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## Use of hay rich diet for Piemontese beef production



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## INTRODUCTION



The **extensive** rearing system are **encouraged** by the EU regulation, and **economic supports** are available for **forage** production and **pasture** use



To increase the farm income could be interesting to **use forage rich diet** not only for dairy but also for **beef production**

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## AIM



To **verify** the possibility to **apply a hay rich diet** in fattening **Piemontese** young bulls

considering the **recent interests** for **diet** more **rich in forages** than in concentrate also for **specialised beef** production



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## MATERIAL AND METHODS

- ✓ two groups (**hay rich** and **conventional**) of 10 Piemontese calves (about 8 months of age and 200 kg LW)
- ✓ reared in the same environmental conditions up to the slaughtering weight (about 550 kg LW)
- ✓ fed with hay and concentrate for **1.2 kg/d ADG**
- ✓ **hay rich diet**: increasing amount of hay (4.2 to 8.2 kg/d) and concentrate (2.2 to 3.8 kg/d)
- ✓ **conventional diet**: 2 kg/d of hay and increasing amount of concentrate (3.4 to 7.4 kg/d)

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## FEEDING RATIONS (kg)

LW (kg)	conventional diet		hay rich diet	
	hay	concentrate	hay	concentrate
200	2.0	3.4	4.2	2.2
250	2.0	4.0	4.8	2.4
300	2.0	4.6	5.4	2.6
350	2.0	5.2	6.0	2.8
400	2.0	5.6	6.4	3.0
450	2.0	6.2	7.0	3.2
500	2.0	6.8	7.6	3.6
550	2.0	7.4	8.2	3.8

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## RESULTS: FEED CONSUMPTION

age (month)	conventional diet		hay rich diet	
	hay	concentrate	hay	concentrate
8 <sup>th</sup>	1.7	3.0	3.3	1.9
10 <sup>th</sup>	2.0	3.9	4.0	2.6
12 <sup>th</sup>	2.0	4.4	5.6	2.9
14 <sup>th</sup>	2.2	4.8	5.1	2.9
16 <sup>th</sup>	2.1	5.0	6.4	3.0
18 <sup>th</sup>	2.0	7.9	5.8	3.1
mean (kg/d)	2.0	4.9	5.1	2.8
total (kg DM)	539	1,338	1,341	743
total (UFV)	1749		1656	

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## RESULTS: LIVE PERFORMANCE

age (month)	conventional diet		hay rich diet	
	LW (kg)	ADG (kg/d)	LW (kg)	ADG (kg/d)
8 <sup>th</sup>	203	-	206	-
10 <sup>th</sup>	254	1.0	255	1.1
12 <sup>th</sup>	318	1.2	311	1.1
13 <sup>th</sup>	356	1.4 <sup>A</sup>	339	1.0 <sup>B</sup>
14 <sup>th</sup>	377	0.8	355	0.6
16 <sup>th</sup>	421	0.8	400	0.7
18 <sup>th</sup>	481	1.3 <sup>A</sup>	446	0.7 <sup>B</sup>
19 <sup>th</sup>	499 <sup>a</sup>	0.6 <sup>a</sup>	455 <sup>b</sup>	0.3 <sup>b</sup>

A, B: P<0.01; a, b: P<0.05

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## RESULTS: 19<sup>th</sup> MONTH

	conventional diet	hay rich diet
live weight (kg)	499	455
ADG (kg/d)	0.6	0.3
consumption		
hay (kg/d)	2.0	5.8
concentrate (kg/d)	7.9	3.1
DM (kg/d)	8.8	7.9
energy (UFV/d)	(~1/3 forages) 8.7	(~2/3 forages) 6.1
FC rate (UFV/kg LW)	(~1/6 forages) 18.2	(~1/2 forages) 26.4
price (Euro/kg LW)	3.20	n.v.

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## RESULTS: LIVE PERFORMANCE

age (month)	converted hay rich diet	
	LW (kg)	ADG (kg/d)
20 <sup>th</sup>	480	0.8
21 <sup>th</sup>	509	1.0
22 <sup>th</sup>	534	0.9
23 <sup>th</sup>	568	1.2



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## RESULTS: GLOBAL PERIOD

	conventional diet	hay rich diet
slaughtering age (d)	579 <sup>B</sup>	649 <sup>A</sup>
slaughtering weight (kg)	530 <sup>b</sup>	580 <sup>a</sup>
ADG (kg/d)	1.0 <sup>a</sup>	0.8 <sup>b</sup>
consumption (kg DM)		
hay	595 <sup>B</sup>	1,657 <sup>A</sup>
concentrate	1,488	1,527
total	2,084 <sup>B</sup>	3,183 <sup>A</sup>
dressing percentage (%)	66.6	68.8

A, B: P<0.01; a, b: P<0.05

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## CONCLUSIONS

A diet so rich in forage:

- ✓ **doesn't suit to fattening** Piemontese young bulls
- ✓ **doesn't allow** to obtain a **product appraised** on the **market**
- ✓ **increases** the length of **fattening period** and consequently the **risks** and the **production costs**
- ✓ could be **interesting** for the **first part** of the **fattening period** in a not so high percentage



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