

KUALITAS DAN KECERNAAN *IN VITRO* COMPLETE FEED FERMENTASI BERBASIS RUMPUT KUMPAI MINYAK (*Hymenachne amplexicaulis*)

INTISARI

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Penelitian ini dilakukan dengan tujuan untuk mengetahui nilai pencernaan *in vitro* dan kualitas *complete feed* fermentasi berbasis rumput kumpai minyak (*Hymenachne amplexicaulis*). Penelitian dilakukan di Laboratorium Teknologi Makanan Ternak pada bulan September – Mei 2017. Materi penelitian menggunakan rumput kumpai minyak yang diperoleh dari Kabupaten Ogan Komering Ilir, Provinsi Sumatera Selatan dan bahan baku pakan lokal (konsentrat) serta inokulan saus burger pakan (SBP[®]) yang diperoleh dari sekitar wilayah Yogyakarta. Penelitian menggunakan rancangan acak lengkap pola faktorial 4 x 4 dengan dua perlakuan yaitu level inokulan (I0 = 0%; I1 = 0,01%; I3 = 0,03%; I5 = 0,05%) dan lama waktu pemeraman (7, 14, 28, 56 hari). Variabel yang diukur dan diamati meliputi karakteristik fisik berupa warna, tekstur dan aroma. Parameter fermentasi rumen meliputi pH, VFA, N-NH₃ cairan rumen serta pencernaan bahan kering (BK) dan bahan organik (BO). Data yang diperoleh dianalisis menggunakan analisis variansi. Jika terdapat perbedaan yang nyata diantara perlakuan maka dilakukan uji *Duncan's multiple range test*. Hasil penelitian karakteristik kualitas fisik pada umumnya baik, kecuali pada hari ke-56 yang telah menunjukkan kerusakan. Analisis *in vitro* hanya dilakukan pada panen hari ke-7 dan 28. Penambahan inokulan (SBP[®]) memberikan pengaruh nyata terhadap pH, kadar NH₃ pra *in vitro*, KcBK, KcBO, KcSK, NH₃ *in vitro*, protein mikroba, dan VFA. Namun, nilai pH *in vitro* menunjukkan hasil yang tidak signifikan. Penelitian ini disimpulkan bahwa *complete feed* fermentasi berbasis rumput kumpai minyak dapat diperam sampai dengan 28 hari. Penggunaan inokulan 0,03% pada *complete feed* fermentasi memiliki karakteristik fisik terbaik dengan lama simpan 7 hari dan penggunaan inokulan 0,05% dengan lama simpan 7 hari menghasilkan nilai pencernaan dan parameter fermentasi terbaik.

Katakunci: *Complete Feed*, Pencernaan, Fermentasi, Rumput kumpai minyak

**QUALITY AND IN VITRO DIGESTIBILITY OF FERMENTED COMPLETE FEED
BASED ON HYMENACHNE GRASS
(*Hymenachne amplexicaulis*)**

ABSTRACT

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The aim of this research was to determine the value of in vitro digestibility and quality of fermented complete feed based on hymenachne grass (*Hymenachne amplexicaulis*). The research was conducted at the Laboratory of Feed Technology in September - Mei 2017. The research material used were Hymenachne grass obtained from Ogan Komering Ilir Regency of South Sumatera Province and local feed ingredients (concentrate) as well as inoculant (SBP®) were obtained from Yogyakarta. The study used completely randomized design of factorial 4 x 4 with two treatments ie inoculant level (I0 = 0; I1 = 0,01; I3 = 0,03; I5 = 0,05%) and length of fermentation time (7, 14, 28, 56 days). Variables measured and observed included physical characteristics of odor, texture and mold. The rumen fermentation parameters measured were pH, N-NH₃ rumen fluid, VFA and dry matter digestibility (DMD), organic matter digestibility (OMD), and crude fiber digestibility (CFD). The obtained data were analyzed using variance analysis, any significant difference between treatments, was continued with Duncan's multiple range test (DMRT). The results of the study of physical quality characteristics are generally good, except on the 56th day fermentation that has shown a damage condition. In vitro digestibility analysis was analyzed at 7th and 28th day fermentation. Inoculant addition (SBP®) showed significant effect ($P < 0.05$) on pH, pre-in vitro NH₃ levels, DMD, OMD, CFD, NH₃ in vitro, microbial protein and VFA. However, in vitro pH values showed nonsignificant results ($P > 0.05$). This research concluded that complete feed fermentation based on Hymenachne grass could be fermented until 28 days. The use of 0.03% inoculum in the complete fermented feed has the best physical characteristics with 7 days' fermentation time and 0.05% inoculant 7 days fermentation time showed the best digestibility and rumen fermentation characteristics.

Keywords: Complete Feed, Digestibility, Fermentation, Hymenachne grass