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Summary only

BODY COMPOSITION STUDIES WITH THE MILK-FED LAMB

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SIXTY-EIGHT crossbred lambs were taken from the ewe when less than one week old and were given reconstituted dried whole cow's milk at different levels of intake, for between two and eight weeks. They were divided into four groups according to the plane of nutrition. The relative growth rates of the gross chemical components were determined by calculating the logarithmic relationship between the weight of each component and the empty bodyweight for each group of lambs. There was no evidence that plane of nutrition had any differential effect on the development of water and protein in the body of the milk-fed lamb within the weight range 4 to 14 kg; but undernutrition resulting in bodyweight loss differentially affected the fat component. This component was lost at a relatively faster rate than it was deposited. These results support the view that restricted nutrition causes a generally uniform retardation of development except in so far as fat tissue is concerned.

Information on the effect of the protein concentration in the diet on the composition of the milk-fed lamb was obtained from the chemical analysis of sixty-five lamb carcasses. The protein content of the six diets used ranged from 5 to 35%. The level of protein in the diet had a differential effect on the amount of fat and water in the carcass and at low levels of protein intake the amount of protein in the carcass was differentially affected.