

## 9 Summary

### **Effect of various degrees of dystocia on the productivity of dairy cows during the current lactation.**

In a retrospective case control study data on the course of parturition and milk test day data from 261 cases of dystocia and their respective controls were analysed. Control animals had calved without veterinary assistance on the same farm during the same time period and were of the same age and breed as the cases. It was the purpose of the study to determine the effects of the obstetrical measures on milk production, milk contents, fertility and culling under field conditions.

1. All groups of cows that needed veterinary assistance during calving had a lower milk production than their controls. Cows that underwent a caesarean section (CS) had the lowest production, also in comparison to their control animals. The other two degrees of dystocia did not reduce milk production significantly compared to controls. In all groups, mature cows (2nd and greater lactation) yielded 5 to 7 kg milk per day more than primiparous cows. Primiparous cows after a caesarean section had the lowest production.
2. Somatic cell counts were lowest in the group CS. They were lower than in their respective control group. Somatic cell counts were numerically higher in cows after severe dystocia (SD) than in their controls. Cows with mild dystocia (MD) did not differ from their controls.
3. The fat content in the milk was slightly lower in cows with mild dystocia than in their controls and slightly higher in cows with SD. Other milk constituents (protein, urea) did not differ between cases and controls.
4. Fifty percent of the cows were re-bred after 140, 130 and 180 days in MD, SD and CS cows, respectively. The figures for their respective control groups were 110, 110 and 100 days after calving. After 160 days, 50% of the MD cows were pregnant again. Less than half of the cows with SD (48.3%) or (CS 48.7%) were pregnant by 200 days in milk. Fifty-six percent of the MD cows were pregnant at 200 days in milk. In the respective control groups, 50% were pregnant at 140 (MD), 130 (SD) and 110 (CS) days. Days open in cows that were pregnant by 200 days in milk differed by 11, -2 and 12 days for MD, SD and CS cows in comparison to their respective control cows.
5. The proportion of dead calves within 48 hours after birth was higher in the cases than in their controls. It was highest in MD (26%), followed by SD (23%) and CS (9%). More male than

female calves were dead.

6. The proportion of cows culled within 200 days in milk was by 25% higher in SD cows and 56% higher in CS cows, compared to their controls. In MD cows there was no difference to the controls. The main culling reasons were "not specified", infertility, low production and udder disorders.
7. The economic calculation included costs for veterinary obstetrics, losses due to dead calves, milk losses, losses due to prolonged days open and culling. The costs per case in comparison to controls were calculated at 58.86 € for MD cows, 130.51 € for SD and 236.61 € for CS cows.

Results of the study show, that the need for veterinary obstetrics is always associated with considerable costs for the farmer. The costs increase with severity of the case indicating that any measure to reduce severity of dystocia has a remarkable potential to reduce costs.