

Factors affecting wool quality of Jezersko-Solčava sheep in Slovenia

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Introduction

Jezersko-Solčava sheep breed

- autochthonous, widespread all over the country
- convex facial profile and long lop ears
- originate from the ancient Alpine population of Zaupel sheep improved with the meat Bergamasca sheep and the extinct Paduan sheep known for the best wool in Venetia with long soft crimped fibres



Objective

- to determine the wool quality traits
- to determine factors affected the wool quality traits
- of the autochthonous Jezersko-Solčava sheep breed in Slovenia



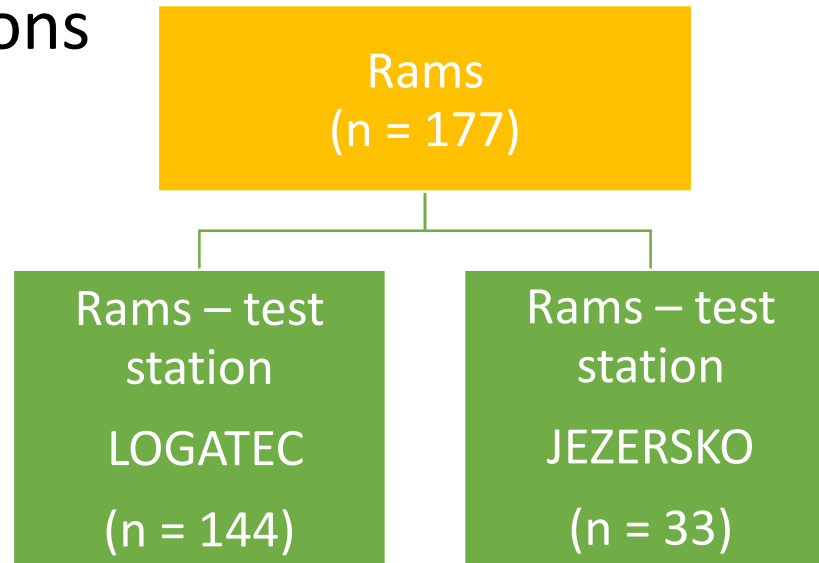
Material

Rams in the test station



Material (2)

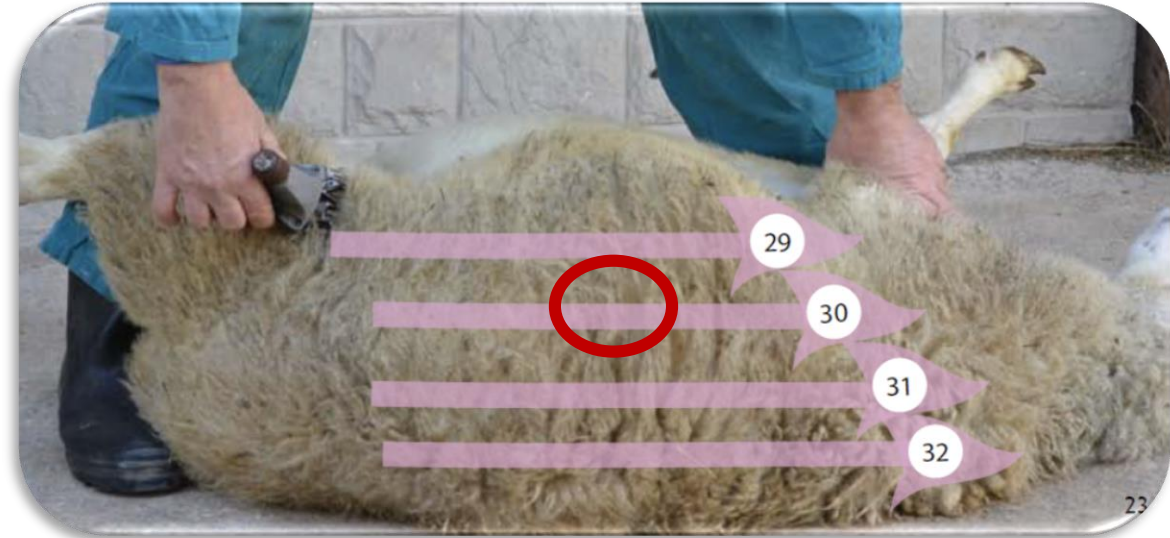
- 177 young Jezersko-Solčava rams
- rams in the growth performance test
- rams selected from 40 flocks according to the breeding program
- 2 different test stations
- year 2018



Methods

Fleece samples

- taken from the left side of the body
- at the end of the test period
- all rams were sheared with Bowen technique
- the average age of rams was 279.4 ± 36.4 days
- analysed in the laboratory of AAFT (www.aaft.com.au) in the UK
- the fleece weight was recorded



Statistical analysis

Model

- Test station (Logatec, Jezersko) – fixed effect
- Rams age at shearing (mean = 9,3 months) – linear regression
- Flock of origin (rams from 40 flocks) – random effect

Statistical package SAS/STAT

- Procedure MIXED

Results

Traits	Mean \pm SD
Fleeces weight (kg)	1.74 \pm 0.45
Fibre diameter (μm)	30.52 \pm 2.83
Comfort factor (%)	54.43 \pm 16.36
Spin fineness	29.91 \pm 2.86
Staple length (mm)	79.83 \pm 21.01
Fibre curvature (degrees/mm)	1.74 \pm 0.45

Classification

Colour	Lot Description	Micron
Yellow	Ultrafine	< 18.01
Blue	Superfine	18.01 to 20.00
Pink	Fine	20.01 to 23.00
Red	Medium	23.01 to 26.00
Green	Strong	26.01 to 30.00
Purple	X strong	> 30.00



Significant effects

Trait	Effects		
	Test station	Rams age	Flock of origin
Fleeces weight		✓	✓
Fibre diameter			✓
Comfort factor			✓
Spin fineness			✓
Staple length	✓		
Fibre curvature		✓	

Conclusions

- Fleece samples of all rams were classified in 3 classes of wool quality: medium (5.6%), strong (37.9%) and extra strong (56.5%)
- Wool quality traits are important for breeders who still processed the wool in the farm
- A plan to include wool quality traits in the breeding program of Jezersko-Solčava sheep in the future

Thank you for your attention!

