

you have kept them in isolation for at least two weeks.

(7) In the event of a disease outbreak have the trouble diagnosed by a trained animal pathologist.

(8) Do not vaccinate unless you are reasonably sure that

your flock will be exposed to the disease you are vaccinating against.

(9) In any outbreak of disease in which the birds show symptoms of difficulty in breathing use only a mild inhalant. Strong inhalants do more harm than good.

FEEDING PREGNANT AND LACTATING EWES RATIONS WITH DIFFERENT PERCENTAGES OF PHOSPHORUS

A Review

Results from feeding pregnant and lactating ewes rations containing different levels of phosphorus were published in December 1945 in Idaho Agricultural Experiment Station Bulletin 266, "The Phosphorus Requirement of Ewes for Pregnancy and Lactation" by W. M. Beeson, R. F. Johnson, D. W. Bolin, and C. W. Hickman.

Rations containing 0.14, 0.16, 0.19 and 0.23 per cent phosphorus were fed to ewes during their gestation and lactation period. Blood samples were drawn periodically from these ewes and analyzed for inorganic phosphorus. These blood phosphorus values were used as an index to determine whether ewes were receiving sufficient phosphorus in their ration.

Ewes fed the 0.14 per cent phosphorus ration did not receive sufficient phosphorus. However, ewes fed the 0.16 and the 0.19 per cent phosphorus ration received sufficient phosphorus during the gestation period, but these two rations failed to supply enough phosphorus when the ewe was suckling a lamb. The 0.23 per cent phosphorus ration supplied enough phosphorus to meet the normal phosphorus requirements of lactation. The ewe, when suckling a lamb, requires a larger amount of phosphorus than at any other period of reproduction.

The authors of this bulletin point out from previous investigations, that ewes on ranges have access to forage, which is rich in phosphorus and protein during the spring and early summer months but when the range becomes dry and the forage matures, there is a rapid loss of phosphorus and protein. The critical period in the phosphorus nutrition of the sheep is during the fall and winter seasons. During this critical period, the rations should be supplemented with phosphorus by giving ewes free access to equal parts of bone meal and salt. In case the ration is also low in protein, a protein-phosphorus rich concentrate such as cottonseed, soybean and linseed meals should be added to the ration.

These investigations would indicate that many rations fed to sheep in North Dakota may be deficient in phosphorus and possibly protein, and that these rations should be supplemented with steam bone meal or a protein-phosphorus rich concentrate if the rations are low in both protein and phosphorus. (Reviewed by Donald W. Bolin, Associate Nutritionist)