PENGARUH PEMBERIAN DOLOMIT TERHADAP PERUBAHAN SIFAT TANAH DAN PERTUMBUHAN TANAMAN JELUTUNG RAWA (*Dyera Polyphylla*) PADA LAHAN GAMBUT TROPIKA PASCA KEBAKARAN

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INTISARI

Ekosistem gambut Indonesia memiliki peran penting dalam pelestarian sumberdaya air, pendukung berbagai keanekaragaman hayati, dan pengendalian iklim global. Namun meningkatnya lahan gambut terdegradasi akibat kebakaran berdampak pada permasalahan pemanasan global dan terganggunya ekosistem gambut yang ditandai dengan hilangnya vegetasi hutan serta terjadinya perubahan sifat tanah gambut. Oleh karena itu dibutuhkan program rehabilitasi lahan dengan tujuan mengembalikan ekosistem gambut dan mengakselerasi proses revegetasi dilahan terdegradasi. Penelitian ini bertujuan untuk mengetahui pengaruh pemberian dolomit terhadap perubahan sifat fisika dan kimia tanah serta pertumbuhan tanaman jelutung rawa pada lahan gambut tropika pasca kebakaran.

Kajian mengenai pengaruh dolomit terhadap sifat fisika dan kima tanah serta pertumbuhan tanaman jelutung rawa dilakukan di Taman Hutan Raya (Tahura) Orang Kayo hitam Provinsi Jambi pada tiga perlakuan: (1) lahan tanpa pemberian dolomit dan tanaman jelutung; (2) lahan tanpa dolomit, dengan penanaman jelutung; (3) lahan dengan pemberian dolomit dan dengan penanaman jelutung. Selanjutnya dilakukan pengujian beberapa karakteristik tanah seperti berat volume, daya hantar listrik, pH, N, P, dan K tersedia serta analisis mikrostruktur dan komposisi kimia tanah menggunakan alat *Scanning Electrone Microscope* (SEM).

Pengaruh dolomit pada lahan gambut pasca kebakaran meningkatkan nilai berat volume, N, P, dan K tersedia, C, O, Si, dan Fe, namun menurunkan nilai pH, daya hantar listrik (DHL), Ca, Cu, S, dan Zn. Pemberian dolomit juga meningkatkan pertumbuhan jelutung rawa (*Dyera Polyphylla*) umur dua bulan yang ditandai dengan rata-rata tinggi sebesar 37,68 cm dan rata-rata diameter 0,75 cm, dibandingkan pada lahan gambut tanpa dolomit dengan rata-rata tinggi 36,55 cm dan rata-rata diameter sebesar 0,43 cm. Pemulihan lahan gambut melalui program rehabilitasi dengan teknologi pemberian dolomit menjadi salah satu alternatif dalam memperbaiki karateristik lahan dan mendukung proses revegatasi dilahan terdegradasi.

Kata kunci: tanah gambut terdegradasi, pemberian dolomit, pertumbuhan jelutung rawa (*Dyera Polyphylla*)

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EFFECT OF DOLOMITE ON SOIL CHARACTERISTIC AND GROWTH OF JELUTUNG RAWA (*Dyera Polyphylla*) ON TROPICAL PEATLAND AFTER THE FIRE

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ABSTRACT

Indonesia's peat ecosystem has an important role in conserving water resources, supporting biodiversity, and global climate control. However, the increase in peatlands degradation due to fire has an impact on the problem of global warming and disruption of the peat ecosystem which is characterized by loss of forest vegetation and changes in the nature of peat soil. Therefore, a land rehabilitation program is needed with the aim of returning the peat ecosystem and accelerating the degradation process in the degraded land. This study aims to determine the effect of dolomite on changes in soil physical and chemical properties and the growth of jelutung rawa plants on post-fire tropical peatlands.

This research of dolomite effect on the physical and chemical characteristic of soil and growth of jelutung rawa plants were carried out in Tahura Orang Kayo Hitam in Jambi Province in three treatments: (1) land without dolomite and jelutung plants; (2) land without dolomite, with the planting of jelutung; (3) land by giving dolomite and by planting jelutung. Furthermore, several soil characteristics were tested such as bulk density, electrical conductivity, pH, N, P, and K available as well as microstructure analysis and soil chemical composition using Scanning Electrone Microscope (SEM) tools.

The effect of dolomite on peat land after fire increases on the high values of bulk density, available N, P, and K values, C, O, Si, and Fe. However, it reduces the pH , electrical conductivity, Ca, Cu, S, and Zn. Dolomite also increased the growth of jelutung rawa (*Dyera Polyphylla*) aged two months which was characterized by an average height of 37.68 cm and an average diameter of 0.75 cm, compared to peatlands without dolomite with a high average of 36.55 cm and an average diameter of 0.43 cm. Recovery of peatlands through rehabilitation programs with dolomite technology is one of the alternatives in improving land characteristics and supporting the degradation process of degraded land.

Keywords: degradation peatland, effect dolomite, growth of jelutung rawa (*Dyera Polyphylla*

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