

KARAKTERISTIK KESUBURAN TANAH DAN POTENSI HARA DARI BAHAN ORGANIK SISA PANEN PADI SAWAH PADA BEBERAPA LOKASI DI SUMATERA BARAT

Abstrak

Penelitian ini bertujuan untuk mengetahui karakteristik dan potensi sumbangan hara dari biomassa sisa panen padi dan akar serta hubungannya dengan karakteristik kesuburan tanah dan stok unsur hara pada sawah intensifikasi di Sumatera Barat. Penelitian ini telah dilaksanakan dari bulan Agustus 2012 sampai Desember 2012. Penelitian dilakukan di tiga lokasi yaitu di Buayan, Anduring dan Aie Angek, dengan metoda survei dan observasi lapangan. Hasil penelitian menunjukkan bahwa status unsur hara tanah : pH tergolong agak masam, C-organik, N-total, Ca-dd dan C/N di Buayan > Anduring > Aie Angek, P tersedia, K-dd dan Mg-dd di Aie Angek > Anduring > Buayan. Sumbangan hara dari biomass tunggul padi dan akar untuk C-total menunjukkan bahwa di Buayan > Aie Angek > Anduring, N-total pada lokasi Buayan > Anduring > Aie Angek , P-total di lokasi Aie Angek > Anduring > Buayan, Ca dan Mg di lokasi Aie Angek > Anduring > Buayan, sedangkan K pada lokasi Buayan > Aie Angek > Anduring. Rata-rata sumbangan hara biomassa sisa panen tunggul padi dan akar (kg/ha/musim tanam) di Buayan ; N 166,21; P 2,39; K 7,49; Ca 2,77; Mg 12,38; dan di Anduring; N 146,78; P 3,37; K 5,96; Ca 2,20; Mg 6,55; dan di Aie Angek ; N 140,54; P 8,86; K 7,79; Ca 2,68; Mg 7,53. Stok unsur hara tanah (kg/ha) di Buayan; N 6.760,00; P 32,03; K 10,92; Ca 18,40; Mg 30,00; dan di Anduring; N 4.420,00; P 50,41; K 18,72; Ca 16,80; Mg 32,88; dan di Aie Angek; N 2.840; P 64,86; K 8,58; Ca 14,80; Mg 38,16. Sumbangan hara dari biomassa sisa panen tunggul padi dan akar berkorelasi positif dengan stok unsur hara tanah seperti N,P, Ca-dd dan C-organik.

Kata kunci : *bahan organik, biomassa, kesuburan tanah, padi, sawah*

CHARACTERISTICS OF SOIL FERTILITY AND NUTRIENT POTENCY OF ORGANIC MATTER FROM RESIDUAL CROPS IN SEVERAL LOCATIONS IN WEST SUMATERA

Abstract

The aim of this research was to determine the characteristics and potential contribution of nutrients from residues of rice biomass and roots as well as the relationship between soil fertility characteristics and nutrient stocks in rice field intensifications in West Sumatra. This study was conducted by using survey methods and field observations at three locations, in Buayan, Anduring, and Aie Angek, from August 2012 to December 2012. The results showed that the nutrient status of the soil : pH was slightly acid, organic-C, total-N, Ca-exchangeable and C/N ration in Buayan > Anduring > Aie Angek. On other hand, the opposite or order was found for P-available, K- and Mg-exchangeable. The nutrient contribution of rice stubble and root biomass to C and K indicated that in Buayan > Aie Angek > Anduring, and N in Buayan > Anduring > Aie Angek, P, Ca and Mg in Aie Angek > Anduring > Buayan. Average nutrient contribution of residual biomass of rice stubble and roots (kg/ha/season) in Buayan; N=166.21; P=2.39; K=7.49; Ca=2.77; Mg=12.38; an in Anduring; N=146.78; P=3.37; K=5.96; Ca=2.20; Mg=6.55; and in Aie Angek; N=140.54; P=8.86; K=7.79; Ca=2.68; Mg=7.53. Stock of soil nutrients (kg/ha) in Buayan, N=6,760.00; P=32.03; C=10.92; Ca=18.40; Mg=30.00, and in Anduring; N=4,420.00; P=50.41; K=18.72; Ca=16.80; Mg=32.88, and in Aie Angek, N=2,840.00; P=64.86; K=8.58; Ca=14.80; Mg=38.16. Contribution of nutrients from residual of rice stubble and roots was positively correlated with the stock of soil nutrients such as N, P, Ca-exchangeable and C-organic.

Keyword : *organic matter, biomass, soil fertility, paddy ,rice field, stubble residues, rice root.*