

FabaHELMi – Advisory service for better fertility in Finnish dairy cattle herds

A. Mylly¹, L. Rampa¹, K. Vaaramaa², M. Päivärinta¹ & U.-M. Sundelin-Ryytty¹

¹ *Faba co-op., P.O.Box 95, Korpikyläntie 77, 15871 Hollola, Finland*

² *ProAgria Maatalouden Laskentakeskus (ProAgria Agricultural Data Processing Centre), Urheilutie 6, P.O. Box 25, 01301 Vantaa, Finland*

Abstract

The new advisory service FabaHELMi (HELMi refers to pearl) was introduced in February 2014 to Finnish dairy farmers. FabaHELMi service is performed by AI-technicians working for Faba co-op. and specialized in fertility issues and fertility advisory. Fertility advisor visits the farms every 2 to 13 weeks as agreed with the farmer. FabaHELMi service aims to improve fertility both on the whole herd scale as well as on individual animal scale.

Fertility disorders and poor management of fertility cause high monetary losses for the farmers. FabaHELMi service supports the farmer in his efforts towards better fertility. The advisor visits the farm regularly and checks both pregnancies and ovarian activity of cows in voluntary waiting period. Animals with fertility disorders are redirected to veterinary treatment, and in feeding problems the herd owner is guided to contact his feeding advisor. Special attention is paid to animal welfare and housing that may affect fertility in the herd. Twice a year the advisor and farmer focus on the fertility report and have a close look on reproduction outcomes during the last twelve and six months. With continuous monitoring of the fertility status of the herd, detection of heats and conception rate are improved.

The fertility report designed for this service describes a thorough picture of the fertility situation in the herd, shows the in herd -development of the key figures and gives also the reference group results for the same traits. The figures are highlighted with descriptive pictures and graphs to ease the interpretation of the report. With this service the farmer will get tools to follow the improvement in fertility and he is strongly encouraged to set targets for his herd management.

Keywords: fertility, advisory services, dairy cattle, reproduction, herd management.

Introduction

Fertility has remarkable impact on dairy farms efficiency, and many hidden costs in dairy production are due to failures in reproduction processes. The milk recording results from Finnish dairy farms in 2012 (Nokka, 2013) show that the average calving interval was 418 days and no. of inseminations needed per calving was 2.01. At the same time poor fertility was the most common reason to cull cows at their first lactation. For these reasons there is a need to help farmers to improve fertility and focus on their objectives in herd fertility management.

Faba is co-operative, farmer-owned company which provides breeding advisory, mating plans and AI-services for cattle farms all over the country. Furthermore it is responsible of keeping the herd book of different cattle breeds in Finland and producing genetic evaluations in close co-operation with other Nordic countries. An effective and progressive advisory work

relies on accurate and reliable up-to-date database that is run in close co-operation by ProAgria Maatalouden Laskentakeskus. Milk recording for the dairy farms in Finland is organized by ProAgria and the farmers will get advisory services for feeding, crop and grassland production and economics from the local ProAgria centres.

All available data is to be used in FabaHELMI service

The fertility advisors have a special database toolbox with which they can be prepared for the farm visit and get a list of all animals that need to be pregnancy checked or checked for ovarian activity. Pregnancy check results (+ or -) made by AI-technicians are automatically saved in the database. As a result there is always up-to-date pregnancy information to be used in fertility advisory, breeding advisory, herd management programs, milk recording etc. The advantage for the farmer is to get pregnancy checks done as easily and conveniently as possible.

Fertility advisor is able to collect a list of fresh cows that might need to be checked based on the database information. Early findings and intervention in fertility problems is profitable to avoid delays in starting inseminations. The list that includes calving date information combined with recorded veterinary treatments information and possible heat records in database is a time saving and practical solution for a busy farmer who no longer needs to collect information himself from different sources.

In practise the fertility advisor contacts the farmer to make an appointment for the farm visit, typically every 4 to 5 weeks. The advisor prepares a proposal list of animals that need to be checked. During the visit the fertility situation of individual animals in the herd is updated and the farmer can thereafter focus on non-pregnant animals. Other significant benefits for the farmer are the savings in labour costs and time and decrease in total reproduction costs.

Goal definition is the key to the progress

Modern dairy farmers need to be highly skilled in many different ways. The point for the farmer is not to be able to do and know everything by himself but to get the right people to work for him and to contribute to his success. Fertility advisors' task is to raise discussion on the most critical points in fertility and to get the farmer to set goals for them. Setting of goals alone is not enough but the advisor needs to motivate the farmer and his employees to change their daily routines and habits to achieve the goals set. However, any improvement in fertility and increased revenues in production give more motivation to the daily work with dairy cows.

In FabaHELMI service the goal definition in a large scale is made every year or every second year and adjustments are made whenever needed. Unfortunately the changes in reproductive performance in a herd scale are very slow. Improvements in heat detection of individual animals and in conception rate are seen more rapidly, though the economic outcomes are not realized until after several months.

Fertility report – see the details, understand the big picture

The fertility report designed for FabaHELMI service gives a comprehensive and detailed review of the reproductive status of the herd. Background data of the herd gives general view of the herd, the level of milk production, breeding values and the proportion of animals from different breeds and their performance.

Herd owner may compare his own results to the other farms of the same herd size. The results in each individual fertility trait are compared to the results of the best 20 % fractile of

the farms of the same size group. The in herd -development in different fertility traits is observed in the herd averages during the last 6 months and the last 12 months (Figure 1).

Heifers	last 6m.	last12m.	Best 20%fractile
Hlehot			
Siemennysten aloitusikä, kk	15,0	15,1	suositus 15,0-16,0
Siemennyskausi, pv	32	50	2
Tilneystark./aloitussiemennys	1,7	2,2	1,7
Siemennyksiä/poikiminen	1,8	1,6	suositus 1,2
Ensikoiden poikimikä, kk	25,8	26,3	24,7

Figure 1. An example of the data layout in the fertility report. The reproductive performance of heifers. Results from the top downwards: age at first insemination, days from 1st to last ins., no. of pregnancy checks per 1st insemination, no. of ins. per calving, age at first calving.

The key figures for fertility are designated to different animal groups consisting young heifers, first calving heifers, cows in 2nd or later lactations and a combined group of all cows in the herd. The report includes results for traits such as length of voluntary waiting period, days from first insemination to conception, calving interval, no. of inseminations per calving, percent of animals pregnant in 100 d post partum, percent of animals not inseminated by 100 d post partum, percent of animals not conceived by 200 d post partum, length of dry period, average no. of calvings per cow, age at first insemination for heifers, average age at first calving – just to mention some. There are several graphs in the report to visualize certain results more in details (Figures 2 & 3). Trend in reproduction performance during the last five years gives an overview of the fertility status of the herd in the past.

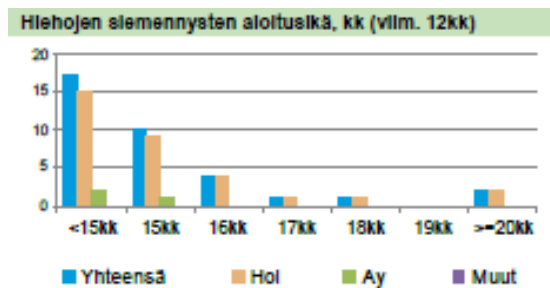


Figure 2. An example of a graph in fertility report: Age at first insemination for heifers (last 12 months). No. of heifers total, Holstein, Ayrshire and Other dairy breeds, respectively.

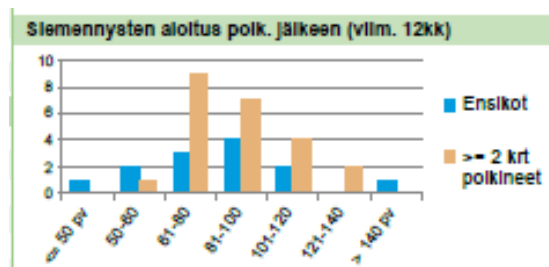


Figure 3. An example of a graph in fertility report: Starting of inseminations, days after calving (last 12 months). No. of cows in first lactation (Ensikot) and no. of cows in later lactations (≥ 2 krt poikineet), respectively.

Experienced advisor is capable of noticing the major factors in herd management that have the biggest impact on fertility. Differences in performance between first calving heifers and older cows, for example, give signal that the younger cows may not cope very well in the herd. The next step is to find the reason for that and then to find the solution to make changes. Information in the report can be interpreted and used in many ways, thus the advisor's expertise will be conclusive for the benefit the farmer achieves.

Conclusion

The purpose of the FabaHELMI fertility advisory service is to allow maximum profit for the dairy farmer by means of improved fertility. Fertility advisor's regular farm visits including systematic program of checking individual animals, supporting the farmer in goal definition for the most critical fertility objectives in the herd scale, and regular monitoring of these objectives will lead the farmer to gain that profit.

List of References

Nokka, S., 2013;

http://www.proagria.fi/sites/default/files/attachment/tuse_esitys_tulosseminaari_2013sn.pdf.

Cited 04.04.2014