

**STUDI PENERAPAN SISTEM WATER MANAJEMEN DI PERKEBUNAN
KELAPA SAWIT MENGHASILKAN DI KALIMANTAN SELATAN
TERHADAP PERTUMBUHAN, PRODUKSI DAN RENDEMEN BUAH
KELAPA SAWIT (*Elaeis guinensis* Jacq.)**

ABSTRAK

Atas dasar ini dilakukan penelitian tentang studi penerapan sistem water manajemen di perkebunan kelapa sawit menghasilkan di kalimantan selatan terhadap pertumbuhan, produksi dan rendemen buah kelapa sawit (*Elaeis guinensis* Jacq.). Penelitian ini dilaksanakan di PT. Putra Bangun Bersama (Julong Group Indonesia) Kalimantan Selatan. Penelitian ini dimulai Bulan Januari 2024 sampai Bulan April 2024. Penelitian ini dibimbing oleh Ibu Dr. Yenni Asbur, S.P., M.P. sebagai Ketua Komisi Pembimbing dan Ibu Dr. Yayuk Purwaningrum, S.P., M.P. selaku Anggota Komisi Pembimbing.

Penelitian ini bertujuan untuk mengetahui manfaat sistem *Water Manajemen* pada saat Anomali Iklim terjadi. Mengetahui pengaruh Anomali Iklim terhadap pertumbuhan dan perkembangan tanaman kelapa sawit (*Elaeis guinensis* Jacq.) di Kalimantan Selatan. Mengetahui pengaruh Anomali Iklim terhadap produksi dan rendemen tanaman kelapa sawit (*Elaeis guinensis* Jacq.) di Kalimantan Selatan. Metode penelitian yang digunakan pada data primer adalah Rancangan Acak Kelompok (RAK) Non-faktorial yang diulang tiga kali dengan perlakuan system water manajemen (W) yang terdiri dari dua taraf, yaitu : W_0 = Tanpa sistem water manajemen, W_1 = Sistem water manajemen. Data sekunder merupakan data curah hujan, suhu, kelembaban, produksi TBS, dan rendemen buah kelapa sawit selama lima tahun (2019-2023). Variabel yang diamati yaitu pertumbuhan lilit batang, jumlah pelepah, jumlah pelepah tegak, jumlah pelepah sengkleh, jumlah bunga jantan, jumlah bunga betina, sex ratio, jumlah TBS / sampel, jumlah tbs perblok, berat tbs, produksi dan rendemen.

Hasil penelitian menunjukkan bahwa penerapan sistem *Water Manajemen* tanaman menghasilkan (TM) berpengaruh terhadap lilit batang, jumlah bunga jantan, jumlah bunga betina, sex ratio, jumlah TBS perblok, berat TBS, produksi dan rendemen. Anomali Iklim berpengaruh terhadap pertumbuhan dan perkembangan tanaman kelapa sawit terutama pada lilit batang, jumlah bunga jantan dan jumlah bunga betina. Anomali Iklim berpengaruh terhadap produksi tanaman kelapa sawit terutama pada jumlah TBS / sampel, jumlah TBS perblok, berat TBS, produksi dan rendemen.

**STUDY ON THE IMPLEMENTATION OF WATER MANAGEMENT
SYSTEM IN PRODUCTIVE OIL PALM PLANTATIONS IN SOUTH
KALIMANTAN TOWARDS THE GROWTH, PRODUCTION, AND YIELD
OF OIL PALM FRUITS (*Elaeis guineensis* Jacq.)**

ABSTRACT

*Based on this, research was conducted on the study of implementing a water management system in productive oil palm plantations in South Kalimantan towards the growth, production, and yield of oil palm fruits (*Elaeis guineensis* Jacq.). This research was conducted at PT. Putra Bangun Bersama (Julong Group Indonesia) in South Kalimantan. The research took place from January 2024 to April 2024. This research was supervised by Dr. Yenni Asbur, S.P., M.P. as the Chair of the Advisory Committee and Dr. Yayuk Purwaningrum, S.P., M.P. as a member of the Advisory Committee.*

*This research aims to determine the benefits of the Water Management system during Climate Anomalies. It seeks to understand the influence of Climate Anomalies on the growth and development of oil palm trees (*Elaeis guineensis* Jacq.) in South Kalimantan. Additionally, it aims to investigate the impact of Climate Anomalies on the production and yield of oil palm trees (*Elaeis guineensis* Jacq.) in South Kalimantan. The research methodology employed for primary data is a Randomized Complete Block Design (RCBD) repeated three times with two levels of water management system treatment (W): W0 = Without water management system, W1 = With water management system. Secondary data include rainfall, temperature, humidity, Fresh Fruit Bunches (FFB) production, and yield of oil palm fruits over five years (2019-2023). Variables observed include stem girth growth, number of fronds, number of erect fronds, number of dead fronds, number of male flowers, number of female flowers, sex ratio, FFB per sample, FFB per block, FFB weight, production, and yield.*

The research results indicate that the implementation of the Water Management system for oil palm plants has an impact on stem girth, the number of male flowers, the number of female flowers, sex ratio, FFB per block, FFB weight, production, and yield. Climate Anomalies affect the growth and development of oil palm plants, particularly in stem girth, the number of male flowers, and the number of female flowers. Climate Anomalies also influence the production of oil palm plants, particularly in terms of FFB per sample, FFB per block, FFB weight, production, and yield.