

1st EMP-meeting: **European boom in AMS and new tools in mastitis prevention**

After the kick-off in Ghent, Belgium in 2007, the 1st meeting of the European Mastitis Panel (EMP) took place on March 27-28th, 2008, when fourteen experts from seven countries met in the Netherlands. The EMP-meeting was initiated by Jantijn Swinkels, Technical manager at Intervet / Schering Plough Animal Health, who organized the meeting in close cooperation with Theo Lam, Dutch Udder Health Centre. The objectives of the EMP are; exchanging knowledge between European countries on mastitis related research as well as field projects, health programs, milk quality and industry. An important point of the meeting was getting insight how farmers and their advisers handle udder health in the different European countries. In two days time the group of experts talked about new trends and tools in mastitis prevention and exchanged their knowledge about latest results of research.



The group of experts from Europe

Front row, left to right:

Andy Biggs (UK), Yvette de Haas (Invited speaker, NL), Nathalie Bareille (F), Alfonso Zecconi (I), Theo Lam (NL),

2nd row, left to right :

Reint Jan Renes (Invited speaker, NL), Hakan Landin (S), Sarne de Vliegheer (BE), Luc Durel (F), Otlis Sampimon (NL), Jantijn Swinkels (NL)

Back row, left to right:

Volker Krömker (D), Francis Serieys (F), Henk Hogeveen (NL)

Absent: Kees de Koning (Invited speaker, NL)

Farm visit: Controlling mastitis and evaluating farm data

The meeting started with a visit on a dairy farm, where the local practitioners Reinoud van Gent and Annemiek Veenkamp explained their way of mastitis control and evaluation. Van Gent works for the Animal Clinic in Flevoland near Utrecht together with 6 large animal vets. Besides emergency cases (“fire brigade”) they focus on prevention (advice, consultancy), fertility, udder health, nutrition and infectious diseases. In addition to that they cooperate with the Utrecht Veterinary Faculty, the Wageningen University Animal Sciences Group in Lelystad, the GD Animal Health Service, Industry and the Dutch Udder Health Centre.

“Networking with colleagues is very important for our work” van Gent describes the importance of his extended network.



Reinoud van Gent, Annemiek Veenkamp
Networking among colleagues is most important

The farm of Pieter Franken and his family has grown in the last years and is still growing. Right now he has 115 cows in the barn. Annemiek Veenkamp visits the farm at least every 4 weeks for routine checks and treatments. Data were used from the dairy herd milk recording and a Dutch herd health management program (“Pir Dap”). After every milk recording, high cell count cows (> 200.000 cells/ml) are critically controlled by California Mastitis Test (CMT) and bacteriological culturing. Depending on the results, individual treatment with antibiotics, dry off of infected quarters or early dry off may follow. Most bacteria found in milk samples are environmental on this farm. The udder health status of the herd is good. The average SCC in the herd is low (120.000 cells/ml) and the percentage of new clinical mastitis cases is 11% per year, which is quite low, but for this farmer, who does everything to avoid mastitis, it was still too high. The dry off evaluation shows that there are still too many new infections during dry off (currently 12%).

“We spend some time on training farmers how to interpret a CMT test, how to take clean milk samples, how to apply drugs properly and we also talk about the importance of wearing milking gloves” van Gent explained his support for the farmer. *“Our clients enjoy the lessons in the barn and they apply their new skills in practise.”*

At least once a year mastitis control on every farm is evaluated and, if necessary, adapted to the current individual farm conditions.



The CMT-test regularly used by farmers is a big progress in udder health management



Pieter Franken enjoys the veterinary lessons in the barn

Waiboerhoeve Research Centre: Five robots in one herd

Afterwards the group visited the Waiboerhoeve research centre for dairy farming in Lelystad. Kees de Koning from the animal science group of Wageningen University informed about practical experiences and state of research in automatic milking systems (AMS) and mastitis.

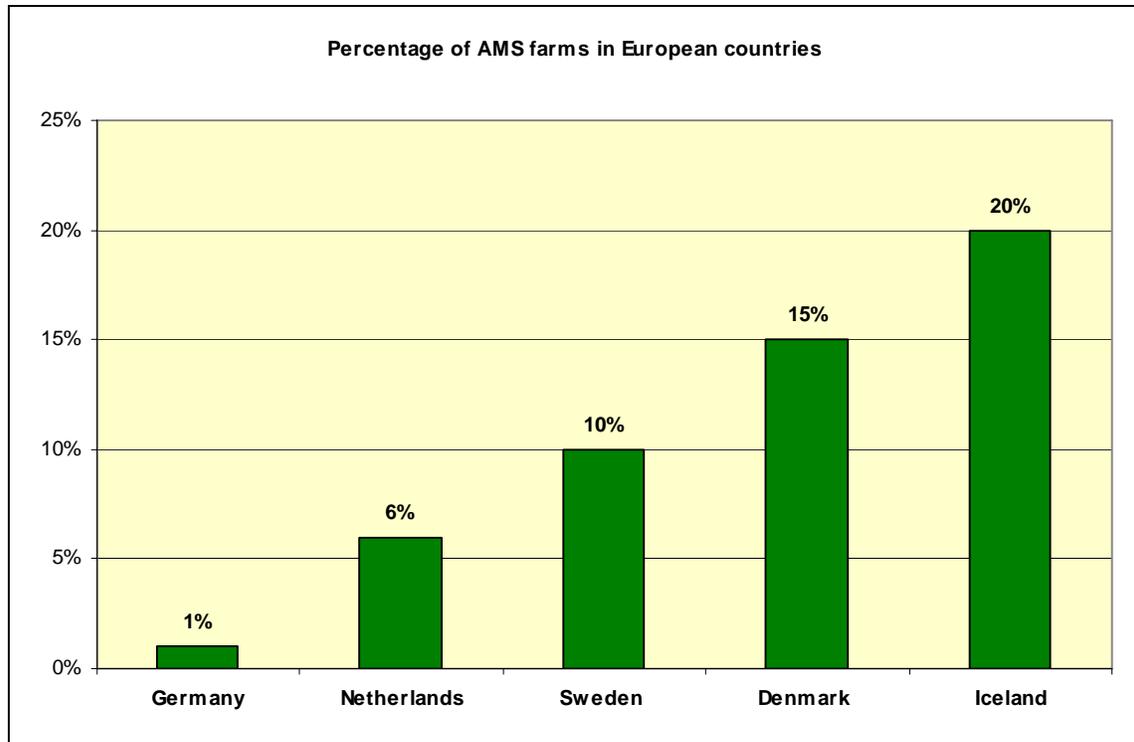
In the last two years we saw a large increase in AMS-farms worldwide. Especially in the north western part of Europe in countries with high milk prices, AMS is booming.



Research centre Waiboerhoeve (NL)



Automatic milking in practice



For example, 10% of the dairy farms in Sweden are milked by a robot.

“It is difficult to find cheap labour in Sweden” explains Hakan Landin from the Swedish dairy association. “For farmers who have to decide whether to give up or to invest in technology it is more economic to stay in business with AMS.”

In the Netherlands, more than 1200 robots have been sold and about 600 in Germany.

“It is an upward trend in our country, too” explains Volker Krömker, University of Hanover in Germany. “Farmers gain more flexible time with AMS, but the technology also costs them around € 0,03 per liter milk.”



Volker Krömker, Hakan Landin
Exchange of knowledge and experience between
the German and the Swedish expert

Kees de Koning added: *“Social aspects are very important. For example, if a farm wants to grow without employing people, buying a robot may be the right decision.”*

Farm management must change with AMS

AMS-technology improved a lot. Cows get used to robot milking in a few weeks. But the farm management also has to be changed. While robot milking systems eliminate the need for the farmer to be present at every milking, it does not mean they do not have to go to the barn anymore. The perfect AMS-farmer is still a “cow person” with a high understanding and interest in technology. He should be able to utilize the data from AMS and compare them with what he sees in the barn and evolve management decisions this way. Farmers are still needed in the barn for cleaning boxes, heat detection and insemination, animal health checks and identification of diseased animals and other routines.

AMS and mastitis

In studies in 3 countries on 45 farms no major effects of AMS on animal health have been found. Cell counts are more or less equal in automatic milking compared to conventional milking. Some problems with adaptation to AMS were found in fresh cows of 2nd and 3rd lactation, which reacted with high cell counts to the introduction of AMS. This difference was not found in heifers. In all cows, an increase in free fatty acids could be observed due to the higher milking frequency with AMS. The risk factors for mastitis are equal to conventional milking and depend on technical and management factors.

“Regarding mastitis we regularly check if disinfection of teats and the steam disinfection of the milking cups work properly”, told Jan Bloemert, herd manager of the Waiboerhoeve. “We also change liners after 2500 milkings (every 2 weeks) according to the producer’s advice.”



Kees de Koning and Jan Bloemert discuss robotic milking and mastitis with the European group

There is an increasing demand for training on AMS for farmers. Kees de Koning pointed out the role of the advisors: *“We need more projects to inform farmers about AMS in which research, vets and industry work together.”*

Practitioners evolve to consultants

Theo Lam presented the current mastitis control program in the Netherlands. The aim of the 5-year-program is to achieve a 10% reduction in mastitis in participating farms. The Dutch Udder Health Centre (UGCN) started the project in 2005 by sending out questionnaires to 400 Dutch farms. Among other things they found that the first

contact person in case of udder health problems is the local practitioner. Thereupon UGCN started training practitioners' skills to motivate and transfer knowledge to their clients. As a next step, the idea of "on farm study groups" was developed. Veterinarians showed "their" farmers in practise how to deal with hygiene, data handling, treatment, feeding and transition and milking /milking machine. The first evaluation of the program showed success. The numbers of veterinary practises and farmers participating increased distinctly and a first significant decrease in BMSCC in the study groups was realised.

"There is a significant practice-effect" Theo Lam concluded.



Theo Lam explains the principles of knowledge transfer

Breeding against mastitis

Yvette de Haas from CRV (international company in the area of cattle improvement) talked about a new udder health index for better breeding against mastitis. The current Dutch udder health index is a combination of fore udder attachment, teat lengths, udder depth, milking speed and somatic cell count. High breeding values are estimated for sires which transmit high udders with short teats and a tight attachment and an average score for milking speed and low SCC. Current breeding is based on lactation average SCC alone. Research showed that using an index composed of 5 SCC-traits (table) will improve breeding against mastitis considerably.

"Possibilities to change the current udder health index are currently further explored", Yvette de Haas informed.

5 SCC-traits for the new Dutch udder health index
• Lactation- average SCC 5-150 days
• Lactation-average SCC 151-400 days
• Absence/presence of SCC > 150,000 cells/ml
• Proportion SCC > 150,000 cells /ml
• Total numbers of peaks in SCC

Communication- a key issue in mastitis prevention

Additionally, Reint Jan Renes from Wageningen University gave a presentation on the importance of communicative skills in prevention programs. Technical knowledge leads nowhere, if it is not used by people in the field. If one wants to change the

behaviour of the farmer, things must be explained simple and logically. The cost-benefit of the action must be obvious. This is reached by forming small discussion groups which try to solve individual farm management problems. Farmers usually trust their vet who comes to their farm regularly. His/her role in the discussion group is to assist solution finding of the farmers themselves.



Reint Jan Renes:

Farmers should find their own individual solutions with the assistance of their vet

EMP-meeting 2009 in Germany

The European team discussed all the topics enthusiastically. Everybody is looking forward to the 2nd EMP-meeting in April 2009 which will take place in Germany. On invitation of Volker Krömker the group will visit dairy farms and talk about the state of mastitis research in Germany.



Further information is presented on the EMP-web site:

<http://www.EuropeanMastitisPanel.eu/>