

## Supporting automatic milking farms in milk recording

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In Finland there are 3755 herds in milk recording (73 % of all herds) and 200 134 cows (80 % of all cows). Currently, 52 % of the milk recording's milk comes from robotic herds, and the estimated amount by 2035 is 80 %. More than 90 % of the Finnish farms are doing their milk recording work by themselves, such as milk sampling and data transferring, but there are several software and customer support services available. The calculation of milk recording data, reporting to customers and the maintenance of the programs are handled by Mtech Digital Solutions Ltd.

The Finnish milk recording organization ProAgria offers various services to all farms, but here the focus is on services for automatic milking farms (AMS) to help their daily work and keep them involved in milk recording. The basic services provided to AMS farms are different technical milk sampling services, milk recording and sampling data's transferring service and customer service. In addition, AMS farms are offered a new comprehensive service that considers a whole farm. This service is still under development and is therefore called "AMS development program".

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Most of the Finnish AMS-farms do regularly milk recording and milk sampling by themselves without difficulty. However, part of farms finds this laborious and would like to either outsource the work or stop taking milk samples. There would be more demand for outsourcing these if more services were available.

There are delays in the data recording on some farms, which is reduced by offering a data transfer and recording services. The Data Quality Points system has helped reduce data recording delays and farms can monitor their officiality in milk recording monthly.

Milk recording service is offered for robot farms. The expert will take and save the milk data remotely from the customer's robot and checks at the same time all relevant information has been sent on time and the reports are fine..

### Abstract

### Introduction

### Services for robot farms

#### Data transfer and recording

### Customer service

Customer service assists all the farmers in milk recording, but they also support robot farms with their many technical issues in milk sampling. At the same time, they monitor the situation of data quality points of the farms.

### Robot sampling

There are plans to develop different new support services for robot sampling:

1. Continuous basic service, sampling 1 x / month by a technician.
2. Temporary service, according to the customer's needs, e.g., during seasonal work or in case of sickness etc.
3. Customer sampling support service; the customer takes care of the sampling, but can get help in many ways, if needed.
4. Help desk -phone, technical support.
5. Equipment rental (samplers, scanners).
6. Maintenance service for sampling equipment.

Some of these services already exists, but availability is currently limited to certain areas.

### Challenges

Connection problems on farms causes the data transfer to be interrupted. There are only a limited number of technicians with technical expertise and located in certain areas; training and new employees are needed. Long distances between facilities and reaching the customers who benefit the most from the services are also challenges.

### Conclusion

Services may not be needed immediately on a large scale because farms are used to doing it themselves and there is no ready-made model. If there is no visible order for the service, it is easy to think that there is no need for it. In Finland, the challenge of the robot sampling service is the long distances between the farms, it is difficult to make it profitable. In addition, other work should be arranged for the employee in connection with farm visits. However, the number of AMS farms using the data transfer and recording service has increased, as well as using milk recording customer service's advices for milk sampling. So, we are going in the right direction.