

Pengaruh Sifat Kimia Tanah Terhadap Pertumbuhan Jati Umur 3 Tahun di Petak 14 Wanagama I Gunung Kidul

INTISARI

Faktor lingkungan sangat berpengaruh terhadap pertumbuhan tanaman. Salah satu faktor lingkungan yang sangat penting dalam memengaruhi pertumbuhan tanaman adalah kesuburan tanah. Kesuburan tanah salah satunya dapat dilihat berdasarkan sifat kimia tanahnya. Tujuan penelitian ini adalah mengetahui sifat kimia tanah terkait dengan kedalaman solum tanah dan mengetahui pengaruh sifat kimia tanah terhadap pertumbuhan tanaman jati.

Penelitian ini dilakukan di Petak 14 Wanagama I Gunung Kidul pada pertanaman uji klon jati. Pada bulan Februari 2012 dilakukan pengambilan sampel tanah per 10 cm pada masing-masing solum (tipis (0-10 cm), sedang (0-20 cm), dan dalam (0-30 cm)) dan pengukuran tinggi dan diameter tanaman. Analisis kandungan N total, P (total dan tersedia), K (total dan tersedia), Ca total dan Mg total tanah dilakukan pada bulan Maret-Mei 2012. Data yang diperoleh dianalisis menggunakan analisis regresi dengan *software* Microsoft excel 2007.

Hasil penelitian menunjukkan bahwa semakin dalam solum tanah konsentrasi P tersedia dan Mg total semakin besar; P total, K tersedia dan Ca total semakin berkurang; dan tidak berpengaruh terhadap N total dan K total. Pertumbuhan tinggi dan diameter jati sebanding dengan kandungan N total, P total dan tersedia, K total dan tersedia, dan Mg total, per hektar. Namun berbanding terbalik dengan Ca total per hektar.

Kata kunci : solum, pertumbuhan jati, sifat kimia tanah

The Effect of Soil Chemical Properties on Growth of the 3-Years Teak at Compartment 14 Wanagama I Gunung Kidul

ABSTRACT

Environmental factors affect the growth of plants. One of the most important environmental factors influencing plant growth is soil fertility. Soil fertility is one of which can be known by the chemical properties of the soil. The purposes of this study were to determine the chemical properties of soil associated with soil the solumn depth and to examine the effect of chemical properties of soil on plant growth teak.

This study was conducted in teak clone trial at compartment 14 Wanagama I Gunung Kidul. In February 2012, soil samples were taken from the different soil depths (shallow (0-10 cm), medium (0-20 cm), and deep (0-30 cm)) and measured of plant height and diameter. Analysis of N (total), P (total and available), K (total and available), Ca (total) and Mg (total) were conducted in March-May 2012. Data were analyzed using regression analysis with Microsoft Excel 2007 software.

It was trend that the deeper of the soil solumn the higher of available P and total Mg, and the lower of total P, available K and total Ca. While no decrease on total N and total K were observed when the soil solumn was deeper. Increasing total N ha^{-1} , total and available P ha^{-1} , total and available K ha^{-1} , and total Mg ha^{-1} increased heigh and diameter of plant. However, increasing total Ca ha^{-1} did not increase the plant growth.

Keywords: solum, teak growth, soil chemical properties