

Firman Bagus Prayoga. 190311100022. Pengaruh Zat Pengatur Tumbuh Terhadap Keberhasilan Stek Batang *Emblemantha urnulata*. Dibimbing oleh : Dr. Mustika Tripatmasari, S.P., M.Si. dan Dr. Agr Eko Setiawan, S.P., M.Si.

ABSTRAK

Tanaman *Emblemantha urnulata* merupakan tanaman endemik provinsi Jambi. Pengembangan dan pemanfaatan *Emblemantha urnulata* yang belum banyak di terapkan oleh kalangan masyarakat sekitar. Salah satu yang menjadi daya tarik untuk melestarikan keanekaragaman *Emblemantha urnulata* yaitu perbanyakan stek secara vegetatif. Penelitian ini bertujuan untuk mengetahui pemberian hormon sitokinin Kinetin dan auksin IAA (*Indole Acetic Acid*) serta interaksi antara sitokinin Kinetin dan auksin IAA (*Indole Acetic Acid*) terhadap pertumbuhan stek batang *Emblemantha urnulata*. Penelitian menggunakan Rancangan Acak Kelompok (RAK) pola faktorial yang terdiri dari 9 taraf perlakuan meliputi A0B0 (kontrol), A0B1 (Kinetin 0 ppm dan IAA 15 ppm), A0B2 (Kinetin 0 ppm dan IAA 30 ppm), A1B0 (Kinetin 15 ppm dan IAA 0 ppm), A1B1 (Kinetin 15 ppm dan IAA 15 ppm), A1B2 (Kinetin 15 ppm dan IAA 30 ppm), A2B0 (Kinetin 30 ppm dan IAA 0 ppm), A2B1 (Kinetin 30 ppm dan IAA 15 ppm), dan A2B2 (Kinetin 30 ppm dan IAA 30 ppm). Perlakuan tersebut diulang sebanyak 3 kali, dimana setiap perlakuan terdapat 3 sampel tanaman, sehingga terdapat 81 tanaman. Hasil penelitian menunjukkan Pemberian Kinetin berpengaruh nyata terhadap pertumbuhan panjang tunas, panjang daun, dan jumlah daun namun tidak berpengaruh nyata terhadap presentase hidup, awal muncul tunas dan pertumbuhan panjang akar, jumlah akar, stek batang *Emblemantha urnulata*. Pemberian IAA (*Indole Acetic Acid*) berpengaruh nyata terhadap pertumbuhan panjang daun pada 16 MST, namun tidak berpengaruh nyata terhadap presentase hidup, awal muncul tunas dan pertumbuhan panjang akar, jumlah akar, panjang tunas, jumlah daun, dan panjang daun pada 6 MST sampai 14 MST stek batang *Emblemantha urnulata*. Sedangkan Interaksi Kinetin dan *Indole Acetic Acid* berpengaruh nyata terhadap pertumbuhan panjang akar 4 MST sampai 12 MST, panjang tunas dan panjang daun pada 6 MST dan 8 MST, jumlah akar pada 8 MST, 10 MST, dan 12 MST, jumlah daun pada 6 MST sampai 16 MST namun tidak berpengaruh nyata terhadap presentase hidup, awal muncul tunas dan pertumbuhan panjang akar 4 MST sampai 12 MST, panjang tunas dan panjang daun pada 10 MST sampai 16 MST, jumlah akar pada 4 MST, 6 MST, 14 MST dan 16 MST, jumlah daun pada 16 MST stek batang *Emblemantha urnulata*.

Kata Kunci : IAA, Kinetin, stek

Firman Bagus Prayoga. 190311100022. The Effect of Plant Growth Regulator on stem cutting of *Emblemantha urnulata*. Supervised by: Dr. Mustika Tripatmasari, S.P., M.Si. and Dr. Agr Eko Setiawan, S.P., M.Si.

ABSTRACT

Plant *Emblemantha urnulata* is an endemic plant of Jambi province. Development and utilization *Emblemantha urnulata* which has not been much intimented by the local community. One of the attractions is to preserve diversity *Emblemantha urnulata* namely vegetative propagation of cuttings. This study aims to determine the administration of the cytokinin Kinetin and the hormone auxin IAA (*Indole Acetic Acid*) and the interaction between cytokinin Kinetin and auxin IAA (*Indole Acetic Acid*) on the growth of stem cuttings *Emblemantha urnulata*. The study used a factorial randomized block design (RBD) consisting of 9 treatment levels including A0B0 (control), A0B1 (Kinetin 0 ppm and IAA 15 ppm), A0B2 (Kinetin 0 ppm and IAA 30 ppm), A1B0 (Kinetin 15 ppm and IAA 0 ppm), A1B1 (Kinetin 15 ppm and IAA 15 ppm), A1B2 (Kinetin 15 ppm and IAA 30 ppm), A2B0 (Kinetin 30 ppm and IAA 0 ppm), A2B1 (Kinetin 30 ppm and IAA 15 ppm), and A2B2 (Kinetin 30 ppm and IAA 30 ppm). The treatment was repeated 3 times, where each treatment contained 3 plant samples, so there were 81 plants. The results of the research show giving Kinetin had a significant effect on the growth of shoot length, leaf length, and number of leaves but did not have a significant effect on survival percentage, early shoot emergence and root length growth, number of roots, stem cuttings *Emblemantha urnulata*. Giving IAA (*Indole Acetic Acid*) significantly affected the growth of leaf length at 16 WAP, but did not significantly affect the percentage of survival, early emergence of shoots and growth of root length, number of roots, shoot length, number of leaves, and leaf length at 6 WAP to 14 WAP of stem cuttings *Emblemantha urnulata*. While Interaction *Indole Acetic Acid* and Kinetin significantly affected the growth of root length from 4 to 12 WAP, shoot length and leaf length at 6 WAP and 8 WAP, number of roots at 8 WAP, 10 MST, and 12 WAP, number of leaves from 6 WAP to 16 WAP but had no effect significantly on percentage of life, early emergence of shoots and root length growth 4 WAP to 12 WAP, shoot length and leaf length at 10 WAP to 16 WAP, number of roots at 4 WAP, 6 MST, 14 WAP and 16 MST, number of leaves at 16 WAP stem cuttings *Emblemantha urnulata*.

Keywords: IAA, Kinetin, cuttings