

THE INFLUENCE OF PELVIC OPENING AND CALF SIZE ON CALVING DIFFICULTIES OF BEEF × DAIRY CROSSBRED COWS

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Difficulty at calving was studied on 164 beef × dairy cows produced from mating Charolais, Hereford, Limousin and Maine-Anjou bulls to Holstein and Ayrshire cows. The cows were mated for the first time at 12 mo of age using an Angus, a Limousin and a Chianina bull representing small, medium and large size, respectively, and for the second parity using the same Chianina and Simmental bull representing large-size bulls. At first calving, 23.1% of all parturitions were difficult and no differences were observed among the genetic groups. Of the second calvings, 4, 12, 20 and 36% ($P < 0.05$) were difficult for the Limousin, Charolais, Hereford and Maine-Anjou crosses, respectively. Cows experiencing calving difficulty at both parturitions had a smaller pelvic opening at breeding, day 150 and 270 of first gestation than all others and the ratio of pelvic opening to body weight was also less. In these other cows, when difficulty was observed at first or second calving, the calves weighed about 5 kg more ($P < 0.05$) than those that calved easily. At first parturition, calving difficulty was 23.0% when the small-size bull was the sire, and it increased to 28 and 47% when the medium and the large-size bull were the sires, respectively. At second calving, male calves required four times more assistance than females ($P < 0.05$). Calving difficulty was 54.2% at the first and 13.8% at the second parturition in cows bred by the Chianina bull. Calf dimensions most highly related to difficult calving were circumferences of head and nose which were, respectively, 1.6 and 1.3 cm larger in calves from difficult calving ($P < 0.01$). The mean interval from calving to first estrus and the number of inseminations per conception were, respectively, 88.0 days and 2.3 inseminations after a difficult calving, 14 days longer ($P < 0.05$) and 0.4 insemination more ($P < 0.05$) than after an easy calving.

On a utilisé, dans deux expériences, 164 vaches croisées représentant huit croisements issus de taureaux Charolais, Hereford, Limousin et Maine-Anjou et de vaches Holstein et Ayrshire pour étudier les difficultés de vélages à la première et deuxième mise-bas. Les vaches étaient saillies, la première fois, à 12 mois par un taureau Angus, un taureau Limousin, ou un taureau Chianina représentant, respectivement, un petit, moyen et grand format. Pour la seconde mise-bas elles étaient saillies par deux taureaux de grand format, soit le même Chianina et un Simmental. Au premier vélage, il a fallu assister 23.1% de toutes les parturitions, sans toutefois y détecter de différence parmi les groupes génétiques: alors qu'au deuxième vélage 4, 12, 20 et 36% ($P < 0.05$) d'assistance fut nécessaire aux croisements Limousin, Charolais, Hereford et Maine-Anjou respectivement. Les vaches qui ont eu des difficultés de vélage à chacune des deux mises-bas, avaient une ouverture pelvienne plus petite à la première saillie, à 150 et 270 jours de la première gestation que celles sans difficulté. Le rapport ouverture pelvienne, poids de la vache était toujours plus petit pour les vaches nécessitant des assistances aux