RINGKASAN

Sektor pertambangan batubara selama ini merupakan salah satu penopang ekonomi nasional terbesar bagi Indonesia. Akibat kegiatan penambangan batubara ini akan mengupas tanah seluruh vegetasi yang menutupi lahan tersebut, juga akan membentuk senyawa logam-logam berat pada lahan yang dapat menjadikan lahan tersebut menjadi tidak subur dan mengakibatkan kerusakan pada lingkungan di area sekitar. Sehingga perlu dilakukan reklamasi untuk memperbaiki dan menata kegunaan lahan yang terganggu dalam hal ini akibat kegiatan penambangan batubara. Oleh karena itu, perlu dilakukan analisis terhadap *fine coal* yang merupakan produk samping dari penambangan batubara sebagai media tanam dalam kegiatan reklamsi di PT Borneo Indobara.

Tujuan penelitian yakni menganalisis kandungan *fine coal* dan kadar asam humat serta menganalisis komposisi dosis antara *fine coal* dan pupuk kompos. Penelitian ini dilakukan dengan metode eksperimen pencampuran *fine coal* dan kompos dengan 6 perbandingan yaitu : A(70% kompos + 30% *fine coal*), B (50% kompos + 50% *fine coal*), C (30% kompos + 70% *fine coal*), D (100% soil), E (100% *fine coal*) dan F (100% kompos), dengan menggunakan rancangan acak lengkap (RAL) yang kemudian data dianalisis menggunakan *metode analisis of variance* (ANOVA) pada tingkat kepercayaan 95%.

Hasil penelitian diperoleh kandungan *fine coal* C organic 41,77, kadar asam humat sebesar 26,12% dan hasil yang optimal pada penambahan tinggi dan diameter tanaman antara komposisi *fine coal* dan pupuk kompos diperoleh dengan komposisi dosis 30% kompos + 70% *fine coal* dengan penambahan tinggi tanaman sengon rata-rata 250 cm dan diameter tanaman dengan rata-rata 2,99 cm pada usia 3 bulan dan usia 6 bulan dengan tinggi 396 cm dan diameter 6,09 cm dan hasil analisis menggunakan *metode analisis of variance* (ANOVA) diperoleh pengaruh pemberian pupuk kompos dan *fine coal* terhadap penambahan tinggi tanaman sengon menunjukan hasil yang sangat signifikan.

SUMMARY

The coal mining sector has been one of the biggest supports for the national economy in Indonesia. As a result of this coal mining activity, it will strip the soil of all the vegetation that covers the land, it will also form heavy metal compounds on the land which can make the land infertile and cause damage to the environment in the surrounding area. So it is necessary to carry out reclamation to improve and organize the use of land that has been disturbed, in this case due to coal mining activities. Therefore, it is necessary to analyze fine coal which is a by-product of coal mining as a planting medium in reclamation activities at PT Bornoe Indobara.

The aim of the research is to analyze the fine coal content and humic acid levels and analyze the dosage composition between fine coal and compost fertilizer. This research was carried out using an experimental method of mixing coal fertilizer and compost with 6 comparisons, namely: A (70% Compost + 30% fine coal), B (50% Compost + 50% fine coal), C (30% compost + 70% fine coal), D (100% soil), E (100% fine coal) and F (100% compost), using a completely randomized design (RAL) and then the data were analyzed using the analysis of variance (ANOVA) method at a confidence level of 95%.

The research results showed that the fine coal C organic content was 41.77, the humic acid content was 26.12% and optimal results in increasing plant height and diameter between the composition of fine coal and compost fertilizer were obtained with a dose composition of 30% compost + 70% fine coal with the addition of high Sengon plants average 250 cm and plant diameter with an average of 2.99 cm at 3 months of age and 6 months of age with a height of 396 cm and a diameter of 6.09 cm and the results of the analysis using the analysis of variance (ANOVA) method obtained the effect of giving compost fertilizer and coal fertilizer to increase the height of sengon plants showed very significant results.