

ABSTRAK

DHANI BUTARBUTAR. Fakultas Pertanian, Universitas 17 Agustus 1945 Samarinda. Pengaruh Pemberian Pupuk Organik Cair Bio Sugih Dan Inokulan Rhizobium Terhadap Pertumbuhan Dan Hasil Tanaman Kedelai (*Glycine Max L.*) Varietas Baluran Dibawah bimbingan **Noor Jannah** dan **Marisi Napitupulu**

Tujuan penelitian untuk mengetahui pengaruh pemberian Pupuk Organik Cair Bio Sugih dan Dosis Inokulan Rhizobium terhadap pertumbuhan dan hasil tanaman kedelai (*Glycine Max L.*) dan untuk memperoleh konsentrasi Pupuk Organik Cair Bio Sugih dan Inokulan Rhizobium yang paling sesuai terhadap pertumbuhan dan hasil tanaman kedelai (*Glycine Max L.*)

Penelitian dilaksanakan selama 3 bulan dari bulan November 2019 sampai Januari 2020, terhitung dari persiapan media tanam sampai dengan pengambilan data terakhir. Lokasi penelitian di Perumahan Pondok Karya Lestari, Kecamatan Sambutan, Samarinda, Kalimantan Timur.

Penelitian menggunakan rancangan acak lengkap (RAL) dengan pola faktorial 4 x 4 dan diulang sebanyak 5 kali. Faktor pertama adalah Pupuk Organik Cair Bio Sugih (S) yang terdiri dari 4 taraf, yaitu : tanpa Pupuk Organik Cair Bio Sugih (s_0), 1 ml/L Pupuk Organik Cair Bio Sugih (s_1), 2 ml/L Pupuk Organik Cair Bio Sugih (s_2), 3 ml/L Pupuk Organik Cair Bio Sugih (s_3). Faktor kedua adalah Inokulan Rhizobium (I) yang terdiri dari 4 taraf yaitu : tanpa Inokulan Rhizobium (i_0), Inokulan Rhizobium 5 g/kg benih (i_1), Inokulan Rhizobium 10 g/kg benih (i_2), Inokulan Rhizobium 15 g/kg benih (i_3).

Hasil penelitian menunjukkan bahwa Pupuk Organik Cair Bio Sugih (S) berpengaruh tidak nyata terhadap seluruh parameter pengamatan. Inokulan Rhizobium (I) berpengaruh tidak nyata terhadap seluruh parameter pengamatan. Interaksi perlakuan (SxI) berpengaruh sangat nyata pada umur berbunga, umur polong pertama dan berat kering biji, berpengaruh tidak nyata terhadap tinggi tanaman umur 14 HST, 28 HST, 42 HST, jumlah polong. Tinggi tanaman terbaik pada perlakuan s_3 yaitu 15,44 cm pada umur 14 HST, perlakuan s_1 32,25 cm pada umur 28 MST, dan perlakuan s_3 42,11 cm pada umur 42 HST. Umur berbunga tercepat pada interaksi yaitu s_2i_2 35,80 (36 hari), jumlah polong terbanyak pada perlakuan s_3 yaitu 69,80 g, umur polong tercepat pada perlakuan s_1i_2 yaitu 44,00 (44) hari dan berat kering biji per tanaman terbaik yaitu terdapat pada perlakuan s_1i_3 yaitu 108,16 g.

ABSTRACT

DHANI BUTARBUTAR. Faculty of Agriculture, University of 17 August 1945 Samarinda. The Effect of Application of Liquid Organic Fertilizer Bio Sugih and Rhizobium Inoculants on Growth and Yield of Soybean (*Glycine Max L.*) Varieties of Baluran Under the Guidance of Noor Jannah and Marisi Napitupulu

The aims of the study were to determine the effect of giving Bio Sugih Liquid Organic Fertilizer and Rhizobium Inoculant Dosage on the growth and yield of soybean (*Glycine Max L.*) and to obtain the most suitable concentration of Bio Sugih Liquid Organic Fertilizer and Rhizobium Inoculant on the growth and yield of soybean (*Glycine*). Max L.)

The research was carried out for 3 months from November 2019 to January 2020, starting from the preparation of the planting media to the last data collection. The research location is Pondok Karya Lestari Housing, Sambutan District, Samarinda, East Kalimantan.

The study used a completely randomized design (CRD) with a factorial pattern of 4 x 4 and was repeated 5 times. The first factor is Bio Sugih Liquid Organic Fertilizer (S) which consists of 4 levels, namely: without Bio Sugih Liquid Organic Fertilizer (s0), 1 ml/L Bio Sugih Liquid Organic Fertilizer (s1), 2 ml/L Bio Liquid Organic Fertilizer Sugih (s2), 3 ml/L Bio Sugih Liquid Organic Fertilizer (s3). The second factor was Rhizobium inoculants (I) which consisted of 4 levels, namely: without Rhizobium inoculants (i0), Rhizobium inoculants 5 g/kg seeds (i1), Rhizobium inoculants 10 g/kg seeds (i2), Rhizobium inoculants 15 g/kg seed (i3).

The results showed that Bio Sugih (S) Liquid Organic Fertilizer had no significant effect on all observation parameters. Rhizobium (I) inoculants had no significant effect on all observation parameters. The treatment interaction (SxI) had a very significant effect on flowering age, age of first pod and dry weight of seeds, no significant effect on plant height at 14 DAP, 28 DAP, 42 DAP, and number of pods. The best plant height in the s3 treatment was 15.44 cm at the age of 14 DAP, the s1 treatment was 32.25 cm at the age of 28 DAP, and the s3 treatment was 42.11 cm at the age of 42 DAP. The fastest flowering age in the interaction was s2i2 35.80 (36 days), the highest number of pods in the s3 treatment was 69.80 g, the fastest pod age in the s1i2 treatment was 44.00 (44) days and the best dry weight of seeds per plant was there the s1i3 treatment is 108.16 g.