Abstract. *Betel nut (Areca catechu L.) is a palm plant, which is grown mainly for seed use. The purpose of this study was to determine the effect of giving tatal crumb rubber waste compost on ultisol soil on the growth of Betara areca nut plant seeds (Areca catechu L.) and determine the best dose of tatal waste compost for the growth of Betara areca nut (Areca catechu L.) plant seeds. The research was carried out on Jalan Hj Nurijah Arifien at Rt.10 Olak Kemang, Teluk Lake District. The study was conducted for 3 months from June to September 2023. Testing of tatal waste compost analysis was carried out at the BPTP Jambi Laboratory. The study used a complete randomized design (RAL). The treatment design used different doses of tatal compost consisted of 4 dose levels as follows: t0 = soil 3 kg per polybag (control) t1 = tatal compost with a dose of 25 g + 3kg soil, t2 = tatal compost with a dose of 50 g + 3kg soil, t3 = tatal compost with a dose of 75 g + 3kg soil, t4 = tatal compost with a dose of 100 g + 3kg soil. Each treatment was repeated 3 times, resulting in 15 experimental plots. The number of plants per plot is 5 plants, 3 plants are taken as samples, so that the total number is 75 plants. Then the data was tabulated followed by variety analysis (Anova), then continued with the duncan test (DNMRT) at the level of α 5%. Based on the data from the results of research and variety analysis, it shows that the application of tatal waste compost with various doses has a real effect on plant height, stem diameter, root dry weight, root crown ratio and seedling quality index, but has no real effect on header dry weight. Application of tatal waste compost with t4 treatment dose (100g tatal waste compost + 3kg ultisol soil) showed the highest average value on the observed parameters. The t4 treatment increased plant height by 26.53%, stem diameter by 53.24%, plant crown dry weight by 44.26%, and plant root dry weight by 300% and seedling quality index by 133.33%.*

Keywords : *Compost; Ultisol soil; Betel nut plant*

Abstrak. Pinang (*Areca catechu* L.) merupakan tanaman jenis palma, yang ditanam terutama untuk dimanfaatkan bijinya. Tujuan penelitian ini untuk mengetahui pengaruh pemberian kompos limbah tatal *crumb rubber* pada tanah ultisol terhadap pertumbuhan bibit tanaman pinang Betara (*Areca catechu L*.) dan menentukan dosis kompos limbah tatal yang terbaik untuk pertumbuhan bibit tanaman pinang Betara (*Areca catechu L*.). Penelitian di laksanakan Jalan Hj Nurijah Arifien di Rt.10 Olak Kemang, Kecamatan Danau Teluk. Penelitian dilaksanakan selama 3 bulan dari bulan Juni sampai September 2023. Pengujian analisis kompos limbah tatal di lakukan di Laboratorium BPTP Jambi. Penelitian menggunakan rancangan acak lengkap (RAL). Rancangan perlakuan yang digunakan dosis kompos tatal yang berbeda terdiri 4 taraf dosis sebagai berikut :t0 = Tanah 3 kg per polybag (kontrol) t1 = pemberian kompos tatal dengan dosis 25 g + 3kg tanah, t2 = pemberian kompos tatal dengan dosis 50 g + 3kg Tanah, t3 = pemberian kompos tatal dengan dosis 75 g + 3kg tanah, t4 = Pemberian kompos tatal dengan dosis 100 g+ 3kg tanah. Masing-masing perlakuan diulang 3 kali, sehingga terdapat 15 plot percobaan. Jumlah tanaman setiap plot sebanyak 5 tanaman diambil 3 tanaman sebagai sampel, sehingga jumlah keseluruhan 75 tanaman. Kemudian data ditabulasi dilanjutkan dengan dianalisis ragam (Anova), kemudian dilanjutkan dengan uji *duncan* (DNMRT) pada taraf α 5%. Berdasarkan data hasil penelitian dan analisis ragam menunjukkan bahwa pemberian kompos limbah tatal dengan berbagai dosis memberikan pengaruh nyata pada tinggi tanaman, diameter batang, berat kering akar, nisbah tajuk akar dan indeks kualitas bibit, tetapi berpengaruh tidak nyata dengan berat kering tajuk. Pemberian pupuk kompos limbah tatal dengan dosis perlakuan t4 (100g kompos limbah tatal + 3kg tanah ultisol) menunjukkan nilai rata-rata tertinggi pada parameter yang diamati. Perlakuan t4 meningkatkan tinggi tanaman sebesar 26,53%, diameter batang sebesar 53,24%, berat kering tajuk tanaman sebesar 44,26%, dan berat kering akar tanaman sebesar 300% dan indeks kualitas bibit sebesar 133,33 %..

Kata kunci : *Kompos; Tanah Ultisol; Tanaman Pinang*