



Poznań University of Life Sciences

**V INTERNATIONAL SCIENTIFIC
CONFERENCE**

**MEAT IN TECHNOLOGY
AND HUMAN NUTRITION**

under its working title

**MEAT AS A FUNCTIONAL
AND PRO-HEALTHY PART OF OUR
DIET**

**ABSTRACTS OF PLENARY LECTURES
& POSTERS PRESENTATIONS**



POZNAN – TARNOWO PODGÓRNE
JUNE 27 – 29, 2018



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NANO-ZN IN NUTRITION OF LIVESTOCK AND DEGRADING ENZYME ACTIVITIES

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Introduction: The use of zinc nanoparticles (Nano-Zn) in animal nutrition comprise a better alternative than conventional zinc sources. Nano-Zn shows a better absorption from the digestive tract, what makes it possible to limit its content in feeds.

The studies aimed at examining proteolytic changes taking place as result of the use of zinc nanoparticles in turkey nutrition so as to analyse the possibility of decreasing the diet supplementation.

Material and methods: The experiments were conducted on Hybrid Converter turkey fowls. The birds were divided among experimental groups. Birds receiving standard feeds, containing typical ZN forms, were treated as control. Experimental groups received Zn in form of nanoparticles.

After the end of the nutrition period samples of the turkeys' breast muscles were taken and homogenised. The homogenates obtained were analysed for basic chemical composition and activity of aminopeptidases, using procedures accepted during the laboratory accreditation process (PB-02, AB1398).

Results: The nutrition studies conducted did not show any differences in the chemical composition of the muscles examined or in the activity of aminopeptidases after the introduction of zinc nanoparticles into the birds diet.

Conclusions: The lack of changes in the proteolytic activity may indicate that the use of Nano-Zn does not lead to an increase in the degradation processes or result in changes in the chemical composition of meat.

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