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HOW TO OPTIMIZE FEED EFFICIENCY BY AUTOMATIC DATA EXCHANGE

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Feeding the dairy cow the right and optimal way is an increasing challenge.

1. There is an increasing focus on the overflow on especially nitrogen and phosphorus to the environment.
2. The climate challenge in general is setting requirement for decrease the Carbon Footprint
3. The genetic improvement increases the requirement for the composition of the nutrients in the diet.

To face these challenges the dairy farmer needs to monitor both the input- and the output side very closely and of course use newest knowledge about cattle nutrition. The input side consist of monitoring the amount of each feedstuff and the quality including content of nutrients. The output side is the performance of the cow meaning the milk production and gain/loss in weight.
In Denmark *SEGES Innovation* has been working on these issues for years together with relevant stakeholders like feed equipment manufacturers, dairies, milk recording and laboratories. For a start we used manual generated data, both on the input and the output side. We have together with other Nordic Countries developed a dynamic feed evaluation system, NorFor, which is used for both optimizing the ration and for evaluating the performed feeding. The challenge has been that it is labor costly to do manually and that the manual monitoring will be a snapshot on the specific day, and not the whole picture with data from each day. The overcome the challenge, there has been focus on getting the data automatic recorded by the feeding equipment and get data automatic transferred.
Today the full data chain is operational. Data from the storage, the laboratory, the feeding equipment, the dairy are transferred automatic to the Central Cattle database in Denmark. In the management system data are used for automatic daily efficiency calculation including parameters on nutrients and different relevant key figures. The farmers and the advisor use the output via different kind of reports to evaluate the feeding for the best of the cow, the production, the climate, and the economy