

**PENGARUH MEDIA TANAM DAN PERLAKUAN
ROOTONE F PADA PERTUMBUHAN STEK BATANG**

Aglaonema Donna Carmen



SKRIPSI

Oleh :

DARSONO

2009-41-012

**PROGRAM STUDI AGROTEKNOLOGI
FAKULTAS PERTANIAN
UNIVERSITAS MURIA KUDUS
TAHUN 2014**

**PENGARUH MEDIA TANAM DAN PERLAKUAN
ROOTONE F PADA PERTUMBUHAN STEK BATANG**

Aglaonema Donna Carmen



SKRIPSI

**Ditujukan Kepada Fakultas Pertanian Universitas Muria Kudus
Untuk Memenuhi Sebagian Dari Syarat-Syarat
Guna Memperoleh Gelar Sarjana Pertanian**

Oleh :

DARSONO

2009-41-012

**PROGRAM STUDI AGROTEKNOLOGI
FAKULTAS PERTANIAN
UNIVERSITAS MURIA KUDUS
TAHUN 2014**

HALAMAN PENGESAHAN

SKRIPSI

**PENGARUH MEDIA TANAM DAN PERLAKUAN ROOTONE F
PADA PERTUMBUHAN STEK BATANG**

Aglaonema Donna Carmen

Yang dipersiapkan dan disusun oleh

Darsono

NIM: 2009-41-012

Telah dipertahankan di depan Dewan Penguji

Pada tanggal : 20 Maret 2014

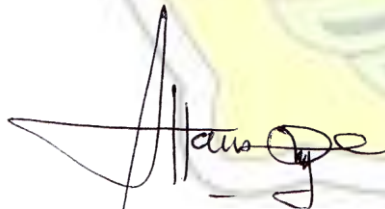
Dan telah dinyatakan memenuhi syarat untuk diterima

Kudus, 20 Maret 2014

Mengetahui,

Pembimbing Utama,

Fakultas Pertanian
Universitas Muria Kudus
Dekan,

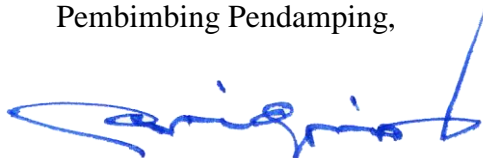


Ir. Untung Sudjianto, MS



Ir. Hadi Supriyo, MS

Pembimbing Pendamping,



Drs. RM. Hendy HHS, M.Si

KATA PENGANTAR

Dengan mengucapkan alhamdulillah, akhirnya penyusun dapat menyelesaikan penyusunan skripsi dengan judul “ Pengaruh Media Tanam dan Perlakuan Rootone F pada Pertumbuhan Stek Batang *Aglaonema* Donna Carmen” Pada kesempatan ini penyusun mengucapkan terima kasih kepada:

1. Ir. H. Hadi Supriyo, MS selaku Dekan Fakultas Pertanian Universitas Muria Kudus.
2. Ir. Zed Nahdi, M.Sc selaku Ketua Komisi Sarjana Fakultas Pertanian Universitas Muria Kudus.
3. Ir. Untung Sudjipto, MS, selaku dosen Pembimbing Utama.
4. Drs. RM. Hendy HHS, M.Si selaku Dosen Pembimbing Pendamping.
5. Semua pihak yang tidak dapat penyusun sebutkan secara langsung maupun tidak langsung membantu penyusunan proposal ini.

Penyusun sadari bahwa dalam skripsi ini masih jauh dari sempurna, oleh karena itu penyusun mengharap kritik dan saran yang membangun untuk penyempurnaan skripsi ini.

Kudus, 20 Maret 2014

Penyusun,

DAFTAR ISI

	Halaman (Page)
HALAMAN JUDUL.....	i
HALAMAN PENGESAHAN.....	ii
KATA PENGANTAR	iii
DAFTAR ISI.....	iv
DAFTAR TABEL.....	vi
DAFTAR LAMPIRAN.....	vii
INTISARI.....	xi
ABSTRACT.....	xii
I. PENDAHULUAN	1
A. Latar Belakang	1
B. Rumusan Masalah.....	5
C. Tujuan Penelitian	5
D. Hipotesis	6
II. TINJAUAN PUSTAKA	7
A. Tanaman <i>Aglaonema</i> Donna Carmen	7
1. Botani.....	7
2. Morfologi Tanaman <i>Aglaonema</i>	7
3. Varietas	8
4. Syarat Tumbuh Tanaman <i>Aglaonema</i>	8
5. Pembiakan Vegetatif.....	9
B. Media Tanam	10
C. Zat Pengatur Tumbuh	14
III. BAHAN DAN METODE	16
A. Tempat dan Waktu Penelitian.....	16
B. Bahan dan Alat.....	16
C. Metode Penelitian	17
D. Pelaksanaan Penelitian.....	18
E. Pengamatan penelitian	20

IV. HASIL DAN PEMBAHASAN.....	22
A. Hasil	22
B. Pembahasan.....	35
V. KESIMPULAN DAN SARAN.....	39
A. Kesimpulan	39
B. Saran	39
DAFTAR PUSTAKA	40
LAMPIRAN-LAMPIRAN.....	43



DAFTAR TABEL
(LIST OF TABLE)

Nomor <i>(Number)</i>	Judul <i>(Title)</i>	Halaman <i>(Page)</i>
Tabel 1.	Pengaruh Media Tanam dan Perlakuan Perendaman Stek dalam Rootone F Terhadap Rata-Rata Panjang Tunas Umur 14, 15, 16, 17, 18, 19, 20, 21 dan 22 MST	23
	<i>(Table 1. The Effect of Plant Medium and Soaked of Cutting on Rotoon F Solution to The Bud Length at 14th, 15th, 16th, 17th, 18th, 19th, 20th, 21th and 22th weeks after planting (WAP)</i>	
Tabel 2.	Pengaruh Media Tanam dan Perlakuan Perendaman Stek dalam Rootone F terhadap Rata-Rata Lebar Daun Umur 16,18, 20 dan 22 MST	26
	<i>(Table 2. The Effect of Plant Medium and Soaked of Cutting on Rotoon F Solution to The Average of Leaf Width at 16th, 18th, 20th and 22th WAP</i>	
Tabel 3.	Pengaruh Media Tanam dan Perlakuan Perendaman Stek dalam Rootone F terhadap Rata-rata Panjang Daun Umur 16,18, 20 dan 22 MST	28
	<i>(Table 3. The Effect of Plant Medium and Soaked of Cutting on Rotoon F Solution to The Average of Leave Length at the 16th, 18th, 20th and 22th Weeks After Planting or WAP)</i>	
Tabel 4.	Pengaruh media tanam terhadap rata-rata bobot segar akar adventif	29
	<i>(Table 4. The effect of plant medium to the average fresh weight of adventife root)</i>	
Tabel 5.	Pengaruh media tanam rata-rata bobot kering akar adventif	31
	<i>(Table 5. The effect of plant medium to the average dry weight of adventife root)</i>	
Tabel 6.	Pengaruh media tanam terhadap rata-rata bobot segar daun.....	32
	<i>(Table 6. The effect of plant medium to the average fresh weight of leave)</i>	
Tabel 7.	Pengaruh media tanam terhadap rata-rata bobot kering daun.....	33
	<i>(Table 7. The effect of plant medium to the average dry weight of leave)</i>	

DAFTAR LAMPIRAN
(LIST OF APPENDIX)

	Halaman (Page)
Lampiran 1. Deskripsi Tanaman <i>Aglaonema</i> var. Donna Carmen. (Appendix 1. Descriptions of <i>Aglaonema</i> var. Donna Carmen)	43
Lampiran 2. Denah Tata Letak Perlakuan Penelitian..... (Appendix 2. Lay-out of the Experimenta Design)	44
Lampiran 3a. Rata-rata Panjang Tunas Umur 14 MST..... (Appendix 3a. The Average of Bud Length at 14 th WAP)	45
Lampiran 3b. Sidik Ragam Panjang Tunas Umur 14 MST (Appendix 3b. Analysis of Variance for The Bud Length at the 14 th WAP)	45
Lampiran 4a. Rata-rata Panjang Tunas Umur 15 MST..... (Appendix 4a. The Average of Bud Length at 15 th WAP)	46
Lampiran 4b. Sidik Ragam Panjang Tunas Umur 15 MST (Appendix 4b. Analysis of Variance for The Bud Length at the 15 th WAP)	46
Lampiran 5a. Rata-rata Panjang Tunas Umur 16 MST..... (Appendix 5a. The Average of Bud Length at 16 th WAP)	47
Lampiran 5b. Sidik Ragam Panjang Tunas Umur 16 MST (Appendix 5b. Analysis of Variance for The Bud Length at the 16 th WAP)	47
Lampiran 6a. Rata-rata Panjang Tunas Umur 17 MST..... (Appendix 6a. The Average of Bud Length at 17 th WAP)	48
Lampiran 6b. Sidik Ragam Panjang Tunas Umur 17 MST (Appendix 6b. Analysis of Variance for The Bud Length at the 17 th WAP)	48
Lampiran 7a. Rata-rata Panjang Tunas Umur 18 MST..... (Appendix 7a. The Average of Bud Length at 18 th WAP)	49
Lampiran 7b. Sidik Ragam Panjang Tunas Umur 18 MST (Appendix 7b. Analysis of Variance for The Bud Length at the 18 th WAP)	49

Lampiran 8a. Rata-rata Panjang Tunas Umur 19 MST.....	50
<i>(Appendix 8a. The Average of Bud Length at 19th WAP)</i>	
Lampiran 8b. Sidik Ragam Panjang Tunas Umur 19 MST	50
<i>(Appendix 8b. Analysis of Variance for The Bud Length at the 19th WAP)</i>	
Lampiran 9a. Rata-rata Panjang Tunas Umur 20 MST.....	51
<i>(Appendix 9a. The Average of Bud Length at 20th WAP)</i>	
Lampiran 9b. Sidik Ragam Panjang Tunas Umur 20 MST	51
<i>(Appendix 9b. Analysis of Variance for The Bud Length at the 20th WAP)</i>	
Lampiran 10a. Rata-rata Panjang Tunas Umur 21 MST.....	52
<i>(Appendix 10a. The Average of Bud Length at 21th WAP)</i>	
Lampiran 10b. Sidik Ragam Panjang Tunas Umur 21 MST	52
<i>(Appendix 10b. Analysis of Variance for The Bud Length at the 21th WAP)</i>	
Lampiran 11a. Rata-rata Panjang Tunas Umur 22 MST.....	53
<i>(Appendix 11a. The Average of Bud Length at 22th WAP)</i>	
Lampiran 11b. Sidik Ragam Panjang Tunas Umur 22 MST	53
<i>(Appendix 11b. Analysis of Variance for The Bud Length at the 22th WAP)</i>	
Lampiran 12a. Rata-rata Jumlah Tunas yang Muncul Umur 16 MST.....	54
<i>(Appendix 12a. The Average of Number Appear Bud at 16th WAP)</i>	
Lampiran 12b. Sidik Ragam Jumlah Tunas yang Muncul Umur 16 MST	54
<i>(Appendix 12b. Analysis of Variance for The Number of Appear Bud</i> <i>at 16th WAP)</i>	
Lampiran 13a. Rata-rata Jumlah Tunas yang Muncul Umur 18 MST.....	55
<i>(Appendix 13a. The Average of Number Appear Bud at 18th WAP)</i>	
Lampiran 13b. Sidik Ragam Jumlah Tunas yang Muncul Umur	
18 MST	55
<i>(Appendix 13b. Analysis of Variance for The Number of Appear Bud</i> <i>at 18th WAP)</i>	
Lampiran 14a. Rata-rata Jumlah Tunas yang Muncul Umur 20 MST.....	56
<i>(Appendix 14a. The Average of Number Appear Bud at 20th WAP)</i>	
Lampiran 14b. Sidik Ragam Jumlah Tunas yang Muncul Umur	
20 MST	56

<i>(Appendix 14b. Analysis of Variance for The Number of Appear Bud at 20th WAP)</i>	
Lampiran 15a. Rata-rata Jumlah Tunas yang Muncul Umur 22 MST..... <i>(Appendix 15a. The Average of Number Appear Bud at 22th WAP)</i>	57
Lampiran 15b. Sidik Ragam Jumlah Tunas yang Muncul Umur 22 MST <i>(Appendix 15b. Analysis of Variance for The Number of Appear Bud at 22th WAP)</i>	57
Lampiran 16a. Rata-rata Lebar Daun Umur 16 MST <i>(Appendix 16a. The Average of Leaves Width at 16th WAP)</i>	58
Lampiran 16b. Sidik Ragam Lebar Daun Umur 16 MST <i>(Appendix 16b. Analysis of Variance for The Leaves Width at 16th WAP)</i>	58
Lampiran 17a. Rata-rata Lebar Daun Umur 18 MST <i>(Appendix 17a. The Average of Leaves Width at 18th WAP)</i>	59
Lampiran 17b. Sidik Ragam Lebar Daun Umur 18 MST <i>(Appendix 17b. Analysis of Variance for The Leaves Width at 18th WAP)</i>	59
Lampiran 18a. Rata-rata Lebar Daun Umur 20 MST <i>(Appendix 18a. The Average of Leaves Width at 20th WAP)</i>	60
Lampiran 18b. Sidik Ragam Lebar Daun Umur 20 MST <i>(Appendix 18b. Analysis of Variance for The Leaves Width at 20th WAP)</i>	60
Lampiran 19a. Rata-rata Lebar Daun Umur 22 MST <i>(Appendix 19a. The Average of Leaves Width at 22th WAP)</i>	61
Lampiran 19b. Sidik Ragam Lebar Daun Umur 22 MST <i>(Appendix 19b. Analysis of Variance for The Leaves Width at 22th WAP)</i>	61
Lampiran 20a. Rata-rata Panjang Daun Umur 16 MST..... <i>(Appendix 20a. The Average of Leaves Length at 16th WAP)</i>	62
Lampiran 20b. Sidik Ragam Panjang Daun Umur 16 MST <i>(Appendix 20b. Analysis of Variance for The Leaves Length at 16th WAP)</i>	62
Lampiran 21a. Rata-rata Panjang Daun Umur 18 MST..... <i>(Appendix 21a. The Average of Leaves Length at 18th WAP)</i>	63

Lampiran 21b. Sidik Ragam Panjang Daun Umur 18 MST	63
<i>(Appendix 21b. Analysis of Variance for The Leaves Length at 18th WAP)</i>	
Lampiran 22a. Rata-rata Panjang Daun Umur 20 MST.....	64
<i>(Appendix 22a. The Average of Leaves Length at 20th WAP)</i>	
Lampiran 22b. Sidik Ragam Panjang Daun Umur 20 MST	64
<i>(Appendix 22b. Analysis of Variance for The Leaves Length at 20th WAP)</i>	
Lampiran 23a. Rata-rata Panjang Daun Umur 22 MST.....	65
<i>(Appendix 23a. The Average of Leaves Length at 22th WAP)</i>	
Lampiran 23b. Sidik Ragam Panjang Daun Umur 22 MST	65
<i>(Appendix 23b. Analysis of Variance for The Leaves Length at 22th WAP)</i>	
Lampiran 24a. Rata-rata Bobot Segar Akar Adventif.....	66
<i>(Appendix 24a. The Average of Adventive Root Fresh Weight)</i>	
Lampiran 24b. Sidik Ragam Bobot Segar Akar Adventif	66
<i>(Appendix 24b. Analysis of Variance for The Adventive Root Fresh Weight)</i>	
Lampiran 25a. Rata-rata Bobot Kering Akar Adventif.....	67
<i>(Appendix 25a. The Average of Adventive Root Dry Weight)</i>	
Lampiran 25b. Sidik Ragam Bobot Kering Akar Adventif	67
<i>(Appendix 25b. Analysis of Variance for The Adventive Root Dry Weight)</i>	
Lampiran 26a. Rata-rata Bobot Segar Daun	68
<i>(Appendix 26a. The Average of Leaves Fresh Weight)</i>	
Lampiran 26b. Sidik Ragam Bobot Segar Daun.....	68
<i>(Appendix 26b. Analysis of Variance for The Leaves Fresh Weight)</i>	
Lampiran 27a. Rata-rata Bobot Kering Daun	69
<i>(Appendix 27a. The Average of Leaves Dry Weight)</i>	
Lampiran 27b. Sidik Ragam Bobot Kering Daun.....	69
<i>(Appendix 27b. Analysis of Variance for The Leaves Dry Weight)</i>	
Lampiran 28a. Rata-rata Panjang Akar	70
<i>(Appendix 28a. The Average The Root Length)</i>	
Lampiran 28b. Sidik Ragam Panjang Akar.....	70
<i>(Appendix 28b. Analysis of Variance for The Root Length)</i>	

RINGKASAN

Penelitian ini bertujuan untuk mengetahui pengaruh perlakuan komposisi media tanam dan perlakuan perendaman dalam larutan Rotoone F terhadap pertumbuhan stek *Aglonema Donna Carmen*.

Penelitian dilaksanakan di Desa Dersalam Kec. Bae, Kab. Kudus, pada ketinggian tempat ± 17 m di atas permukaan laut, suhu 28- 30⁰ C. Jenis tanah latosol dengan pH 5,5-6, dilaksanakan pada tanggal 27 Juni sampai 19 Desember 2013.

Penelitian ini menggunakan metode percobaan faktorial dengan pola dasar Rancangan Acak Kelompok Lengkap (RAKL) yang terdiri atas dua faktor dengan tiga ulangan. Faktor yang pertama, yaitu komposisi media tumbuh (M) terdiri dari 4 taraf, yakni: M1 : Tanah (kontrol), M2 : komposisi tanah : pupuk kandang : sekam = 1:2:1, M3 : komposisi tanah : pupuk kandang : sekam = 2:1:1 dan M4 : komposisi tanah : pupuk kandang : sekam = 3:1:1. Adapun faktor yang kedua yakni perendaman stek dalam larutan Rotoone F (R) yang terdiri atas 2 taraf, yaitu : R1: Tanpa Rootone F dan R2 : Menggunakan Rootone F 200 ppm (direndam selama 2 jam).

Hasil penelitian menunjukkan bahwa perlakuan komposisi media tanam berpengaruh nyata terhadap parameter panjang tunas umur 14, 15, 16, 17, 19, 20 MST (minggu setelah tanam), bobot segar akar adventif dan bobot kering akar adventif. Berpengaruh sangat nyata terhadap panjang tunas umur 18, 21, 22 MST, lebar daun dan panjang daun pada umur 16, 18, 20, 22 MST, bobot segar daun serta bobot kering daun. Dan tidak berpengaruh nyata terhadap parameter jumlah tunas yang muncul pada umur 16, 18, 20, 22 MST dan panjang akar.

Pada parameter lebar daun umur 22 MST memberikan lebar daun tertinggi pada perlakuan media tanam komposisi tanah : pupuk kandang : sekam = 1:2:1 (M2) dengan panjang tunas umur 22 MST tunas tertinggi yaitu 13,60 cm, lebar daun 3,70 cm dan bobot kering akar 0,03 g dibandingkan dengan media tanah (M1) yang memiliki panjang tunas 10,75 cm, lebar daun terendah yaitu 2,55 cm dan bobot kering akar 0,02 g.

Hasil penelitian menunjukkan bahwa perlakuan perendaman stek dalam Rootone F hanya berpengaruh nyata pada parameter panjang tunas umur 21 dan 22 MST. Yaitu 11,83 dan 12,48 cm pada stek tanpa perendaman (kontrol) dan 10,63 cm dan 11,25 cm pada stek yang direndam larutan Rotoon F.

Terdapat interaksi antara perlakuan media tanam dengan perendaman stek dalam larutan Rotoon F, pada parameter lebar daun umur 20 MST.

Kombinasi perlakuan terbaik diperoleh pada kombinasi perlakuan komposisi perlakuan komposisi tanah : pupuk kandang : sekam = 1:2:1 tanpa perendaman Rotoone F (M2R1) panjang tunas umur 22 MST 13,80 cm dan lebar daun terlebar yaitu 3,90 cm.

ABSTRACT

The purpose of this research, was to study the effects of the growth media composition and soaked cutting on Rotoone F Aglonema Donna Carmen.

The experiment was conducted in Dersalam village, Bae subdistrict, Kudus regency, at altitude \pm 17 m above the sea level, the temperature of 28-30⁰ C. Latosol soil types with pH 5,5-6 , implemented in June 27 to December 19, 2013.

The experimental method applied in this research was the factorial model based on the Completely Randomized Block Design (RCB) consisting of two factors with three replications . The first factor was the growth media composition (M) consists of four levels, namely : M1 : Soil (control) , M2 : the composition of the soil : manure : husk = 1:2:1 , M3 : the composition of the soil : manure : husk = 2:1:1 and M4 : composition of the soil : manure : husk = 3:1:1 . The second factor is the granting of Rotoone F which consists of two levels, namely : R1 : Without Rootone F and R2 : Using Rootone F 200 ppm (soaked for 2 hours).

The results showed that the composition of growing medium significantly affected bud length at the 14th, 15th, 16th, 17th, 19th, and 20th WAP (week after planting), the fresh dry weights of adventitious roots, very significantly affected bud length at the 18th, 21st, 22nd WAP, leaf width and length at the 16th, 18th, 20th, 22nd WAP, as well as the fresh and dryn weights of leaves, although it did not significantly affect the number of emerging shoots at the 16th, 18th, 20th, 22nd WAP, nor the root length.

At the 22 WAP, the growing medium composition of soil: manure : husk = 1:2:1 (M2) gave the best leaf width (3.70 cm), the highest bud length(13.60 cm), and root dry weight of 0.03 g compared to the merely soil medium (M) that gave 10.75 cm bud length, 2.55 cm leaf width, and the lowest root dry weight (0.02 g).

Moreove, the results of this research also showed that the soaking treatment of cuttings in Rootone F only significantly affected bud length at the 21st and 22nd WAP. Ie 11.83 and 12.48 cm in cuttings without soaked (control) and 10.63 cm and 11.25 cm cuttings were soaked in a solution of Rotoon F.

An interaction was found between the growth medium composition and the soaking of cutting in Rotoone F solution on leaf width at the age of 20 WAP.

The best treatment combination was obtained in the composition of the growth media of the soil : manure : husk = 1:2:1 with unsoaked cutting (M2R1) on bud length at 22 WAP that reached 13.80 cm and the widest leaf width (3.90 cm).