

ABSTRACT

JUMIYATI MUYO, Faculty of Agriculture, the 17th of August 1945 University, Samarinda, Effect of Nasa Liquid Organic Fertilizer and Atonic Plant Regulator on the Growth of Grafted Rubber Seedling (*Hevea brasiliensis* Muel. Agr) PB 260 Variety. Supervised by **Hery Sutejo** and **Abdul Fatah**.

Objective of the research: (1) To study the effect of the application of Nasa liquid organic fertilizer and Atonic plant regulator on the growth of grafted rubber seedling; (2) To find suitable dosage of Nasa liquid organic fertilizer and Atonic plant regulator for better growth of rubber seedling.

The research carried out from March to June 2014 at Suakong Village, Bentian Besar sub District of West Kutai Regency, East Kalimantan Province. It applied Completely Randomised Design (CRD) that consisted of two factors and with five replications. The first factor was Nasa liquid organic fertilizer (N) comprised with: no Nasa fertilizer application (n_0), 3 ml/l water (n_1), and 6 ml/l water (n_2). And the second factor was Atonic plant regulator (A) comprised with: no Atonic application (a_0), 0,5 ml/l water (a_1), and 1,5 ml/l water (a_2).

Result of the research indicated that the Nasa fertilizer application affected very significantly on the seedling height at 2 months old and 4 months old, leave number at 2, 3 and 4 months old. It affected significantly on seedling height at 3 months old, and stem diameter at 2 and 4 months old.

The Atonic plant regulator affected very significantly on the seedling height at 2, 3 and 4 months old, leave number at 2, 3 and 4 months old, and stem diameter at 3 months old. But it did not affect significantly on stem diameter at 2 and 4 months old.

The interaction between Nasa fertilizer application and Atonic plant regulator affected very significantly on the leave number at 4 months old. It affected significantly on leave number at 3 months old. But it did not affect significantly on seedling height at 2, 3 and 4 months old, leave number at 2 months old, and stem diameter at 2, 3 and 4 months old.

ABSTRAK

JUMIYATI MUYO, Fakultas Pertanian Universitas 17 Agustus 1945 Samarinda. Pengaruh Pupuk Organik Cair Nasa dan Zat Pengatur Tumbuh Atonik Terhadap Pertumbuhan Bibit Karet Okulasi Klon PB 260 (*Hevea brasiliensis* Muel. Agr). Dibimbing oleh **Hery Sutejo** dan **H. Abdul Fatah**.

Tujuan penelitian adalah untuk : (1) Mengetahui pengaruh pemberian Pupuk Organik Cair Nasa dan Zat Pengatur Tumbuh Atonik Terhadap Pertumbuhan Bibit Karet Okulasi Klon PB 260 dan (2) Mengetahui konsentrasi Pupuk Organik Cair Nasa dan Zat Pengatur Tumbuh Atonik yang baik bagi pertumbuhan bibit karet okulasi klon PB 260.

Penelitian ini dilaksanakan dari bulan Maret 2014 sampai dengan bulan Juni 2014 di Kampung Suakong, Kecamatan Bentian Besar, Kabupaten Kutai Barat, Provinsi Kalimantan Timur. Rancangan percobaan yang digunakan dalam penelitian ini adalah Rancangan Acak Lengkap (RAL) yang terdiri dari dua faktor yang diulang sebanyak 5 kali. Faktor pertama adalah Konsentrasi Pupuk Organik Cair Nasa (n), terdiri atas: tanpa pemberian POC Nasa (n_0), POC Nasa 3 ml/l air (n_1), POC Nasa 6 ml/l air (n_2). Faktor kedua adalah Konsentrasi Zat Pengatur Tumbuh Atonik (a) terdiri atas 3 taraf yaitu tanpa ZPT Atonik (a_0), 0,5 ml/l air ZPT Atonik (a_1), 1,5 ml/l air ZPT Atonik (a_2).

Perlakuan POC Nasa (N) berbeda sangat nyata terhadap tinggi bibit umur 2 bulan dan 4 bulan, jumlah daun bibit umur 2, 3 dan 4 bulan, dan diameter bibit umur 3 bulan. Berbeda nyata terhadap tinggi tanaman umur 3 bulan, diameter bibit umur 2 bulan dan umur 4 bulan.

Perlakuan ZPT Atonik (A) berbeda sangat nyata terhadap tinggi bibit umur 2, 3 dan 4 bulan, jumlah daun bibit umur 2, 3 dan 4 bulan, dan diameter bibit umur 3 bulan. Berbeda tidak nyata terhadap diameter bibit umur 2 bulan dan umur 4 bulan.

Interaksi perlakuan (NxA) berbeda sangat nyata terhadap jumlah daun bibit umur 4 bulan. Berbeda nyata terhadap jumlah daun bibit umur 3 bulan. Berbeda tidak nyata terhadap tinggi bibit umur 2, 3 dan 4 bulan, jumlah daun bibit umur 2 bulan dan diameter bibit umur 2, 3 dan 4 bulan