

The crossing and production of lamb : Comparison and selection of male breeds

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First generation crossbreeding experiments for lamb production were realized during 1976 through the collaboration of the I.N.R.A., the I.T.O.V.I.C. and the MIDATEST. They clearly confirm differences in the growth rate and conformation of sire breeds, criteria which can be observed on live animals. But carcass measurements indicate large differences in tissue composition (especially total fat) and in the distribution of adipose tissue. Texel sires give leaner carcasses at same weight, and Berrichon cross lambs are the fattest with the largest dorsal fat deposits. Lacaune have the greatest proportion of bone, but adipose tissue is mostly internal with little dorsal fat.

Several questions remain to be studied:

— Can genotypes always be classed in the same way, whatever the breeding system used and the type of lamb desired?

— What is the possibility of selecting for restricted carcass fatness; is this selection in opposition with conformation and maternal abilities?

For the breeders, we advocate the creation of a single progeny test station for several breeds, where each breed can be given the best orientation for its selection.

Adipose tissue development in meat lambs : effect of type of fat incorporated into the milk replacer

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A first trial involving 12 Charmois lambs demonstrated the significant effect of tricaprylin ingestion before weaning on adipose tissue composition at weaning (35 days) and at slaughter (120 days, 28 kg). Saturated fatty acid content of the back fat thus decreased at weaning from 38.9 to 33.3 %, and the content of unsaturated fatty acid increased from 38.3 to 44.2 %. At slaughter the saturated fatty acid content of the back fat at the same site decreased from 37.8 to 31.6 %, while the unsaturated fatty acid content increased from 50.5 to 52.9 %; odd and branched-chain fatty acid content increased from 11.6 to 16.0 %. Again, at slaughter saturated fatty acid content of the inner back-fat decreased from 56.2 to 50.2 % and unsaturated fatty acid content increased from 38.3 to 44.2 %.

In a second trial involving 59 Limousin or Limousin × Romanov lambs, slaughtered at weaning (28 lambs) or at 35 kg of weight (31 lambs), direct and long-term effect of tricaprylin