ABSTRACT

Oil palm (*Elaeis guineensis* Jacq.) is a plantation commodity that has good development prospects in Indonesia and also has high economic value and large export potential. The increasing level of rejuvenation results in an increase in the need for quality seeds. Efforts to obtain good and quality seeds need to pay attention to the growth media used in the nursery. Oil palm nurseries have two stages, namely the first stage of initial nursery for three months (pre nursery) and the second stage of main nursery for nine months (main nursery). Efforts that can be made to support the growth and development of oil palm seedlings are by providing nutrients through fertilization. The aim of the research was to study the effect and obtain the best dose of empty oil palm fruit bunch compost and banana peel POC on the growth of oil palm seedlings (*Elaeis guineensis* Jacq.) in the main nursery. The research used a Randomized Block Design (RBD) with 9 treatments and 3 replications, so there are 27 experimental units. The number of plants in the experimental unit was 2 plants and all plants were sample plants with a distance of 50cm x 50cm. The total number of oil palm seed plants is 54 plants. This research was carried out at the Teaching and Research Farm, Faculty of Agriculture, Jambi University from January to April 2023. The variables observed were increase in seed height, increase in number of fronds, increase in stem diameter, shoot dry weight, root dry weight, root shoot ratio, and root volume. . The observed data was then analyzed using variance analysis and the DMRT test. The results of this research indicate that the provision of TKKS compost and banana peel POC has not been able to significantly increase the growth of oil palm seedlings in the Main Nursery.

Keywords: Oil palm, composting empty oil palm fruit bunches, banana peel liquid organic fertilizer, Main nursery.

ABSTRAK

Kelapa sawit (*elaeis guineensis Jacq.*) merupakan salah satu komoditas perkebunan yang memiliki prospek pengembangan yang baik di Indonesia juga mempunyai nilai ekonomi yang tinggi dan potensi ekspor yang besar. Bertambahnya tingkat peremajaan mengakibatkan kebutuhan bibit yang berkualitas meningkat. Usaha mendapatkan bibit yang baik dan berkualitas perlu memperhatikan media pertumbuhan yang digunakan pada pembibitan. Pembibitan kelapa sawit memiliki dua tahap yaitu tahap pertama pembibitan awal selama tiga bulan (pre nursery) dan tahap kedua pembibitan utama selama sembilan bulan (main nursery). Upaya yang dapat dilakukan untuk mendukung pertumbuhan dan perkembangan bibit kelapa sawit yaitu dengan penyediaan unsur hara melalui pemupukan. Tujuan penelitian untuk mempelajari pengaruh dan mendapatkan dosis terbaik dari pemberian pupuk kompos tandan kosong kelapa sawit dan POC kulit pisang terhadap pertumbuhan bibit kelapa sawit (*Elaeis guineensis* Jacq.) di main nursery.Penelitian menggunakan Rancangan Acak Kelompok (RAK) dengan 9 perlakuan dan 3 ulangan, sehingga terdapat 27 satuan percobaan. Jumlah tanaman dalam satuan percobaan terdapat 2 tanaman dan seluruh tanaman merupakan tanaman sampel dengan jarak 50cm x 50cm. Jumlah keseluruhan untuk tanaman bibit kelapa sawit adalah 54 tanaman. Penelitian ini dilaksanakan di Teaching and Research Farm

Fakultas Pertanian Universitas Jambi pada bulan Januari sampai April 2023. Variabel yang diamati yaitu pertambahan tinggi bibit, pertambahan jumlah pelepah, pertambahan diameter batang, bobot kering tajuk, bobot kering akar, rasio tajuk akar, dan volume akar. Data yang diamati kemudian dianalisis menggunakan sidik ragam dan uji DMRT. Hasil penelitian ini menunjukkan bahwa pemberian kompos TKKS dan POC kulit pisang belum mampu meningkatkan secara nyata pertumbuhan bibit kelapa sawit di Main Nursery.

Kata kunci: Kelapa sawit, Pupuk kompos tandan kosong kelapa sawit, POC kulit pisang kepok, Main nursery.