

Methodology for Identification of Lamb Carcass Composition

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INTRODUCTION

Lamb procurement in the United States has historically been based on live weight, dressing percent and pelt characteristics. The national average slaughter weight for lambs has increased sharply over the last decade (American Sheep Industry, Inc. [AST], 1996). Dressing percent is largely a function of carcass fat content. As carcasses become fatter, the dressing percent increases.

The procurement of lambs based on increasingly heavier weights and a high dressing percent has encouraged the production of lambs with high amounts of carcass fat. Couple this with economical feedstuffs and seasonal lamb supplies, one should not be surprised that one of the largest problems facing the U.S. sheep industry is the production of excess fat at the front end of the marketing chain (Magagna, 1991; Texas Agricultural Marketing Research Center [TAMRC], 1991; Tatum et al., 1992). A logical starting place to send clearer signals to producers regarding market preferences and improve consumer perception of lamb would be to modify the method of lamb procurement from one based on live weight and dressing percent to one based on salable lean tissue, carcass composition and/or yield of consumer desired retail cuts.

Accurate cutability classification of lamb carcasses would be a means for identifying differences in carcass value. Carcass procurement based on lean yield would be a strong deterrent to marketing over-finished lambs. A carcass yield pricing system must have an acceptable level of accuracy in carcass evaluation such that it receives producer confidence and packer acceptance.

This review addresses technology that has shown potential under laboratory or industrial conditions to identify lamb carcass composition, primal cut composition or retail yield. This includes the use of carcass or live weight, the USDA yield grading system, ultrasonic scanning, optical reflectance probes, bioelectrical impedance and electromagnetic scanning of whole carcasses.

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