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Pengaruh limbah cair tahu terhadap kesuburan kimia pada tanah lithio hplustollis di desa Kepek kecamatan Wonosari kabupaten Gunungkidul
Dewi Puspita Sari, Drs. Jamulya, M.S.

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PENGARUH LIMBAH CAIR TAHU TERHADAP KESUBURAN KIMIA PADA TANAH LITHIC HAPLUSTOLLS DI DESA KEPEK KECAMATAN WONOSARI KABUPATEN GUNUNGKIDUL

Oleh

Dewi Puspita Sari
02/ 161428/ GE/ 05306

INTISARI

Adanya unsur atau ion yang masuk dalam tanah mengakibatkan akumulasi ion yang dapat berpengaruh terhadap sifat tanah. Penelitian ini dilakukan di Desa Kepek. Tujuan penelitian ini adalah (1) mengetahui kesuburan kimia tanah yang tidak terkontaminasi limbah cair tahu di Desa Kepek, (2) mengetahui kesuburan kimia tanah yang terkontaminasi limbah cair tahu di Desa Kepek, dan (3) mengetahui pengaruh limbah cair tahu terhadap tingkat kesuburan kimia tanah di Desa Kepek.

Metode yang digunakan adalah metode *casual comparative*. Pengambilan contoh tanah menggunakan *systematic sampling*. Satuan analisa berupa satuan tanah, pada setiap satuan tanah diambil dua macam sampel, yaitu sampel tanah yang tidak terkontaminasi limbah dan tanah yang terkontaminasi limbah. Parameter yang dipakai adalah kadar bahan organik, unsur hara makro tanah yaitu; kandungan nitrogen, fosfor dan kalium. Analisa kesuburan kimia tanah menggunakan kriteria kesuburan kimia tanah yang disusun oleh Pusat Penelitian Tanah Bogor tahun 1983.

Hasil penelitian menunjukkan bahwa kesuburan kimia pada tanah yang tidak terkontaminasi limbah cair tahu di Desa Kepek berdasarkan parameter bahan organik nya adalah tinggi, berdasarkan N totalnya sedang, kemudian berdasarkan kandungan fosfor tersedianya tinggi, dan berdasarkan kalium tersedianya sangat rendah. Kesuburan kimia pada tanah yang terkontaminasi limbah cair tahu di Desa Kepek berdasarkan parameter dan distribusi limbah menurut jarak tanah terhadap sumber limbah yaitu; pada tanah jarak dekat terdapat bahan organik yang tinggi, N totalnya tinggi, kandungan fosfor tersedianya sangat tinggi, kalium tersedia sangat rendah, sedangkan pada jarak sedang; bahan organiknya tinggi, N totalnya sedang, kandungan fosfornya sedang, kalium tersedia sangat rendah, dan pada tanah jarak jauh; bahan organiknya sedang, N totalnya sedang, kandungan fosfor tersedianya sedang, kalium tersedianya sangat rendah. Hasil analisa data menunjukkan bahwa pengaruh limbah cair tahu terhadap kesuburan kimia tanah di Desa Kepek adalah cenderung meningkatkan kesuburan kimia tanah yang dapat dilihat dengan meningkatnya bahan organik dan unsur hara makro tanah.

Kata kunci : limbah cair tahu, kesuburan kimia tanah.

**THE EFFECT OF TOFU LIQUID WASTE TO SOIL CHEMICAL
FERTILITY AT LITHIC HAPUSOLLS IN KEPEK VILLAGE, WONOSARI
DISTRICT, GUNUNGKIDUL REGENCY**

by

Dewi Puspita Sari
02 / 161428 / GE / 05306

ABSTRACT

The chemical elements and ion in the soil will lead to the ion accumulation that affects the soil characteristic. The research was conducted in Kepek Village. The aim of this research were (1) to study the soil chemical fertility which was not contaminated by tofu liquid waste, (2) to study the soil chemical fertility which was contaminated by tofu liquid waste, and (3) to study the effect of tofu liquid waste to soil chemical fertility.

The method applied to this research was a casual comparative method. The sample of soil was taken by using systematic sampling. The unit of analysis was soil unit. Two types of samples were taken from every soil unit, sample of soil which was not contaminated by tofu liquid waste and sample of soil which was contaminated by tofu liquid waste. The variables were uses are the organic substances the soil contained and chemical elements of soil such as nitrogen, phosphor, and potassium. The soil chemical fertility analysis was conducted by using soil chemical fertility classification stipulated by Pusat Penelitian Tanah Bogor, 1983.

The outputs of this research showed that soil which was not contaminated by tofu liquid waste in Kepek Village contained organic substances was high, N total showed intermediate class, then the phosphor variables include on high class, and very low potassium. Whereas the soil which was contaminated by tofu liquid waste based on variable and waste distribution measured by the distance between the soil to the contaminator were: in the nearest distance soil contains of high organic substance, high N variable, very high phosphor and of very low potassium, in the intermediate distance the soil contains of high organic substance, intermediate N variable, intermediate phosphor and very low potassium, in the farthest distance organic substance in the soil is intermediate, intermediate N variable, intermediate phosphor and very low potassium. The output of the data analysis denote that tofu liquid waste in Kepek Village increases the soil chemical fertility that was indicated by the increasing of the number of organic substances and macro chemical elements of soil.

Keyword: tofu liquid waste, soil chemical fertility