

KAJIAN PERTUMBUHAN DAN HASIL BEBERAPA TANAMAN SELA SISTEM TUMPANGSARI PADA KAWASAN PERKEBUNAN KELAPA SAWIT TBM 3

INTISARI

Penelitian ini bertujuan untuk 1) mengetahui pertumbuhan dan hasil padi gogo, jagung, sorgum, kedelai dan kacang tanah di antara tegakan tanaman kelapa sawit TBM 3 dan dibandingkan dengan tanaman monokulturnya, dan 2) mengetahui performa tanaman kelapa sawit TBM 3 pada interaksinya dengan padi gogo, jagung, kedelai, kacang tanah dan sorgum dan dibandingkan dengan tanaman monokulturnya. Penelitian dilaksanakan di perkebunan kelapa sawit TBM 3, Desa Batu Peny, Kecamatan Gantung, Kabupaten Belitang Timur, pada Juni - November 2013.

Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) faktor tunggal dengan tiga blok sebagai ulangan. Perlakuan yang diuji adalah sistem tanam yaitu tumpangsari padi gogo, jagung, kedelai, kacang tanah dan sorgum dengan kelapa sawit TBM 3, monokultur tanaman semusim dan monokultur kelapa sawit TBM 3. Pengamatan dilakukan terhadap variabel lingkungan dan tanah, aktivitas fisiologis, pertumbuhan dan komponen hasil tanaman semusim, serta aktivitas fisiologis dan pertumbuhan kelapa sawit TBM 3. Data yang diperoleh dari hasil percobaan selanjutnya dianalisis varian (ANOVA) dan dilanjutkan dengan uji LSD taraf 5%. Keeratan hubungan antar variabel pengamatan ditentukan dengan analisis korelasi.

Hasil penelitian memberikan informasi bahwa lahan kelapa sawit TBM 3 memiliki ruang tumbuh yang masih kosong sebesar 65%. Produktivitas padi gogo, jagung, kedelai, kacang tanah dan sorgum yang ditanam secara tumpangsari berturut-turut adalah 315,72 kg/ha, 2400 kg/ha, 640 kg/ha, 2140 kg/ha, dan 2860 kg/ha, sedangkan produktivitas padi gogo, jagung, kedelai, kacang tanah dan sorgum monokultur berturut-turut adalah 138,26 kg/ha, 3350 kg/ha, 546,5 kg/ha, 2350 kg/ha, dan 1860 kg/ha. Produktivitas padi gogo, jagung, kedelai, kacang tanah dan sorgum tumpangsari dapat menyamai monokulturnya. Keberadaan tanaman sela di antara barisan kelapa sawit TBM 3 tidak mengganggu pertumbuhan kelapa sawit TBM 3.

Kata kunci : kelapa sawit TBM 3, tumpangsari, padi gogo, jagung, kedelai, kacang tanah, sorgum

**STUDY ON GROWTH AND YIELD OF
SEVERAL ANNUAL CROPS INTERCROPPING
IN THE AREA OF THREE YEARS OLD OF OIL PALM**

ABSTRACT

The objectives of research were 1) to determine the growth and yield of upland rice, maize, sorghum, soybeans and peanuts in between stands of three years old of oil palm and compared to monoculture, and 2) to determine the performance of three years old of palm oil on interactions with upland rice, maize, soybeans, sorghum and peanuts and compared to monoculture. The research was conducted at three years old of oil palm plantations, Batu Penyu Village, Gantung District, East Belitung Regency, in June to November, 2013.

The research was conducted in Randomized Complete Block Design (RCBD) single factor with three blocks as replications. Factor was cropping system, namely intercropping of upland rice, maize, soybeans, peanuts and sorghum with three years old of palm oil, monoculture of upland rice, maize, soybeans, peanuts, sorghum and three years old of oil palm. The observations were done on several variables of microclimate and soil, physiological activities, growth and yield components of several annual crops, as well as physiological activities and growth of three years old of oil palm. Data were analyzed with Analysis of Variance (ANOVA), and continued with LSD test at 5% levels. The relationship patterns between the variables were determined using correlation analysis.

The results showed that the land of three years old of oil palm has an empty growth space by 65%. Productivities of upland rice, maize, soybeans, peanuts and sorghum intercropped with three years old of oil palm were 315.72 kg/ha, 2,400 kg/ha, 640 kg/ha, 2140 kg/ha, and 2860 kg/ha, while productivities of monoculture of upland rice, maize, soybeans, peanuts and sorghum were 138.26 kg/ha, 3350 kg/ha, 546.5 kg/ha, 2350 kg/ha, and 1860 kg/ha, respectively. Productivities of upland rice, maize, soybeans, peanuts and sorghum intercropped with three years old of oil palm were able to match with monoculture. The existences of upland rice, maize, soybeans, peanuts and sorghum in between the rows of three years old of oil palm don't interfere with the growth of three years old of oil palm oil.

Key words: oil palm, intercropping, upland rice, maize, soybean, peanuts, sorghum