



**PROCEEDINGS
OF
FIRST INTERNATIONAL
BIOLOGICAL,
AGRICULTURAL AND LIFE
SCIENCE CONGRESS**

NOVEMBER 7-8, 2019

LVIV, UKRAINE



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LVIV, UKRAINE**

**In
Lviv, Ukraine**

**Organized by
Trakya University**

**ISBN # : 978-975-374-250-4
Trakya University Publisher No: 221**

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(28089) COMPARATIVE ANALYSIS OF FATTY ACIDS COMPOSITION BETWEEN GRASS AND LUCERNE FORAGE

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Forages represent a major part of ruminant diets. Fatty acids composition of forage feed has major influence on energy intake and productivity of animals and also has significant effects on nutritional quality of milk and meat. The fatty acids composition of forages depends on many factors, including: species, variety, climate, growth stage, growth period, fertilization and conservation method. The aim of this study was to perform comparative analysis of fatty acid composition between grass and lucerne forage. Reliability and accuracy of the analytical method for the detection of fatty acids was ensured by use of the certified reference matrix consisted of mixture of 37 FAME standards (Supelco 37 Component FAME mix, Sigma-Aldrich). The content of the particular component was expressed as percentage from the sum of all analyzed fatty acids. According obtained results from analysis of fatty acid profile of feed samples higher content of saturated fatty acids was noted in samples of grass forage (41,87%), compared with lucerne (31,24%). The contents of monounsaturated fatty acids in samples of grass forage was 11,28% and 11,08% in samples of lucerne forage, while contents of polyunsaturated fatty acids in samples of grass forage was 41,93% and 52,78% in samples of lucerne forage. The contents of unsaturated fatty acids in meat and milk depend of their contents in animal feed. Forage feeding is main approach to increase the supply of beneficial fatty acids from plants into ruminant products. Analysis of fatty acids profiles of grass and legume forage is very important because of their effect on nutritional quality of and health benefits of ruminant products.

Keywords: fatty acids; GC-FID; grass forage, lucerne forage