

ANIK SETIA DEWI NIM. 16.03.1.1.1.00004. Pengaruh Campuran Bahan Organik Paitan (*Thitonia Diversifolia*) Dan Jerami (*Glycine Max* (L) Merrill) Terhadap Sifat Fisik Tanah, Pertumbuhan Dan Hasil Kedelai Pada Tanah Mediteran. Di bawah Bimbingan **Dr. Ir. Eko Murniyanto, M.P.**

ABSTRAK

Tanah Madura didominasi oleh kompleks tanah mediteran merah yang berbahan induk batu kapur dan batu pasir. Sehingga menjadi perhatian utama pengelolaan tanah mediteran. Sifat fisik yang spesifik menjadi permasalahan, misalnya daya menahan air rendah, porositas tanah tinggi. Tanah mediteran pada umumnya diusahakan untuk tanaman pangan seperti padi gogo, jagung dan kedelai. Produktivitas kedelai diduga kurang optimal akibat kesuburan tanah rendah. Bahan organik merupakan material yang dapat digunakan untuk memperbaiki permasalahan yang ada karena dapat memperbaiki sifat fisika tanah. Tujuan penelitian ini mengetahui pengaruh campuran bahan organik paitan dan jerami padi terhadap sifat fisik tanah, pertumbuhan, dan hasil tanaman kedelai. Penelitian ini dilaksanakan di Kebun Buah Socah, pada bulan November 2019 sampai Maret 2020. Metode Penelitian ini yang digunakan adalah rancangan acak kelompok dengan 6 taraf perlakuan. Hasil penelitian menunjukkan bahwa pemberian campuran bahan organik paitan 1,67 ton/ha + jerami 1,12 ton/ha memberikan hasil produksi terbaik dan tidak berpengaruh nyata terhadap KPA tanah cenderung naik, porositas tanah cenderung menurun, bobot isi tanah (*soil bulk density*) cenderung menurun, tinggi tanaman cenderung rendah, waktu berbunga pada umur 34 HST, berat biomassa tanaman cenderung rendah, bobot biji pertanaman mencapai 14,46 g, jumlah polong isi 47,44, jumlah polong cipo, meskipun begitu perlakuan ini memberikan pengaruh nyata terhadap bobot 100 biji, dan hasil produksinya mencapai 3,54 ton/ha.

Kata Kunci: Kedelai, Sifat Fisik Tanah, Bahan Organik, Pertumbuhan, Produksi.

ANIK SETIA DEWI NIM. 16.03.1.1.1.00004. The Effect of Paitan Organic Matter(*Thitonia Diversifolia*) and Straw (*Oryza sativa*) to the Physical Properties of Soil, The Growth and result of the Soybean (*Glycine max*) on Mediterranean Soil. Supervisor **Dr. Ir. Eko Murniyanto, M.P.**

ABSTRACT

The domination of Madura soil that is red mediterranean soil composition made from limestone and sandstone. So that it becomes a main concern in the management of Mediterranean soil. The properties of specific physical cause some problems, for example low water holding capacity and high soil porosity. Usually Mediterranean soil used for food crops such as upland rice, corn and soybeans. Soybean productivity is less than optimal due to low soil fertility. Organic matter is a material that can be used to improve existing problems because it can improve the physical properties of the soil. The aim of this study was to determine the effect a mixture of paitan organic matter and straw on physical properties of soil and yield of soybean plants. The research was carried out in Socah Orchards, from November 2019 to March 2020. The research method was used a randomized block design with 6 levels of treatment. The result showed that the administration of paitan organic matter 1,67 ton/ha + jerami 1,12 ton/ha give the best production results and have no significant effect on the KPA of soil which tends to rise, soil porosity tends to decrease, soil bulk density tends to decrease, height of plant tends to be low, flowering time at age 34 HST, weight of plant biomass tends to be low, the weight of crop seed reaches 14,46 g, the number of filled pods 47,44, the number of cipo pods, however this treatment has a significant effect on the weight of 100 seeds, and the production results reach 3,54 ton/ha.

Key words: Soybean, The Physical Properties of Soil, Organic Matter, Growth, Production.