

## EFFECT IN INDUSION OF SUNFLOWER CAKE AND ENZYMATIC PREPARATIONS DIETS FOR GROWING PIGS

Zofia Antoszkiewicz<sup>1</sup>, Jan Tywończuk<sup>1</sup>, Paulius Matusevičius<sup>2</sup>

<sup>1</sup> *University of Warmia and Mazury, Faculty of Animal Bioengineering, Oczapowskiego 5; 10-719 Olsztyn;*

*E-mail: [zocha@luwm.edu.pl](mailto:zocha@luwm.edu.pl)*

<sup>2</sup> *Lithuanian Veterinary Academy, Tilžės str. 18; LT – 3022 Kaunas; E-mail: [paulmat@lva.lt](mailto:paulmat@lva.lt)*

**Summary.** A digestibility-balance experiment was performed on 16 growing pigs (4 x 4) to determine the possibility of partial replacement of soybean meal with sunflower cake in their diets. The effects of enzymatic preparations (Energex and Bio Feed Wheat) were also analyzed. Sunflower cake constituted 5 % of diet II and 10 % of diets III and IV. Diet IV contained also enzymatic preparations. Sunflower cake added to diets did not affect crude protein digestibility. It did not reduce considerably crude fiber digestibility, either. Sunflower cake caused an increase in crude fat digestibility, with its higher content of the experimental diets. Supplementation of diet IV with the enzymatic preparations caused a significant improvement in ether extract digestibility, and a significant or a highly significant improvement in crude fiber digestibility. The level of nitrogen intake was similar in all groups. Different levels of nitrogen retention were observed in groups II and III, and its increase was noted in group IV, compared with the control group. The best utilization of retained nitrogen, in relation to nitrogen taken and digested, was found in group II (5 % of sunflower cake). Similar indices were reported for group IV (10 % of sunflower cake + enzymes). Diet supplementation with sunflower cake allowed to increase crude fat digestibility. The digestibility of the other nutrients did not change considerably. Feed enzymes improved nutrient digestibility. The substitution of sunflower protein for soybean protein did not reduce the utilization of nitrogen taken and digested.

**Keywords:** sunflower cake, growing pigs, digestibility, nitrogen balance.