

**PENGARUH LAMA PEMERAMAN TERHADAP NILAI
KECERNAAN *IN VITRO* JERAMI PADI
BALES FERMENTASI**

Fitria Fatmawati
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INTISARI

Penelitian ini bertujuan untuk mengetahui pengaruh lama pemeraman pada jerami padi *bales* fermentasi dengan menggunakan urea-biofad[®] terhadap nilai kecernaan *in vitro* produksi gas. Jerami padi segar seberat 25 kg dicampur dengan 500 g urea dan 250 g biofad[®]/kgBK, kemudian dipres menjadi *square bales* dan diperam selama 3, 6, 9 minggu. Setiap perlakuan diambil sampel kemudian dilakukan analisis proksimat untuk mengetahui kandungan bahan kering (BK), bahan organik (BO), serat kasar (SK), protein kasar (PK) dan analisis *in vitro* produksi gas untuk mengetahui fraksi a, b, c, a+b, dan produksi gas kumulatif (P). Data yang diperoleh dianalisis statistik dengan analisis variansi pola searah dan apabila terdapat perbedaan dilanjutkan dengan *Duncan's new multiple range test* (DMRT). Hasil penelitian menunjukkan perbedaan yang tidak nyata pada kandungan BK dan kandungan SK, berbeda nyata pada kandungan BO dan PK. Pemeraman 3 minggu memiliki nilai BO tertinggi dibandingkan pemeraman 6 minggu dan 9 minggu (73,167 vs. 68,190, dan 69,913%) dan pemeraman 9 minggu memiliki nilai PK tertinggi dibandingkan 3 dan 6 minggu (9,019 vs. 7,869 vs. 8,589%). Hasil analisis produksi gas menunjukkan perbedaan tidak nyata pada fraksi a dan fraksi c namun berbeda nyata pada fraksi b, a+b dan P. Pemeraman 9 minggu memiliki nilai fraksi b terendah dibandingkan 3 dan 6 minggu (14,993 vs. 17,978, 18,216 ml/100mg BK) dan pemeraman 9 minggu memiliki nilai a+b terendah dibandingkan 3 dan 6 minggu (15,166 vs. 18,581, 18,705 ml/100mg BK) dan P terendah dibandingkan dengan 3 dan 6 minggu (10,403 vs. 12,487, 12,882 ml/100 mgBK). Kesimpulan penelitian ini adalah lama pemeraman 3 minggu sudah mampu memperbaiki kualitas jerami padi *bales*, akan tetapi pemeraman dapat dilakukan hingga 6 minggu tanpa mengurangi kualitasnya.

(Kata kunci: Lama pemeraman, Fermentasi, Jerami padi *bales*, kecernaan *in vitro*).

THE EFFECT OF FERMENTATION LENGTH ON *IN VITRO* DIGESTIBILITY OF BALES RICE STRAW

Fitria Fatmawati
02/155201/PT/04355

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ABSTRACT

This experiment was conducted to determine the effect of fermentation period on the *in vitro* gas production digestibility of baled rice straw which fermented by urea-biofad[®]. Freshly harvested rice straws in 25 kg of weight were mixed with 500 g urea and 250 g biofad[®]/kgDM, then pressed into square bales and incubated for 3 weeks, 6 weeks, 9 weeks. Proximate analysis were done on samples to determine the dry matter (DM), organic matter (OM), crude fiber (CF), and crude protein (CP) contents and *in vitro* gas production was applied to determine the fraction of a, b, c, a+b, and gas production (P). Data collected were analyzed statistically by one-way analysis of variance and followed by Duncan's new multiple range test (DMRT) if there are any significant differences. The results showed that there were no significant differences in the DM and CF contents. Significant differences in the OM and CP contents. 3 weeks fermentation period has the highest OM content compared to 6 weeks and 9 weeks (73.167% vs. 68.190%, and 69.913%) and 9 weeks fermentation period has the highest CP content, compared to 3 weeks and 6 weeks (9.019% vs. 7.869% vs. 8.589 %). The result of *in vitro* gas production analysis showed that there were no significant differences in the a fraction and c fraction. Significant differences in b fraction, a+b, and P. 9 weeks fermentation period has the lowest value of b fraction compared to 3 weeks and 6 weeks (14.993 ml/100mg DM vs. 17.978 ml/100mg DM, 18.216 ml/100mg DM), 9 weeks fermentation period has the lowest a+b values compared to 3 and 6 weeks (15.166 ml/100mg DM vs. 18.581 ml/100mg DM, 18.705 ml/100 mgDM). 9 weeks fermentation period has the lowest P values compared to 3 weeks and 6 weeks (10.403 ml/100mg DM vs. 12.487 ml/100mg DM, 12.882 ml/100 mgDM). It can be concluded that 3 weeks fermentation period could improve the quality of rice straw bales, however fermentation period could be done until 6 weeks without reducing its quality.

(Key words: Incubation period, Fermentation, Rice straw bales, *In vitro* digestibility)