

**SUGARCANE BAGASSE SILAGE TREATED WITH DIFFERENT
LEVELS OF UREA FOR IMPROVING SHEEP PRODUCTION. II.
BODY WEIGHT CHANGES AND EWES` REPRODUCTIVE
PERFORMANCE**

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ABSTRACT

This study was carried out to investigate the influence of sugarcane bagasse silage treated with different levels of urea on body weight and ewes reproductive performance. The study included 179 3/4 Chios x 1/4 Ossimi sheep, 103 ewes and 76 newborn lambs. Animals were divided into four treatment groups, a control group (26 animals) fed concentrates with wheat straw, and three silage fed groups, T₀ (25 animals), T_{1.5} (26 animals) and T₃ (26 animals) receiving silage containing 0, 1.5 and 3 % urea, respectively. The animals were fed 60 % of their nutritional requirements from a concentrate mixture while the roughages, silage or wheat straw, were given ad libitum. The experiment was lasted 10 months and consisted of 4 periods, pre-mating (1 month), mating (1 month), pregnancy (5 months) and lactation (3 months). Body weight, incidence of estrus, number of service per conception and fertility rates were recorded. During the pre-mating period, silage or urea had no significant effect on body weight or body weight gain, whereas the increase in feed intake was significant (P<0.05). During pregnancy, T₀, T_{1.5} and T₃ had higher body weight and body weight gain (P<0.05) and feed intake (P<0.01) as compared to the control group, whereas during lactation, T_{1.5} and T₃ groups had higher body weight than that of T₀ fed group.

Numbers of ewes that exhibited estrus or lambled were less in urea fed groups (T_{1.5} and T₃) than the control and T₀ silage fed groups. Number of services per conception (S/C) was adversely affected by urea treatment, particularly the 3% urea level. Silage fed groups had higher body weight at lambing and their lambs had higher average and total birth weight and weaning weight than the control group. Long term feeding of urea had adverse effect on fertility of treated ewes as compared to fertility before treatment. About 18% (8 out of 45 ewes) of urea fed-groups had estrus length more than 48 hours as compared to about 4% (2 out of 49 ewes) for both control and silage (T₀) fed groups. In conclusion, feeding sugarcane bagasse silage with or without urea may improve growth performance, whereas feeding urea, particularly the combined effect of long term feeding and high level (3%), have had a negative effect on reproductive performance of ewes.

Key words: *Sheep, sugarcane bagasse, urea, body weight, estrus, service per conception, fertility, and %.*