ABTRACT

Candra Aya Sofia, 24020119130107. ***Germination of Purple Waxy Corn Seeds (Zea mays* var. *ceratina* Kuleshov*) Using Gallic Acid Priming****. Laboratory of Plant Structure and Function Biology, Department of Biology, Faculty of Science and Mathematics, Diponegoro University, Semarang, under the supervision of Dr. Dra. Sri Darmanti, M.Si., and Dr. Nintya Setiari, S.Si., M.Si.*

Purple waxy corn (Zea mays var. *ceratina* kuleshov*) has a high functional value due to its anthocyanin content. The success of crop cultivation is influenced by seed quality, one of which occurs during the germination phase. To improve seed quality, priming with gallic acid is used. This study aims to examine the effect of gallic acid priming at various doses on the germination and early seedling growth of purple glutinous corn, as well as to determine the dose that provides the best response to germination and early seedling growth. The method used is gallic acid priming at doses of 0 ppm, 50 ppm, 100 ppm, 150 ppm, and 200 ppm. The study employed a completely randomized design with a single factor and 5 replications. Data were analyzed using ANOVA followed by Duncan's test. The germination parameters observed were germination viability, percentage of normal seedlings, percentage of abnormal seedlings, vigor index, and germination stimulation index, while the early growth parameters observed were radicle length and shoot length. The study results indicated that gallic acid priming at doses of 0-200 ppm had no significant effect on the germination of purple glutinous corn, but had a significant effect on the early growth of seedlings. The optimal dose to enhance seedling growth is 150 ppm.*

Keywords*: seed viability, seedling vigor, early growth, radicle, antioxidant activity*