



62nd Annual Meeting EAAP 2011
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Stavanger NORWAY



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Slaughter value of Hungarian buffalo heifers

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Some words about Hungarian buffaloes...



- Buffaloes were brought in by the Avars in 4th century
- There were more than 150 000 buffaloes in Hungary before the World Wars
- Nowadays the buffalo stock is about 1000 heads (with 5-600 buffalo cows)
- Lack of exact knowledge of performance data, but it is needed for the effective product output and is required for the elaboration of conscious breeding strategies.



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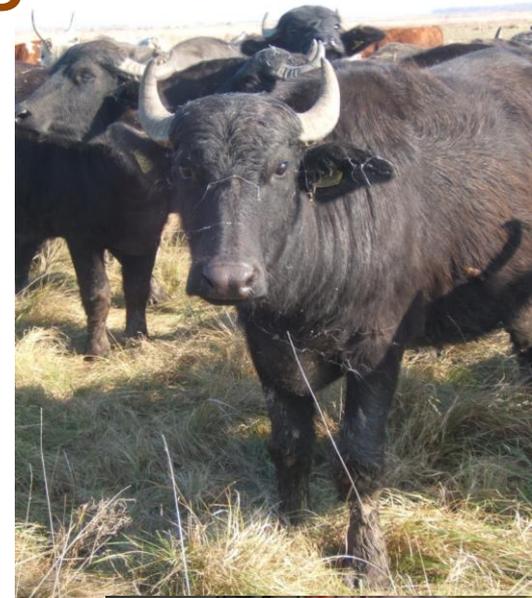
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Materials and Methods

- Animals (n=12, heifers) were kept under extensive condition on pasture.
- They were slaughtered at a average live weight of 550 kg.
- Main slaughter and dressing data were collected.
- Meat samples (longissimus muscle) were taken from the right carcass at about the level of the 13th rib.
- Dry matter, protein, fat and ash content and fatty acid profile of the samples was determined.
- Rib joints (11th-13thribs) were scanned by using Siemens Emotion 6 CT scanner.
- The results were corresponded to the literature data of traditonal cattle (Hungarian Grey) kept on pasture.
- Statistical analysis: SPSS 10.0 program package
(one-sample T test)



Cutting results

Item	Hungarian Buffalo		Hungarian Grey Cattle
	Mean	SD	Mean
Weight of cold half carcass, kg	99.12	21.62	111.70
Lean meat, %	67.83a	2.31	70.96b
Bone, %	21.47	1.78	20.24
Tendon, %	0.63a	0.17	3.97b
Fat, %	10.07a	3.10	4.80b



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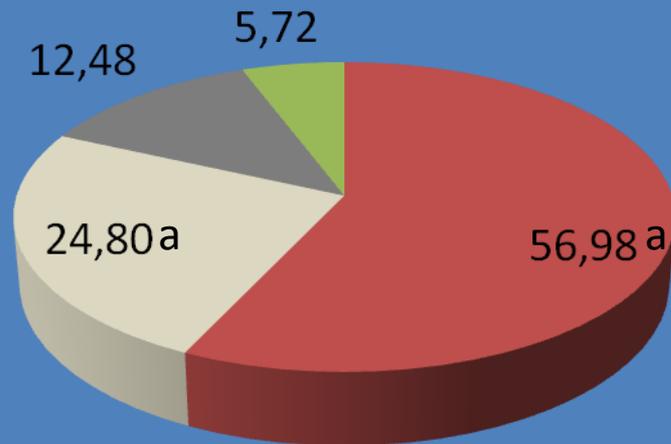
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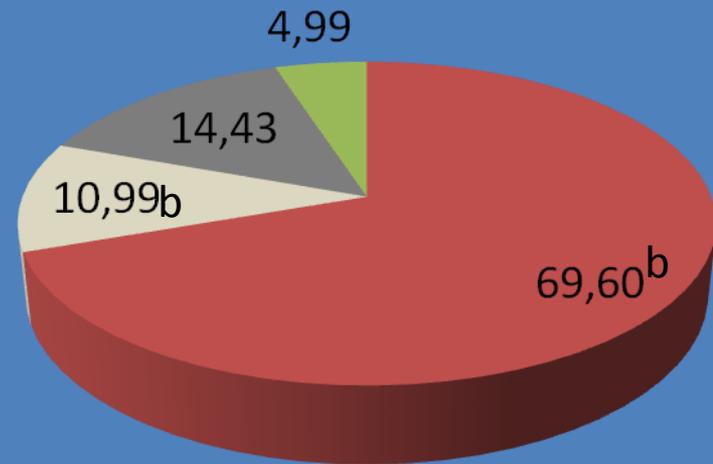
CT results

Tissue composition (%) of rib joints

Hungarian Buffalo



Hungarian Grey Cattle



■ muscle ■ fat ■ bone ■ tendon



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Meat quality results

Item	Hungarian Buffalo		Hungarian Grey Cattle
	Mean	Standard deviation	Mean
pH	5.37	0.24	5.64
Dry matter	28.33a	0.73	23.81b
Protein	24.43a	1.47	21.02b
Fat	2.80	1.06	1.55
Ash	1.20a	0.08	1.06b
Colour. L*	33.22	4.05	33.27



Meat quality results

Fatty acid profile

Item	Hungarian Buffalo		Hungarian Grey Cattle
	Mean	SD	Mean
SFA	51.28a	2.56	43.80b
PUFA	10.52a	3.55	20.76b
<i>n-6</i>	7.15a	2.21	14.44b
<i>n-3</i>	2.63a	0.76	5.05b
CLA	0.74	0.61	0.81
<i>n-6/n-3</i>	2.71	0.20	2.86
PUFA/SFA	0.21a	0.07	0.47b



Conclusion

Parameters		Hungarian Buffalo	Hungarian Grey Cattle
Carcass	Lean %		<
	Fat %		>
Longissimus muscle	Dry matter		>
	Protein		>
	Ash		>
	SFA		>
	PUFA		<
	N-6		<
	N-3		<
	PUFA/SFA		<

