ABSTRAK

Tujuan penelitian ini adalah untuk mengetahui pengaruh penambahan bioaktivator Pumakkal, EM4 dan Urea. Mengetahui pengaruh campuran pumakkal, EM4 dan urea yang memberikan pengaruh terbaik. Jenis penelitian ini adalah penelitian eksperimen dengan menggunakan RAL 4 perlakuan dan 5 ulangan, perlakuannya adalah menggunakan urea saja, perlakuan ke 2 menggunakan EM4 saja, perlakuan ke 3 menggunakan Pumakkal saja dan perlakuan ke 4 menggunakan campuran pumakkal, EM4 dan urea. Setiap perlakuan diberikan ulangan sebanyak 5 kali. Parameter yang diamati adalah protein kasar (PK) dan serat kasar (SK). Data dianalisis menggunakan One-Way ANOVA (Uji normalitas, Homogenitas, Hipotesis dan BNJ). Berdasarkan data hasil tentang kandungan protein dan serat kasar fermentasi jerami padi dapat diketahui bahwa semua perlakuan berdistribusi normal karena $L_0 < L_{daf}$ 0,0337. Setelah dilakukan uji homogenitas didapat bahwa x^2 1,27 $< x^2$ $_{(1-0,05)\ (4-1)}$ 7,81 dari tabel chi-kuadrat yang berarti H0 diterima homogen, maka dilanjutkan uji hipotesis, hasil uji hipotesis tersebut diperoleh berpengaruh nyata. Uji statistika tahap terakhir yaitu uji BNJ (Beda Nyata Jujur), memberi kesimpulan bahwa PK dan SK dari semua perlakuan berbeda nyata dan berpengaruh baik, namun kandungan yang diperoleh belum memenuhi kriteria Standar Nasional Indonesia (SNI). Berdasarkan hasil uji coba buletin pembelajaran kepada peserta didik, buletin pembelajaran sudah layak digunakan untuk media pembelajaran biologi kelas XII.

Kata Kunci : bioaktivator, fermentasi jerami padi, sumber belajar biologi

ABSTRACT

The purpose of this study was to determine the effect of adding the bioactivators Pumakkal, EM4 and Urea. Knowing the effect of a mixture of pumakcal, EM4 and urea which gives the best effect. This type of research is an experimental study using RAL 4 treatments and 5 replications, the treatment is using urea only, the second treatment using EM4 only, the 3rd treatment using Pumakkal only and the 4th treatment using a mixture of pumakcal, EM4 and urea. Each treatment was given 5 repetitions. The parameters observed were crude protein (PK) and crude fiber (SK). Data were analyzed using One-Way ANOVA (Test for normality, homogeneity, hypothesis and BNJ). Based on the result data on protein and crude fiber content of fermented rice straw, it can be seen that all treatments were normally distributed because L0 < Ldaf 0.0337. After the homogeneity test was carried out, it was found that x2 1.27 < x2 (1-0.05) (4-1) 7.81 from the chi-square table which means that H0 is accepted as homogeneous, then proceed to hypothesis testing, the results of the hypothesis test have a significant effect . The final statistical test, namely the BNJ test (Honest Significant Difference), concluded that the PK and SK of all treatments were significantly different, but the content obtained did not meet the criteria of the Indonesian National Standard (SNI). Based on the results of the trial of learning bulletins to students, learning bulletins are suitable for use as learning media for biology class XII.

Keywords: *bioactivator, rice straw fermentation, biological learning resources*