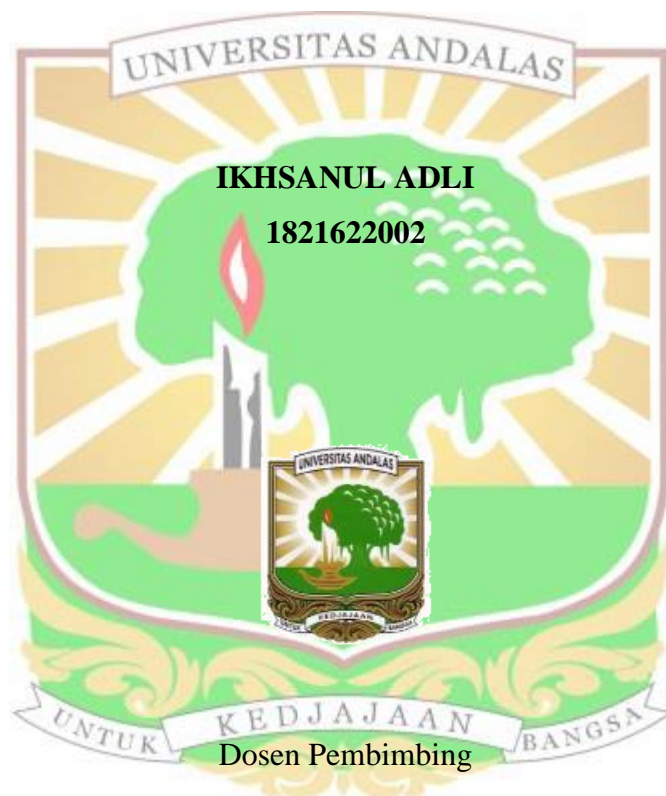


**DAMPAK MANAJEMEN PERKEBUNAN KELAPA SAWIT SELAMA  
PERIODE 2017-2021 TERHADAP DINAMIKA STATUS KESUBURAN  
TANAH DI SUMATERA BARAT  
(STUDI KASUS PT. INCASI RAYA GROUP)**

**Tesis**



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**SEKOLAH PASCASARJANA  
UNIVERSITAS ANDALAS**

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Oleh: IKHSANUL ADLI (1621622002)

(Dibawah bimbingan: Prof. Dr. Ir. Aprisal, MP dan Dr. Jabang Nurdin, M. Si)

Abstrak

Budidaya kelapa sawit yang telah berjalan, sesuai anjuran pemerintah dengan fokus manajemen perkebunan yang baik untuk produktivitas tanah dan tanaman kelapa sawit optimal. Memicu penulis tertarik untuk mengamati lebih dekat dampak manajemen perkebunan kelapa sawit terhadap dinamika status kesuburan tanah. Selain itu, hubungan jenis tanah dan manajemen perkebunan terhadap dinamika status kesuburan tanah perkebunan kelapa sawit di Sumatera Barat dalam ruang lingkup studi pada PT. Incasi Raya Grup yaitu; PT. Selago Makmur Plantation (PT. SMP), PT. Sumaterajaya Agrolestari - Solok Selatan (PT. SJAL-SS), dan PT. Incasi Raya Sodeitan (PT. IR. Sodeitan) selama periode 2017-2021 dengan tahun tanam 1998. Penelitian ini dilaksanakan dengan menggunakan metode kuantitatif deskriptif dengan pendekatan korelasi (*correlational research*). Pengolahan data dilakukan dengan *analysis of variance* (ANOVA) pada selang kepercayaan 95% dan 99%, dilanjutkan dengan menggunakan uji korelasi Pearson SPSS 25. Hasil penelitian menunjukkan manajemen perkebunan berupa pupuk NPK Hi-Kay Bio hanya diberikan pada PT. SMP dan tidak adaya pemberian kapur pertanian atau dolomit dilokasi penelitian. Jenis tanah di PT. SMP adalah Ultisols (*Typic Kanhapludults*), PT. SJAL-SS adalah Inceptisols (*Typic Dystrudepts*) dan PT. IR Sodeitan adalah Histosols (*Sapric Haplohemist*). pH tanah pada setiap perusahaan tidak berbeda nyata dan tergolong agak masam-masam. PT. SMP dan PT. SJAL-SS memiliki %C-Organik, N-total, Rasio C/N, P-tersedia, KTK, dan Basa-basa (K, Na, Ca, Mg) tidak berbeda nyata, tetapi kejenuhan basa (KB) berbeda tidak nyata (kandungan hara tergolong rendah). PT. IR. Sodeitan memiliki nilai KTK, K dan Ca berbeda nyata dengan lokasi lainnya. Status kesuburan tanah (SKT) di PT. SMP dan PT. SJAL-SS menunjukkan selama 5 tahun periode 2017-2021, tergolong rendah dan PT. IR. Sodeitan tergolong sedang. Dampak manajemen perkebunan berupa input TKKS, solid dan pupuk kimiawi dan hal yang sama terlihat pada PT. IR Sodeitan, dimana pemakaian pupuk kimia yang disertai dengan pembuatan saluran drainase, memberikan dampak positif terhadap produksi, tetapi masih belum dapat meningkatkan status kesuburan tanah. Perlu dilakukan perubahan manajemen lahan dengan mempedomani kualitas dan jenis tanah, seperti penambahan bahan organik berupa biochar dan kapur pertanian atau dolomit yang dapat meningkatkan tingkat status kesuburan tanah dan hara dalam tanah di lokasi PT. SMP dan PT. SJAL-SS. serta PT. IR Sodeitan.

Kata kunci : Manajemen, Perkebunan Kelapa Sawit, Jenis Tanah, Pupuk, Biochar

**THE IMPACT OF OIL PALM PLANTATION MANAGEMENT DURING  
THE 2017-2021 PERIOD ON SOIL FERTILITY DYNAMICS IN  
WEST SUMATRA  
(CASE STUDY OF PT. INCASI RAYA GROUP)**

By : IKHSANUL ADLI (1621622002)

(The Supervision of : Prof. Dr. Ir. Aprisal, MP dan Dr. Jabang Nurdin, M. Si)

Abstracts

Oil palm cultivation that has been running, according to government recommendations with a focus on good plantation management for optimal soil and oil palm productivity. The author is interested in taking a closer look at the impact of oil palm plantation management on the dynamics of soil fertility levels. In addition, the relationship between soil type and plantation management on the dynamics of soil fertility levels of oil palm plantations in West Sumatra within the scope of the study at PT. Incasi Raya Group, namely; PT. Selago Makmur Plantation (PT. SMP), PT. Sumaterajaya Agrolestari - South Solok (PT. SJAL-SS), and PT. Incasi Raya Sodetan (PT. IR. Sodetan) during the period 2017-2021 with the planting year 1998. This research was conducted using a descriptive quantitative method with a correlation approach (*correlational research*). Data processing was done with *analysis of variance* (ANOVA) at the 95% and 99% confidence intervals, followed by using the SPSS 25 Pearson correlation test. The results showed that plantation management in the form of NPK Hi-Kay Bio fertiliser was only given to PT. SMP and there was no provision of agricultural lime or dolomite in the research location. Soil types at PT. SMP are Ultisols (Typic Kanhapludults), PT. SJAL-SS are Inceptisols (Typic Dystrudepts) and PT. IR. Sodetan are Histosols (Sapric Haplohemist). Soil pH in each company was not significantly different and was classified as slightly acidic to acidic. PT. SMP and PT. SJAL-SS have %C-Organic, N-total, C/N Ratio, P-available, CEC, and Bases (K, Na, Ca, Mg) not significantly different, but base saturation (KB) is not significantly different (nutrient content is low). PT. IR. Sodetan has CEC, K and Ca values significantly different from other locations. The level of soil fertility in PT. SMP and PT. SJAL-SS shows that during the 5-year period 2017-2021, it is classified as low and PT. IR. Sodetan is classified as medium. The impact of plantation management in the form of inputs of TKKS, solid and chemical fertilisers and the same is seen in PT. IR. Sodetan, where the use of chemical fertilisers accompanied by the creation of drainage channels, has a positive impact on production, but still cannot improve soil fertility levels. It is necessary to change plantation management by guiding soil quality and type, such as the addition of organic materials in the form of biochar and agricultural lime or dolomite which can increase the level of soil fertility and nutrients in the soil at the location of PT. SMP and PT. SJAL-SS. and PT. IR. Sodetan.

Keywords: Management, Oil Palm Plantation, Soil Type, Fertiliser, Biochar