

## **Role of Vitamin E and Selenium in Sheep Reproduction**

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### **Procedures and Results**

An experiment was conducted to determine if the Oklahoma State purified diet, which contains urea as the sole nitrogen source would support reproduction in ewes. The diet contained selenium but no additional vitamin E except the small amount in corn oil, which was fed at a level of 1% of the diet. All lambs died at birth or shortly afterwards and the ewes had symptoms of muscular dystrophy, indicating a vitamin E deficient diet.

An experiment was then designed to determine the value of selenium and vitamin E in the reproduction of the ewe. Four treatments are used as follows: (1) negative control, having no added vitamin E or selenium, (2) selenium added, (3) vitamin E added, and (4) both selenium and vitamin E were added. Corn oil, from which the vitamin E had been removed, replaced regular corn oil in the diets. Ewes which were about four months of age were placed on the trial in the summer of 1967 and have been fed their assigned diets up to the present time. Breeding was initiated in October and extended over a 60-day period.

The experiment is still underway and the observations are too incomplete for further report at this time.

### **Publications**

One article has been reported on this project.

Erlinger, L. E. 1967. Effect of a purified diet upon reproduction in ewes. Thesis for M.S. Degree. Oklahoma State University, Stillwater.

### **Future Work**

The experiment will be continued as outlined.

## **Non-Protein Nitrogen Studies With Ruminants**

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### **Procedures and Results**

As protein is the most limiting nutrient in the nutrition of man, work is underway to determine means of feeding more urea to ruminant animals. This has been and continues to be an active project. During