

I. — GROWTH, FATTENING AND QUALITY OF LAMB AND KID CARCASSES

Overall growth of the lamb: its characteristics and rules

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A descriptive study of the prenatal and post-natal growth of the lamb and the methods used to determine its characteristics was made.

Unpublished data on the dissection of 80 lambs belonging to 5 different genotypes (Romanov, Merino, Romanov × Merino, Berrichon, Berrichon × Merino) slaughtered at 25, 50, 100 and 150 days of age were used.

Breed comparisons were done at similar degrees of maturity (slaughter weight /adult weight). The results show large breed differences in the growth of various organs and fat deposits but not in the proportions of muscles and bones. These differences decreased when degree of maturity reached 0.25 to 0.60.

The allometric coefficient of empty liveweight or total mass of similar tissue was also used to characterize the growth of different organs and tissues. The usual rules for differential growth were verified for each genotype studied; however, there are some differences in the magnitude of the allometric coefficient in these 5 genotypes. Roughly, this magnitude varied less in the muscle tissue from one genotype to another. However, there are differences in muscle mass distribution, i.e. at the same degree of maturity, the Romanov and the Merino had more shoulder muscle and less leg muscle than the Berrichon.

The prerequisites for an inventory of growth characteristics and anatomical composition of the main French sheep breeds are outlined. The utilisation of simple estimators for predicting growth is suggested.

General aspects of the development and growth of muscle and adipose tissues : characteristics in sheep

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The aim in meat production is to increase the muscle mass (which is the protein fraction) in the carcass and obtain an optimal amount of fatty tissue. To satisfy these objectives, it is necessary to have a better knowledge of the mechanisms governing muscle and adipose development. To do this, we must study distribution of the adipose tissue in the whole animal and the cellular aspects of that development, adipocyte ability to synthesize fatty acids or to assimilate nutritional lipids and adipocyte faculty of releasing fatty reserves. In studying muscle tissue.