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Effect of using forages in lamb fattening on the profile and content of fatty acids in roast leg meat

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Introduction

Koluda sheep ewes

The composition and quality of meat products are determined by several factors, in that from the breeder side:

- feeding method
- breed origin

Introduction

Intensive recent studies on modifying healthy quality of meat have focused mainly on selected muscles and/or fats.

Not many research are aimed to determine the health quality of whole culinary elements.

Aim of the study

..... to determine the effects of using forages and breed origin of lambs on the profile and content of fatty acids in leg roast meat

Material and methods

Animals: 36 ram-lambs; 50% of Koluda sheep (KS)

50% of F_1 Ile de France x KS (IFxKS)

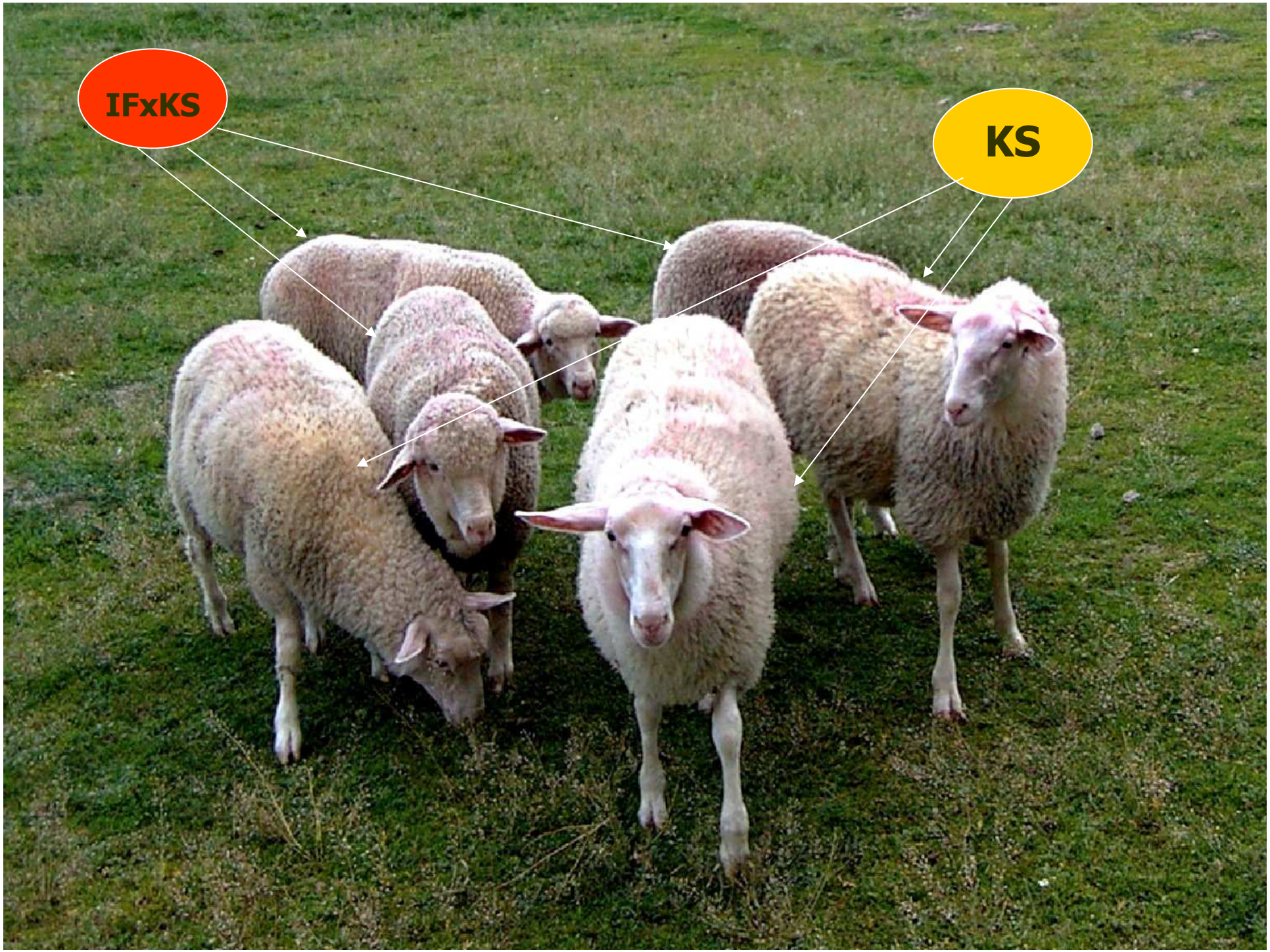
- intensive fattening to 32-37 kg
- 3 feeding groups; in all this same complete feeds *ad libitum*

+ different roughage supplement:

C - grass hay

F - field forage fed in a sheep shed

P - pasture grazing (4 h/day)


IFxKS
KS

Material and methods

Studied element: raw leg roast meat

[+ 2% salt, 24 h maturation in temp. 4 ^{O}C]

Analysis of raw meat:

- basic chemical composition
- cholesterol
- fatty acid composition, including CLA

Results

Nutrient intake

- similar basic nutrients intake per DM of diet (g/100 g)

protein: C - 13,7, F - 13,9; P - 13,5

fat: C - 4,4; F - 4,9; P - 4,6

NFE: C - 63,4; F – 62,5; P - 63,8

- higher PUFA intake in groups F and P compared to C;

by 20,2 and 14,0% respectively

Results

Fat content

The use of forages resulted non-significant differences in RML fat and cholesterol content:

C - 53,3 and 0,63 g/kg

F - 50,2 and 0,67 g/kg

P - 55,9 and 0,66 g/kg respectively

Results

Fatty acids content

There were no significant differences in the percentage of SFA, MUFA, PUFA and CLA in FA pole of RLM fat

Differences in RLM fat content caused greater differences in the absolute content of PUFA; in group **F** 9,1% lower but in **P** one 9,4% higher compared to **C**

There was a tendency towards more favourable parameters of RML health quality in the groups fed with forages, especially **in grazed lambs**

Results

Breed origin

Ile de France ram

IFxKS *vs.* KS:

☢☢☢

-similar content: fat - 52,9 *vs.* 53,4 g/kg

cholesterol - 0,64 *vs.* 0,67 g/kg

-negative effect on PUFA content - 8,25 *vs.* 7,46% resp.

-negative tendency in healthy parameters based on FA profile:

CLA - 0,30 *vs.* 0,34 g/kg
PUFA n3 - 0,28 *vs.* 0,33 g/kg
PUFA:SFA – 0,166 *vs.* 0,184

Conclusions

The present study showed that the use of field forage supplement or pasture grazing had a little effect on modifying the health promoting quality of the meat of intensively fattened lambs.

Thank you for attention !!