

Effect of Mineral Supplementation on Post-parturient diseases in Pregnant goats

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Abstract

An experiment was carried out to evaluate the effect of mineral supplementation on post-parturient complication in pregnant goats and perinatal mortality in their kids. The study revealed increased in survival percentage of kids and reduced post parturient complication during kidding in mineral supplemented group than non supplemented group. From the present study it is concluded that the supplementation of mineral mixture @ 15gm per day orally for 60 days during advance stage of pregnancy in does increased survival percent of kids and reduced post-parturient complications during kidding than non supplemented group.

Keywords: Mineral, Post-Parturient Disease, Pregnancy,

In India different problems of production and reproduction of farm animals have been found to be associated with different kinds of mineral imbalances. The macro and micro minerals play an important role in process of reproduction and production.

The present study was planned to evaluate the effect of mineral supplementation on post parturient complications in pregnant does and perinatal mortality in their kids.

Materials and Methods

Twenty pregnant does about 120 days of gestation were divided into two equal groups. All goats were allowed to graze on natural pasture. First group was kept as untreated control with 300 gm concentrate feed without mineral supplementation. Second group was given 300 gm concentrate feed with mineral mixture @ 15 gm once daily orally up to 60 days. All the pregnant goats were subjected for macro and micro mineral profile in serum before and after supplementation. All animals were observed for post parturient complications viz. retention of placenta, mastitis, metritis, abortion, still birth, dystokia etc. and perinatal mortality in their kids for four weeks post kidding.

Results and Discussion

In present study, the status of serum macro and micro mineral profile was carried out in pregnant does during last month of pregnancy. The findings of the serum micro-macro mineral profile investigation showed deficiency of Ca, P, Zn, Fe and Cu in pregnant does grazing on pasture.

It is evident from study that number of kids born, total mortality observed and percent of kid survival in control and treatment group during kidding were 7, 3 and 40% and 13, 3 and 65%, respectively. Higher kid survival percentage (65%) recorded in mineral supplemented group as compared to non-supplemented group (40%). These results can be attributed to the supplementation of mineral mixture during late pregnancy. It is clearly suggested that without supplementation of mineral mixture in does of control group during late pregnancy might have resulted in ill development of kids born. The results obtained in present study are in close agreement with those of Bhoshale (2005), who also reported higher kid survival percentage (50%) in mineral supplemented does as compared with non mineral supplemented does (16.67%).

Bajhau and Kennedy (1990) who also reported that under nourishment during late pregnancy will result in the birth of smaller kids that will turn to show increased mortality and slower growth rate. The findings of the present study support the view of Parnekar (2003) that the most of non-conventional feeds are deficient in one or other mineral elements especially micro minerals. Such deficiencies in feed are likely to accentuate many problems related to animal reproduction.

The post parturient complications observed were predominantly abortion (30%), retention of placenta (10%), dystokia (10%) and still birth (10%) in control group and abortion (20%), dystokia (10%) and mastitis (10%) in treatment group of does during kidding. Post-

parturient complications observed in does of control group were higher than treatment group and can be attributed to deficient intake of nutrients mainly macro and micro mineral during late pregnancy in control group. The reduction in post-parturient complications in treatment group might be due to supplementation of mineral mixture in late pregnancy. Post parturient complications were also reduced dramatically in the study undertaken by Bhoshale (2005) in pregnant does by supplementing mineral mixture in late pregnancy.

The findings of present study support the view of Kumar (2003) who substantiated that nutrition during pregnancy is the most crucial part to maintain dam's body growth and fetal organogenesis, further a deficient nutrition may result in abortion, pregnancy

toxemia, still birth or poor offspring viability in neonatal life, increased incidence of retention of placenta and calving difficulties.

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