

SKRIPSI

**PENGARUH IMBANGAN *SOLUBLE CARBOHYDRATE* DAN
PROTEIN DALAM RANSUM BASAL SILASE *TOTAL MIXED
FIBER* TERHADAP KARAKTERISTIK KONDISI RUMEN
KERBAU SECARA *IN VITRO***

***THE EFFECT OF SOLUBLE CARBOHYDRATE AND PROTEIN
IN SILAGE TOTAL MIXED FIBER BASAL RATION
ON BUFALLO CHARACTERISTICS RUMENT
CONDITIONS BY IN VITRO***



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**PROGRAM STUDI PETERNAKAN
JURUSAN TEKNOLOGI DAN INDUSTRI PETERNAKAN
FAKULTAS PERTANIAN
UNIVERSITAS SRIWIJAYA
2019**

LEMBAR PENGESAHAN

**PENGARUH IMBANGAN *SOLUBLE CARBOHYDRATE* DAN
PROTEIN DALAM RANSUM BASAL *SILASE TOTAL MIXED*
FIBER TERHADAP KARAKTERISTIK KONDISI RUMEN
KERBAU SECARA *IN VITRO***

SKRIPSI

Sebagai Salah Satu Syarat untuk Mendapatkan Gelar Sarjana Peternakan
pada Fakultas Pertanian Universitas Sriwijaya

Oleh:

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
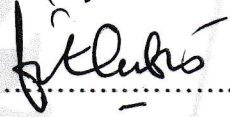
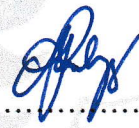
Mengetahui,
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Skripsi dengan Judul “Pengaruh Imbangan *Soluble Carbohydrate* dan Protein Dalam Ransum Basal Silase *Total Mixed Fiber* Terhadap Karakteristik Kondisi Rumen Kerbau Secara *In Vitro*” oleh Danny Setyawan telah dipertahankan di hadapan Komisi Penguji Skripsi Fakultas Pertanian Universitas Sriwijaya pada tanggal 14 Maret 2019 dan telah diperbaiki sesuai saran dan masukan tim penguji.

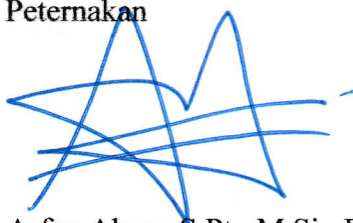
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Judul : Pengaruh Imbangan *Soluble Carbohydrate* dan Protein Dalam Ransum Basal Silase *Total Mixed Fiber* Terhadap Karakteristik Kondisi Rumen Kerbau Secara *In Vitro*

Menyatakan bahwa semua data dan informasi yang dimuat dalam skripsi ini merupakan hasil penelitian sendiri di bawah supervisi pembimbing, kecuali yang disebutkan dengan jelas sumbernya. Apabila di kemudian hari ditemukan adanya unsur plagiasi dalam skripsi ini, maka saya bersedia menerima sanksi akademik dari Universitas Sriwijaya.

Demikian pernyataan ini saya buat dalam keadaan sadar dan tidak mendapat paksaan dari pihak manapun.



Indralaya, Maret 2019

Yang membuat pernyataan,



Danny Setyawan

SUMMARY

DANNY SETYAWAN. Effect of Soluble Carbohydrate and Protein To Silage Total Mixed Fiber Basal Ration On Buffalo Characteristics Rument Conditions By In Vitro. (Supervised by **AFNUR IMSYA** and **RISWANDI**).

Agricultural wastes and swamp forages can be used as alternative feed for buffaloes, the addition of a balance of soluble carbohydrates and protein in rations can improve rumen conditions. The purpose of this research was obtained a level of ratio of soluble carbohydrate and protein in the basal silage ration of TMF against the characteristics of the rumen conditions including total VFA concentration, RAN concentration, and rumen pH in vitro. The research was conducted from May to August 2018 at the Animal Nutrition and Feed Laboratory, Department of Livestock and Industry Technology, Faculty of Agriculture, Sriwijaya University. The method used in this research is Completely Randomly Designed (CRD) with 3 treatments and 4 replications. Level ratio of soluble carbohydrate (SCH) and protein is added to the TMF silage basal ration. P1 : 300g SCH and 300g protein (1:1), P2 : 600g SCH and 300g protein (2:1), P3 : 900g SCH and 300g protein (3:1). The parameters observed were concentrations of volatile fatty acids (VFA), ruminal concentrations of ammonia nitrogen (RAN), and rumen pH in vitro. The results showed that the soluble carbohydrate and protein balance in basal silage TMF ration had a significant effect ($P < 0.05$) on total VFA values, RAN concentrations, but did not affect ($P > 0.05$) rumen pH in vitro. Based on the results of the study it can be concluded that the right level of soluble carbohydrate and protein balance in the total mixed fiber silage ration was 3: 1 which increased the total VFA concentration by 139.40mM, RAN concentration of 11.82mM, and pH value 6.7.

Keywords : Silage, TMF, Soluble Carbohydrate, Protein, Concentration, RAN, VFA, pH.