

**GROWTH RESPONSE OF RED BETEL (*Piper crocatum* Ruiz and Pav.) TO
DIFFERENT CUTTING SOURCES AND DURATION OF SOAKING IN
NATURAL PLANT GROWTH REGULATORS FROM RED ONION**

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ABSTRACT

The failure of red betel cuttings can be overcome by selecting the appropriate source of cuttings and applying a red onion growth regulator soaking treatment. This study aims to determine the growth response of red betel to the use of different cutting sources and the duration of soaking in red onion growth regulator. The study was conducted from February to May 2024 at the Experimental Garden of the Faculty of Agriculture, UPN "Veteran" Yogyakarta. The research method used was a field experiment, arranged in a factorial Completely Randomized Design (CRD) with 2 treatment factors and 3 replications. The first factor was the source of cuttings, consisting of basal, middle, and apical sections. The second factor was the duration of soaking in red onion extract, which included 30 minutes, 60 minutes, and 90 minutes. The data obtained during the study were analyzed for variance using Analysis of Variance (ANOVA) at the 5% level and followed by Duncan's Multiple Range Test (DMRT) at the 5% level. The results showed no interaction in all treatment combinations. The middle section of cuttings provided the best results in terms of plant height, number of leaves, leaf area, fresh weight of shoots, and survival rate. A soaking duration of 30 minutes in red onion extract showed the best results for leaf area and dry root weight. A soaking duration of 60 minutes showed the best results for the time of shoot emergence and shoot-root ratio.

Keywords : Red Betel, Stem Cutting Source, Soaking Duration, Red Onion Extract