

IMPACT OF USING FIBROLYTIC ENZYMES ON SHEEP PERFORMANCE IN SUMMER SEASON

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OBJECTIVES

The present work was conducted to study effect of fibrolytic enzyme (Fibrozyme) supplementation to reduce effect of heat stress on sheep performance.

INTRODUCTION

Heat stress occurs when an animal heat load is greater than its capacity to loss heat. The animal reacts with heat stress by several physiological changes include; increase of body temperature, increased respiration rate, increased water consumption, decreased feed intake, slow rate of feed passage, slow blood flow to internal organs, altered endocrine secretions and serious depression in productive and reproductive performances.

There are many means to reduce effect of heat stress; adding exogenous enzymes to diet is a one of this means. It increases enzymatic activity in the rumen, which enhance digestibility of the diet.

MATERIALS & METHODS

*Twelve adult Barki lambs weighed 50 ±1.5 Kg in average.

*Animals were divided into two groups; control group fed without Fibrozyme and Fibrozyme group fed with added 10 g Fibrozyme/h/day

*Animal in two groups was fed on concentrate feed mixture at 2% of their body weight and fed sorghum grass ad Lib.

*At last week of the feeding period feces samples and rumen liquor samples were taken

Table 1: Chemical composition of concentrate and roughage

Component	Concentrate	Roughage
Moisture	8.12	8.43
Component, % on DM basis		
OM	89.13	89.40
CP	13.28	9.36
CF	16.03	28.07
EE	4.33	1.55
NFE	47.37	41.99
Ash	10.87	10.60

CONCLUSION

Can be concluded that fibrolytic enzymes supplementation:

- Increased feed intake
- Increased most of nutrients digestibility and feeding value
- Enhanced rumen activity

RESULTS

Table 2: Feed intake, nutrients digestibility and feeding value

Item	Experimental groups		Sig.
	Control	Fibrozyme	
DM intake, g/h/day			
Concentrate	918.8	872.9	*
Roughage	534.6	664.0	*
Total	1453.4	1536.9	*
Roughage ratio	36.7	43.2	*
Nutrients digestibility, %			
DM	74.76	76.54	NS
OM	79.18	80.18	NS
CP	73.96	78.09	*
CF	55.90	66.27	*
EE	75.74	82.05	*
NFE	77.29	80.46	*
Feeding value, %			
TDN	67.12	71.89	*
DCP	8.20	8.66	NS

Table 3: Rumen liquor parameters

Parameter	Experimental groups		Sig.
	Control	Fibrozyme	
pH			
0 hr.	6.83	6.62	NS
3 hrs.	6.70	6.59	NS
6 hrs.	6.75	6.65	NS
Total VFA,s, meq/dl			
0 hr.	9.07	9.18	*
3 hrs.	10.19	10.61	NS
6 hrs.	9.99	10.60	NS
Ammonia-N, mg/dl			
0 hr.	16.05	15.33	*
3 hrs.	20.27	18.38	*
6 hrs.	24.73	21.55	*