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Title: Nutrient digestibility and ruminal fatty acid metabolism in lambs supplemented with soybean oil partially replaced by fish oil blend

Author: Evandro Maia Ferreira Alexandre Vaz Pires Ivanete Susin Marcos Vinicius Biehl Renato Shinkai Gentil Michelle de Oliveira Maia Parente Daniel Montanher Polizel Claudio Vaz Di Mambro Ribeiro Eduardo de Almeida



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- 4 Evandro Maia Ferreira^a, Alexandre Vaz Pires^b*pires.1@usp.br, Ivanete Susin^b, Marcos Vinicius
- 5 Biehl^b, Renato Shinkai Gentil^b, Michelle de Oliveira Maia Parente^b, Daniel Montanher Polizel^b,
- 6 Claudio Vaz Di Mambro Ribeiro^c, Eduardo de Almeida^d
- 7
- ^aDepartment of Animal Science, State University of Ponta Grossa, General Carlos Cavalcanti
 Avenue, n 4748, Ponta Grossa, Paraná, Brazil, Zip: 84.030-900
- ^bDepartment of Animal Science, College of Agriculture "Luiz de Queiroz", University of São
 Paulo, Pádua dias Avenue, n 11, Piracicaba, São Paulo, Brazil, PO Box 09, Zip: 13418-900
- ^cDepartment of Animal Science, Federal University of Bahia, Adhemar de Barros Avenue, n 500,
 Salvador, Bahia, Brazil, Zip: 40170-110
- ^d Centro de Energia Nuclear na Agricultura, University of São Paulo, Centenário Avenue, n 303,
- 15 Piracicaba, São Paulo, Brazil, PO Box 96, Zip: 13400-970
- 16
- * Corresponding author. Current address: Department of Animal Science, College of Agriculture
 "Luiz de Queiroz", University of São Paulo, Pádua dias Avenue, n 11, Piracicaba, São Paulo,
 Brazil, PO Box 09, Zip: 13418-900.
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- 22 Abstract
- The objective of these experiments was to evaluate the effects of partially replacing soybean oil 23 24 with small amounts of fish oil blend on the intake and digestibility of nutrients, ruminal SCFA and 25 pH, and duodenal flow of fatty acids. Five ram lambs rumen and proximal duodenum-cannulated 26 $(51.7 \pm 3.1 \text{ kg of initial BW; mean} \pm \text{SD})$ were assigned to a 5 x 5 Latin square design. The oils 27 were added to a basal diet that contained 900 g/kg DM of concentrate (corn, soybean meal, soybean 28 hulls, urea, ammonium chloride, limestone, mineral mix, and Rumensin[®] 100) and 100 g/kg DM) and 100 g/kg DM of forage (fresh sugarcane bagasse). The treatments were as follows: 1) basal diet 29 30 without added oil (CONT); 2) 40 g/kg DM of soybean oil (0FO); 3) 2.5 g/kg DM of fish oil blend + 37.5 g/kg DM of soybean oil (2.5FO); 4) 5 g/kg DM of fish oil blend + 35 g/kg DM of soybean oil 31 32 (5.0FO); and 5) 7.5 g/kg DM of fish oil blend + 32.5 g/kg DM of soybean oil (7.5FO). All diets 33 were isonitrogenous (160 ± 3 g/kg DM of CP). Intakes of DM, organic matter (OM), non-fiber 34 carbohydrates (NFC), and neutral detergent fiber (NDF) (kg/d) were not affected by the treatments.

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