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# Implementation of new milk recording practises in Finland

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For the last two years, the Finnish milk recording provider ProAgria has been running a development project on milk recording. The aim of the project is to improve data capture, data quality and data utilisation in order to give added value to the farmers. In the beginning of 2015, many developments have been implemented. They concern yield calculations as well as reporting and customer services. As an example, more variety in recording intervals was introduced, data capture from AMS farms changed from monthly sum to 24-hour milk yield, data quality points were introduced as a motivating data quality supervision tool, and technical staff was trained to offer services in milk recording. We are still in the process of improving milk recording reports and customer services. A wide range of stakeholders has been involved in the project. ProAgria and many of the stakeholders have made large investments in order to achieve the project aims. Such a major reform of milk recording requires a vast amount of training to the staff and farmers. The project has been challenging in terms of communication, since many in the business had to implement new procedures. A lot of attention has been paid to continuous monitoring and quick response to customer feedback. The effect of the developments on customer satisfaction can be assessed more fully at the end of the milk recording year.

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## Abstract

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*Keywords: development, milk recording, data capture, data quality, customer services.*

ProAgria is a Finnish agricultural advisory organisation providing services in milk recording. Services are provided by 15 independent organisations around Finland, which employ around 600 farm advisors. The central organisation is taking care of strategic planning, marketing and development work.

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## Introduction

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Since 2013, ProAgria has been running a development program on milk recording with aim to enhance the services and give added value to the farmers. One of the goals is to increase the share of cows in milk recording to 90% (4/2015: 84%). Improvement of data quality and utilisation of data on farms are the key tasks in the project.

Many developments related to milk yield calculations, reporting and customer services were implemented in the beginning of this year. We are also changing milk recording vials and starting to offer additional analyses from milk samples. Such major reform requires a vast amount of training, communication and monitoring in order to be successful. The project is based on customer feedback, and therefore communication with farmers and stakeholders has played an important role in the whole project.

**Milk yield calculations**

Milk recording intervals have been rather fixed over the past 50 years and customers have not been able to change the interval actively. Most of the customers, 97%, have had a B48 recording. The aim of the change in recording intervals was to give more benefit to customers, by giving them more options and possibility to utilise milk recording more efficiently in farm management.

New milk recording and sampling intervals offered in Finland are 2, 6 and 8 weeks. A milk recording vacation is now possible with 2 and 4 week intervals. Table 1 shows that some changes have happened already in the first four months. Those with a 2-week recording interval are mainly AMS customers and those with an 8-week interval are small herds.

During the years 2003 to 2014, the AMS customers used a monthly milk sum method for milk yield calculations. It was substituted by 24-hour milk yields (Table 2). The new method allows the customers to utilise all new intervals, choose freely their recording day and send all the data to database at once. In the old system, they had to wait for the end of the calendar month until milk recording was ready and could be reported. AMS customers will further benefit from the new method and shorter intervals, when the pregnancy testing from milk samples will start later this year.

Feedback from AMS customers was devastating in the beginning of the year. Despite of a large amount of education, proper information did not reach customers on time. This has led to many misunderstandings and large amount of feedback claiming that the recording results were not correct compared to AMS averages. Eventually most customers have come to see the benefits and no movement away from milk recording has been observed.

**Reporting**

Data quality points (DQP) is a novel tool for supervision of recording data quality, introduced in the beginning of this year. They take into account e.g. recording intervals, deviations from dairy deliveries and milk meter testing (Wahlroos et al., 2014). Better quality of data gives added value to the customer, to advisory services and to breeding evaluations. DQP is now reported to the customer and advisor after each recording.

*Table 1. The number of herd by milk recording and sampling interval in May 2015.*

| Intervals | Milk recording interval | Sampling interval |
|-----------|-------------------------|-------------------|
|           | Number of farms         | Number of farms   |
| 2 weeks   | 68                      | 7                 |
| 4 weeks   | 5605                    | 382               |
| 6 weeks   | 23                      | 25                |
| 8 weeks   | 310                     | 5626              |

*Table 2. Milk yield calculation for AMS farms, 24-hour yield*

|                      | Milking at AMS  |                | Recorded milk yield                 |
|----------------------|-----------------|----------------|-------------------------------------|
|                      | Time at milking | Yield, kg milk |                                     |
| At sampling          | 10:00           | 10             | 20 kg milk in 20 hours              |
| Previous             | 0:00            | 10             | = 20 kg * (24/20) =                 |
| Previous to previous | 14:00           |                | = 24 kg milk yield on recording day |

making immediate action possible. In earlier years, data quality was first assessed after the recording year was finished. DQP have gained a notable amount of attention among customers. Most of the feedback is positive and plenty of actions have been taken to improve data quality on farms.

Periodic reports have been reformed, according to customer needs and because of the additional information we will be receiving from milk samples. Most wanted figures, lifetime production per day and breed averages, were added to the summary report. On the periodic report milk yield target of the herd is reported on group level and can be easily compared to the milk yield on recording day. Earlier it has been possible to set the target, but no simple monitoring tools were available. Also, possibilities to divide the periodic reports between different groups within the herd have been designed and will be introduced later this year. Those will be helpful on farm as management tools.

Internal reporting on milk recording practises and results is done on weekly basis. Weekly statistics are delivered to local centres, where they can be utilised for better supervision of the milk recording services and for better customer service. Statistics include e.g. detailed information about unanalysable samples with reason, vial type and milk meter type. Customers with milk sample problems can thus receive more specific advice.

Traditionally all dairy advisors have been performing milk recording related services. This has been a challenge for the quality and cost-efficiency of the services. Customer services were re-organised during the project so that each local center now has a few specialised milk recording advisors and technicians.

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## Customer services

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Milk recording advisors monitor the milk recording data and advice the customers. They also provide milk yield data capture services, e.g. they can extract the necessary data from AMS system via remote access if the client so wishes. Technicians use milk sampling devices for AMS, TruTest electronic milk meters, EziScanners and mechanical milk meters. Variety of equipment differ between the centers. The share of pre-coded vials used with on-farm barcode readers has reached 25% of all samples.

A major challenge for the technical services is to make them cost effective. Distances between the farms are great and number of customers is still low due to our long history of B recording.

Customers have been informed about the new possibilities through several media such as articles in special journals, telephone campaigns, social media, on-line meetings, electronic newsletters and SMS services. Local centers have also organised a lot of seminars and "morning porridges". Communication with stakeholders has also been continuous since the start of the project.

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## Communication

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One aim of the project was to decrease the delay from milk recording to the day when milk yields are in database. Around 70% of the milk yields in Finland are reported by the farmer. A milk recording reminder service was started to remind customers about milk recording day, missing milk yields from data base and available new reports. The service was offered to all customers as part of milk recording (Table 3). Messages seem to be useful, since only less than 20% have resigned from the service. With this service we have been able to catch many customers who have reported milk yields to data base. Most probably this service has had a significant effect on decrease of the reporting delay.

*Table 3. The use of milk recording reminder –services in April 2015*

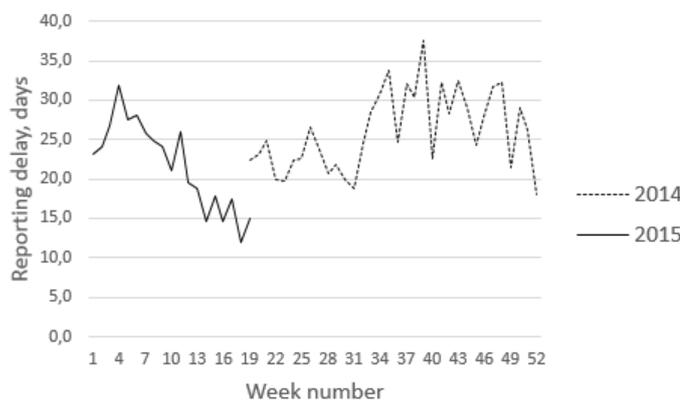
|                   | No of messages |       |
|-------------------|----------------|-------|
|                   | SMS            | Email |
| Recording date    | 4 946          | 58    |
| Missing yields    | 969            | 7     |
| Reports available | 4 633          | 51    |

**Results**

The number of samples analysed has increased somewhat compared to previous years, which is due to the available shorter sampling intervals and reminders to prevent farmers forgetting to sample. More frequent sampling creates customer value to milk recording. The old monthly sum method for AMS farms has caused problems at milk laboratories and technical services on AMS companies, since most of the samplings were done during the last week of the month. Samples are seen to arrive more evenly nowadays.

The DQP system has been in use only few months now, thus real development will be seen first in the end of recording year. The trend is promising. DQP average was 3.7 in August 2014 and 5.0 in April 2015. We have had approximately 25% of unofficial farms last recording years and the goal of the project was less than 10%. In April 2015 we had 14.5% farms which were under critical DQP level (=0 points). This is a clear evidence that quality matters to customers and DQP has an impact on data quality (Figure 1).

It seems that the actions have also had a significant effect on reporting delays. The most effective actions have been frequent contacts with customers using several media and continuous communication about the meaning of reporting delay to customer value. Typical average for reporting delay has been for years at 28 days. As shown in figure 1 the delay is decreasing rapidly. Customers are using the services of milk recording advisors in similar manner than before, but on average they have paid much more attention to reporting data immediately after milk recording. There is still work to do, since we aim at <5 days delay.



*Figure 1. Development of milk yield reporting delay.*

Changes in customer services are still under development. Services provided by milk recording advisors are not the same in all local centers, which causes a challenge in customer satisfaction. However, feedback from customers has been mainly positive, since somebody is now actively and regularly keeping track of their records.

Technical services need to be further developed to make it more interesting for the customers and more cost-effective for ProAgria centers. Route optimization has been considered as a solution. It requires unification of the services throughout the country, investments on equipment and borderless services, which again would make the services more cost-effective. Testing of milk meters should also be included in technical services and turned into products.

Milk recording reports should be further improved, so that they are easy to use, contain information in useful form and can be customised to meet different needs. New tools and reports are under construction and will be introduced to customers in 2016.

There cannot be enough communication with customers, advisors and stakeholders in such a development project. Lot of effort has been made last year, but surely it was not enough. Improved communication methods and quantity has been in use this spring, when informing customers about the milk sample vial change and additional analyses. Most of the customers appreciate contacts by phone, SMS and email. After receiving the information many have called and asked more details from the advisors. Thus, education of the staff is very crucial in introducing changes.

Wahlroos, H., Kyntäjä, J. & Nokka, S. 2014; Data quality points - an immediate and motivating supervision tool. 39th ICAR Session, Berlin (Germany). 19-23 May 2014.

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**Further developments**

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**List of references**

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