

## THE INFLUENCE OF AGE AT FIRST CALVING AND WINTER FEEDING MANAGEMENT AS YEARLINGS ON CALF PRODUCTION FROM BEEF SHORTHORN COWS

C. S. BERNARD, M. H. FAHMY AND G. LALANDE

*Canada Department of Agriculture, Research Station,  
Lennoxville, Quebec, Canada*

### SUMMARY

The effects of age at first calving (2 v. 3 years) and the winter feeding management as yearlings (roughages v. roughages supplemented with meal) on conception rate, calving performance (survival and weights) and lifetime production were studied on 76 beef Shorthorn cows born from 1956 to 1958 at the Lennoxville Research Station. Conception rates averaged 89%, and were not influenced by treatments. Calf mortality from birth to weaning was 1.5 and 0.6% higher among the calves out of the cows which had calved first at 2 years old and cows not supplemented, respectively, but the differences were not significant. Calves born to cows calving first at 2 years were 0.8 and 7.7 kg ( $P > 0.05$ ) lighter at birth and weaning respectively than those born to cows calving first at 3 years of age. The effect of feeding régime of the cows as yearlings on the weights of calves at birth and at weaning was non-significant. In cows calving annually up to 8 years of age in this trial the lifetime production of those calving first at 2 years of age was greater by 40 kg than of those calving first at 3 years of age, although the advantage was greater in earlier years.

### INTRODUCTION

NUMEROUS reports have dealt with the effect of age at first calving on various productive and reproductive traits such as calf weights at different ages, milk production and composition, conception rates, and gestation length. While there are conflicting results, reports generally agree that calving at 2 years of age increases the lifetime production of a beef cow by some fraction of one weanling calf.

The influence of nutrition on the reproductive performance of beef cows has been reviewed by Lamond (1970). He showed that much of the variation in reproductive performance is related directly to the level of nutrition, especially when it is inadequate.

The present report deals with the influence of early calving and of winter feeding management of females of a beef breed on their conception rate and calving performance. The data also provide comparisons between the different management procedures on lifetime production.

### MATERIAL AND METHODS

A total of 76 Shorthorn young adult females (heifers) representing three crops of calves born in 1956, 1957 and 1958 furnished data for this study.