

Robust calves – well begun is half done. An interdisciplinary research & development project (2018-2021)

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Robust and healthy calves are pivotal to ensure optimal productivity for dairy farmers and veal producers. The first months in the life of a calf require a lot of attention by farm staff, mortality peaks during this period and antibiotic use can be considerable due to diarrhea and respiratory infections. Therefore, what happens to a calf during the first weeks of life will have a major impact on its performance later in life, whether as a milking cow or a veal calf. Disease, suboptimal feeding and poor management during the calf rearing period can influence milk yield and daily gain substantially. There is a need for improvement of calf “robustness” so calves reared by dairy as well as veal producers reach their optimal performance levels. To this end, proper tools and strategies regarding diagnostics, data recording, health classification and health management should be developed.

The challenge is to identify and measure “robustness” of animals and to document which type of management produces healthy, high performing calves. Current data platforms in Danish cattle production collect vast amounts of health and performance data on heifers and cows, whereas relatively few data are available on calf rearing results. This underlines the need for data – and ways to collect and present them – on both heifer and bull calves. It will enable the farmer to monitor risk factors and improve health and performance of calves raised on the farm by making the decisions and adjustments based on farm specific data and information – and evaluate the effects of interventions and improvements.

Robust calves are less prone to disease and, in principle, require fewer treatments with antibiotics. The Danish cattle industry has a goal of using as little antibiotics as possible, however, ideally no antibiotics should be used at all. Increasing calf robustness is one way to achieve this goal. In the project, we will focus on the effect of preventive measures such as biosecurity and pre-biotics, and finally efforts will be made to produce veal calves with minimal or no use of antibiotics.

The overall objective of the project is to enhance production of healthy and robust calves by means of knowledge and tools to improve calf health and performance through better management. This will be achieved by

- Systematic collection of knowledge and data from clusters of farms (veal producers and the dairy farms that deliver calves to them)
- Development of diagnostic tools for monitoring of calf health (test of immune status, on-farm disease monitoring)
- Test of alternatives to antibiotic treatment (pre-biotics, NSAID’s, antibiotic-free production)
- Development and implementation of IT management tools (data management and analysis)