

VARIATIONS OF WEIGHT AND MORPHOLOGICAL INDICES
TO MOOSE FORAGE QUALITY IN QUÉBEC

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Abstract: During 1981 and 1982 hunting seasons, 2 indices to energy intake (live weight and heart weight) and 2 indices to protein intake (cranial breadth and kidney weight) were measured or estimated in 3 areas of southern Québec as a preliminary screening of moose habitat quality. An analysis of covariance with age as covariate indicated slight but significant ($P < 0,001$) regional variations for all 4 indices. Live weight as estimated by snout length and heart weight were greater on the Gaspé Peninsula than in central and western Québec, suggesting a higher energy intake or dependance in the former area. The east-west trend was reversed for cranial breadth as estimated by carcass head width and kidney weight, suggesting that moose of western Québec rely more on protein for their metabolic needs than farther east. Moreover sex-related differences were significant for heart and kidney weight and for head width; an earlier cessation of growth by 2-3 years in females than in males accounts for much of this difference. Finally the statistical analysis revealed significant differences for head width and kidney weight between the 2 years, but no obvious explanation can be given for it. Further studies on forage quality and moose physiology would be necessary to understand regional and annual variations that were found in this preliminary screening.

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