

Katrien van 't Hooft: “Most Dutch dairy cows are marathon runners!”

What can dairy farmers from The Netherlands learn from their colleagues in India? And vice versa? This was the main topic of the workshop of Katrien van 't Hooft. She is a passionate, knowledgeable veterinarian who set up [Dutch Farm Experience](#), a company that aims to promote exchanges between The Netherlands and other countries. The current [E-Motive exchange program](#) between Netherlands, India, Ethiopia and Uganda aims to lower antibiotic use in the dairy farming. Interestingly, not only farmers participate in the exchange, but also veterinarians. Due to their training as well as their dependence on the sale of antibiotics for their income, many veterinarians are reluctant to actively look for changes in antibiotic use.

By IRENE JURNA, SUZANNE VAN DER MEER en ELSKE HAGERAATS.

Time for some biology. From the moment a young cow is two years old, it can get one calf per year. After the fourth calf is born (the so called fourth lactation, when the cow is around 6 years old), the cow naturally gives the highest milk production.

But most dairy cows in the Netherlands do not live that long – since they are not able to keep up with the high milk production that the farmer expects from them to earn a decent income.

A cow is a ruminant with four stomachs, designed by nature to digest grass and transform this into meat and milk. In order to get the highest milk production, most Dutch cows also consume a lot of soy (in concentrates) and maize – which is not their natural food. Besides this, the cattle are also selected in such a way that they produce maximum amounts of milk, in some cases up to 12.000 litres per year. Average yearly milk production of a Holstein dairy cow is 9.719 litres per year. This makes ‘most dairy cows a marathon runner’ according to van 't Hooft. The side effects of this are high frequency of disease, such as mastitis (udder infection), claw problems and infertility. Due to these problems, a Dutch cow gets on average 5.7 years old – which is precisely when she will start to give the highest milk production!

Antibiotic use in the Netherlands

Until recently, The Netherlands used to be one of the major antibiotic users in the livestock production system within the EU. Until recently, in dairy farming antibiotics were massively used to prevent and cure udder

infections, for example. Note that in the past antibiotics were also used at low dose as a growth promoter, especially in chicken and pig rearing. The EU prohibited this in 2005.

Threat for human health

In contrast to the livestock sector, the antibiotic use for *humans* is very low in the Netherlands. Unlike many other countries in the world there is no free sale of antibiotics in the shops. Human doctors are reluctant to prescribe it when you have a flue for example. Your body has to cure itself. However, the high use of antibiotics in the *livestock* industry has resulted in the increased risk of multi resistant microbes. This means that when you get a microbial infection no antibiotic treatment will be effective, since the microbe is *resistant*. Therefore, in 2012 the Dutch government has set strict regulations to lower antibiotic use in the livestock sector, with the goal to reduce 70% by the end of 2015 – compared to 2009.

India

India has around 75 million dairy farmers – the average dairy farmer being a woman with one to three cows. All together, and combined with thousands of Community Milk Collection Centres, makes India the largest milk producer in the world! Part of this massive and successful dairy program, which was started in the 1980s, was a rigorous breeding strategy: the local breed Indian cows were to be crossbred with exotic breeds, especially the Holstein Frisian (HF) cow. Local bulls were castrated, and since then Indian dairy cows

have been artificially inseminated with semen from HF bulls. Over time this resulted in cows with high % of HF genetics. However, the milk production of these animals was not as high as expected: only 2-5 litres per cow per day. The HF cow has its origins in a temperate climate – and the animals have difficulties in adapting to the high temperatures, housing- and feeding conditions in India. Many farmers try to boost milk production by (over-)feeding them with concentrated feed, resulting in similar cow diseases as the Netherlands: mastitis, indigestion, claw problems and infertility. Meanwhile in India, unlike the Netherlands, you can easily purchase all kinds of antibiotics. And these are used extensively and without any form of control. Antibiotic residues end up in the milk consumed by the people. India is now one of the countries with most multi-resistant microbes in the world.

Knowledge on herbs in India

The south Indian Trans-Disciplinary University ([TDU](#)), together with the Tamil Nadu Veterinary Science University ([TANUVAS](#)), is working to lower antibiotic use by training veterinarians and farmers on the use of Ayurvedic herbs in the dairy sector. They are promoting an effective recipe based on Aloe Vera and Curcuma to treat mastitis. The formal acceptance of these herbs is growing by the day. During a severe outbreak of Foot and Mouth Disease (FMD) in 2013, the recipe for the rapid cure of the blisters was even spread by the state government of Kerala.

Sharing knowledge

In this context, an E-Motive exchange program was set up between Netherlands and India. Dutch Farm Experience, together with TDU organized the visits of Dutch farmers and

veterinarians to India and vice versa, to learn about the use of herbs as well as other ways to reduce antibiotic use. This 2 year program (2014-2015) is funded by Oxfam Novib and the Overijssel provincial government.

Trials in the Netherlands

Since the first exchange visit to India in 2014, several small trials with Ayurvedic recipes have been executed by Dutch institutes: one for lowering the cell count in milk, and one on prevention of calf diarrhoea. Some were effective, others less so. So, though these recipes did not always have the desired effect in the Dutch context, this experience did open up the mind of farmers about the possibility of using herbs in the Netherlands.

While the Dutch dairy sector continues exporting semen from Holstein Frisian bulls, as well as related knowledge, the problems that result from this at the long run are largely ignored. In India, as well as in Africa, after the 3rd generation the crossbreed animals are more susceptible to disease, resulting in economic loss and high use of antibiotics. The residues eventually end up in the milk consumed by the people. So, in order to improve dairy farming while reducing antibiotic use, a different approach is needed. Therefore, the exchange program is aiming to design viable options to reduce antibiotic use in dairy farming in the Netherlands, India, Ethiopia and Uganda.

Join the symposium!

On October 1st 2015 a [symposium](#) will be organized in Zwolle, where a delegation of Indian and other international farmers, veterinarians and scientists will share their knowledge on dairy farming, including the use of herbs. Would you like to join to this symposium? Stichting Boerengroep will organise a preparatory lecture on this topic and arrange transport to the symposium. Sign up via the mail: st.boerengroep@wur.nl

← Jan Wieringa, farmer of organic [dairy farm Veld en Beek](#) in Renkum, makes sure the pasture for his local breed Blaarkop cows contain many different species of grass and herbs. The milk production is lower but also the costs are much lower. And the milk... is delicious!

(Picture from de Gelderlander)

