

ABSTRAK

Penelitian dengan judul “Pengaruh Penambahan Cairan *Fermentation Broth* dalam Pakan Domba terhadap Kecernaan Bahan Kering (KBK) dan Kecernaan Bahan Organik (KBO) secara *In Vitro*” dilakukan dengan tujuan mengetahui interaksi antara jerami padi dan cairan *fermentation broth*, mengetahui pengaruh penggunaan jerami padi dan jerami padi amoniasi dan mengetahui pengaruh penggunaan cairan *fermentation broth* dalam meningkatkan KBK dan KBO secara *in vitro*. Penelitian dilakukan secara eksperimental menggunakan pola faktorial 2x3 dengan rancangan acak kelompok (RAK). Perlakuan yang diuji adalah ransum JP (jerami padi 30% + konsentrat 70%) dan JPA (jerami padi amoniasi 30% + konsentrat 70%) sebagai faktor utama dan faktor kedua dosis *fermentation broth* 0, 150, dan 300 μ L dan sebagai kelompok adalah sumber inokulum (cairan rumen). Materi yang digunakan yaitu jerami padi, jerami padi amoniasi, konsentrat, cairan *fermentation broth*, dan bahan kimia untuk percobaan *in vitro*. Percobaan *in vitro* berdasarkan metode dua tahap (Tilley and Terry, 1963). Peubah respon yang diamati meliputi kecernaan bahan kering dan kecernaan bahan organik. Data dianalisis menggunakan analisis sidik ragam (ANOVA) dan uji lanjut BNJ (Tukey HSD). Hasil menunjukkan bahwa interaksi penambahan cairan *fermentation broth* dan jenis jerami padi tidak berpengaruh nyata ($P>0,05$). Penggunaan jerami padi amoniasi mampu meningkatkan KBK dan KBO secara signifikan ($P<0,01$) dibanding jerami padi dan penggunaan cairan *fermentation broth* pada dosis (0, 150, 300 μ L) tidak berpengaruh nyata ($P>0,05$) terhadap kecernaan bahan kering dan kecernaan bahan organik. Rata-rata KBK dan KBO untuk perlakuan jerami padi dengan dosis *fermentation broth* yang berbeda adalah berkisar 38,91-39,20% dan 48,46-48,72% sedangkan untuk perlakuan jerami padi amoniasi adalah berkisar 39,69-39,90% dan 49,97-50,43%.

Kata Kunci: *fermentation broth*, jerami padi, jerami padi amoniasi, kecernaan bahan kering, dan kecernaan bahan organik

ABSTRACT

The research entitled “The Effect of Adding Fermentation Broth Liquid in Sheep Feed on Dry Matter Digestibility (DDI) and Organic Matter Digestibility (OIC) In Vitro” was conducted with the aim of knowing the interaction between rice straw and fermentation broth liquid, knowing the effect of using rice straw and ammoniated rice straw and knowing the effect of using fermentation broth liquid in increasing DDI and OIC in vitro. The research was conducted experimentally using a 2x3 factorial pattern with a randomized block design (RAK). The treatments tested were JP (30% rice straw + 70% concentrate) and JPA (30% ammoniated rice straw + 70% concentrate) rations as the main factor and the second factor was the fermentation broth dose of 0, 150, and 300 μ L and as a group was the inoculum source (rumen fluid). The materials used were rice straw, ammoniated rice straw, concentrate, fermentation broth liquid, and chemicals for in vitro experiments. The in vitro experiment was based on a two-stage method (Tilley and Terry, 1963). The observed response variables included dry matter digestibility and organic matter digestibility. Data were analyzed using analysis of variance (ANOVA) and Tukey's HSD (Level 1) test. The results showed that the interaction between the addition of fermentation broth and the type of rice straw had no significant effect ($P>0.05$). The use of ammoniated rice straw significantly increased the CBC and OBO (CBO) compared to rice straw, and the use of fermentation broth at doses (0, 150, and 300 μ L) had no significant effect ($P>0.05$) on dry matter and organic matter digestibility. The average CBC and CBO for rice straw treatments with different fermentation broth dosages ranged from 38.91% to 39.20% and 48.46% to 48.72%, respectively, while for the ammoniated rice straw treatment, they ranged from 39.69% to 39.90% and 49.97% to 50.43%.

Keywords: *fermentation broth, rice straw, ammoniated rice straw, dry matter digestibility, and organic matter digestibility*