differences in general combining ability (GCA) and specific combining ability (SCA) among the evaluated genotypes. Tiron and Timor had the greatest GCA. The greatest SCA and heterosis value was found in crosses of Kuning/Tiron, Timor/Bima Juna, Tiron/Timor and Kuning/Sibolangit. Heterosis effect varied from low to high. Broad sense heritability estimate for all characters was high, but narrow sense heritability was low for most characters. The dominant gene action observed on all yield-related characters suggests that the evaluated genotypes are potential to be used in breeding for high yielding hybrid varieties. Keywords: GCA, SCA, heterosis, heritability, shallot</p>
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