

# The Effects of Terminal Sire Breed on Carcass Quality and Sensory Traits of Lamb

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## Introduction

This experiment was conducted to compare the carcass and eating quality of crossbred lambs from Charollais, Suffolk, Texel, Canadian Arcott, and Ile de France sires bred to cross bred ewes, slaughtered at current market weights produced under Western Canadian conditions.

The efficiency of meat production is maximized by the use of terminal sire breeds to complement characteristics of crossbred ewes. To compete effectively, the industry needs to produce uniform, nutritious, lean lamb that satisfies the eating preferences of Canadian consumers. A major influence on carcass lean content is the sire breed that is used and there is a wide range of breeds in Canada, as well as an increasing number of new breeds imported from Europe.

Suffolk sheep are widely used in the Canadian sheep industry and have been included in many breed evaluations in the United Kingdom and United States. The other common terminal sire breeds in Canada include the Charollais, Canadian Arcott and Texel. The Ile de France sheep breed has recently been introduced into Canada from Europe and consequently, very little research has been gathered on this breed in North America.

Canada has a large number of sheep breeds, making it difficult for producers to know which ones will help them to produce lamb most profitably. This diversity also causes problems when lambs for a single market are sourced from flocks with widely varying growth rates and finishing characteristics. Most breeds of lambs in western Canada are properly finished at 50-52 kg

(110-115 lb.) live weight (Agric. 2005). However, very large-framed lambs may not have enough fat cover at that weight, while small-framed lambs may be over finished at this same weight which may affect the consistency of quality lamb cuts.

Different terminal sire breeds may be suited to different production systems. To produce lamb carcasses to fixed level of fat cover, the larger breeds (eg. Suffolk and Ile de France cross) would be expected to produce heavier and older lambs than those of lighter sire breeds. In this study, lambs from the five terminal sire breeds were selected to be slaughtered within the range of 45-55 kg, (100-120 lb.) live weight so that each sire has equal numbers of lambs of each sex within this weight category (Graph 1).

Graph 1.

MEANS OF LIVE WEIGHTS BY BREED & SEX

