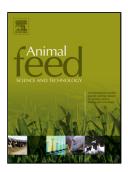
Accepted Manuscript

Title: Thermal energy application on extrusion and nutritional characteristics of dog foods

Authors: Peterson D.G. Pacheco, Thaila C. Putarov, Mayara A. Baller, Francine M. Peres, Bruna A. Loureiro, Aulus C. Carciofi



PII: DOI: Reference:	S0377-8401(18)30153-6 https://doi.org/10.1016/j.anifeedsci.2018.07.003 ANIFEE 14029				
To appear in:	Animal	Feed	Science	and	Technology
Received date: Revised date: Accepted date:	1-2-2018 26-6-2018 3-7-2018				

Please cite this article as: Pacheco PDG, Putarov TC, Baller MA, Peres FM, Loureiro BA, Carciofi AC, Thermal energy application on extrusion and nutritional characteristics of dog foods, *Animal Feed Science and Technology* (2018), https://doi.org/10.1016/j.anifeedsci.2018.07.003

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

1	Thermal energy application on extrusion and nutritional characteristics of dog
2	foods
3	Peterson D. G. Pacheco, Thaila C. Putarov, Mayara A. Baller, Francine M. Peres,
4	Bruna A. Loureiro, Aulus C. Carciofi ¹
5	Highlights
6 7 9 10 11 12 13	 Specific thermal energy application reduced the mechanical energy required to cook and extrude Kibble expansion and starch gelatinization increased with higher specific thermal energy application. The <i>in vitro</i> digestibility of the organic matter increased with higher specific thermal energy application. Total tract apparent nutrient digestibility and feces traits were unaffected by increasing thermal energy application. Food palatability by dogs did not change by thermal energy application.
15 16	Universidade Estadual Paulista (UNESP), Faculdade de Ciências Agrárias e Veterinárias, Jaboticabal, Sao Paulo, Brazil.
17	Abstract
18	The aim of this study was to evaluate the effects of specific thermal energy (STE)

19 application at the extrusion preconditioning stage on the processing parameters, starch

Abbreviations: BCFA, branched-chain fatty acids; CP, crude protein; DM, dry matter; GE, gross energy; OM, organic matter; RT, residency time of the mass at the preconditioner; SCFA, short-chain fatty acids; SG, starch gelatinization; SME, specific mechanical energy; STE, specific thermal energy; TSE, total specific energy; Temp, preconditioner temperature; T45, treatment with preconditioner mass temperature of 45°C; T55, treatment with preconditioner mass temperature of 55°C; T65, treatment with preconditioner mass temperature of 65°C; T75, treatment with preconditioner mass temperature of 65°C; T75, treatment with preconditioner mass temperature of 85°C; T95, treatment with preconditioner mass temperature of 95°C; T95, treatment with preconditioner mass temperature of 95°C; T95, treatment with preconditioner mass temperature of 95°C; T95, treatment with preconditioner mass temperature of 95°C and extruder mass flow corrected to achieve the same motor amperage of the treatment T45.

¹ Corresponding author: Tel.: +55 16 3209-7228; Fax.: +55 16 3203-1226.

E-mail address: aulus.carciofi@gmail.com (Aulus C. Carciofi).

Download English Version:

https://daneshyari.com/en/article/8490908

Download Persian Version:

https://daneshyari.com/article/8490908

Daneshyari.com