Challenges towards natural calving in double-muscled cattle in the Netherlands

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The current high rate of caesarean sections (>90%) in double-muscled (DM) cattle has led to increased public concerns in the Netherlands. In general, DM cattle have a smaller pelvic area in comparison to other beef breeds, which in combination with a higher calf birth weight, results in problems at birth. Only a decrease in the proportion of caesarean sections in DM cows would make these breeds less controversial, which is only achievable by directed breeding efforts. Until now, no evaluation has been made to estimate the economic impact of an increased rate of natural calving in DM cattle in the Netherlands. The objective of this study is, therefore, to gain insight into these economic effects on individual animal level. Due to lack of quantitative information in the literature, interviews and questionnaires were used to collect quantitative farm data to parameterise a stochastic partial budgeting model. This model simulates the economic consequences of the current situation with 100% caesarean sections and of an aimed situation of having 50% natural calving in DM cattle. The model reflects the period after the second parturition of a DM cow till slaughtering after the fourth parturition, assuming that the animal has delivered her first two calves by caesarean sections. No striking differences in the average gross margins were found between the current and the aimed situation in DM cattle (€ 2,171 vs. € 2,160, resp.). In spite of a reduction in the gross margin in the aimed situation due to lower maintenance costs and veterinarian costs, these reductions were compensated by the expected reduced revenues (€ 4,196 current vs. € 3,938 aimed). The 90% confidence interval of gross margins ranged from € 901 to € 3,952 in the current situation and from € 885 to € 4,116 in the aimed situation, indicating some higher level of uncertainty in the latter. Given the expected economic impacts, economic motives will not prevail as incentive for DM cattle farmers to breed towards more natural calving in DM cattle in the future.