FARM MANAGEMENT, QUALITY FOOD AND ENERGY IN PRACTICE IN THE NETHERLANDS

Joris van Kempen, farmer, Biddinghuizen, Flevoland, The Netherlands
(dekandelaar@planet.nl)
Abele Kuipers, Expertise Center for Farm Management and Knowledge Transfer,
Wageningen University and Research Centre, The Netherlands

Abstract

This paper describes a farm situation in a lowland area in The Netherlands having attention for labour efficiency, energy collection, and food safety and medicine use. The region is heavily populated by wind turbines. The farm has dairy and arable farming and also offers bed & breakfast services. The slatted floor is kept clean by the robotic barn cleaner, and milking is done with the fully automatic Voluntary Milking System. The farm is involved in a quality assurance scheme for milk of the dairy cooperative that guarantees the way in which the milk is produced with specific attention to safety and quality. Also attention is given to a good and hygienic production process, the avoidance of foreign substances on the farm, the well-being and welfare of the animals and of course the safety of the product. The farm participates in a national project in which the medicine use in the herd and data transfer in the chain are topics of care and improvement. This will be explained.

Key words: farm, management, food safety, energy

Introduction

My name is Joris van Kempen, born on February 7, 1973. I live with my girlfriend and parents on a dairy / agriculture farm near Biddinghuizen in the province Flevoland in the Netherlands. The farm is run in partnership with my parents, sister and brother-in-law and the work is mainly done by my father, brother-in-law and me. Since 1 January 2008 I am fully active in the company. Prior to this I worked for a company which dealt with the automation in the agricultural sector, such as farm management tools on dairy farms (uniform Agri) for 9 years. In addition to the normal exploitation of the farm we also run a bed & breakfast, managed by my sister and mother. Our website is www.dekandelaar.eu (the site is currently only in Dutch, but please have a look as it contains a few photos).

Area to farm in: Flevoland

Our farm is located in Biddinghuizen. Biddinghuizen is a village in the province Flevoland. Flevoland consists of three polders (drained land), namely Noordoostpolder, Eastern and Southern Flevoland. Biddinghuizen is located in Eastern Flevoland, which was drained in 1957. Flevoland is kept dry with the use of pumping engines. These pumping engines control the water level in the whole of Flevoland. When you are in Flevoland, you are actually a few meters below sea

level. Our farm is 6 meters below sea level. The province Flevoland in total covers 146,000 hectares. Eastern Flevoland is the largest with 54,000 hectares and most of the land is used for farming.

Wind turbines

What stand out in Flevoland are the many modern wind turbines. In recent years Flevoland has invested a huge amount in renewable 'green' energy. In 1996 there were only 37 wind turbines and by 2007 this totalled to 574. In 2007 the total energy production from wind in Flevoland was 625 MW, which can supply 345,000 households. Most of the windmills are owned by the farmers as in 1996 windmills were allowed to be placed on farms. In the future, Flevoland wishes to halve the number of wind turbines to recreate the original open landscape. This will be realised by wind parks on new and existing sites with bigger capactity wind turbines producing more energy. The expected energy production from wind energy in 2020 is estimated at 1350 MW produced by 320 wind turbines. The capacity of the windmills now ranges from 0.3 to 3 MW, the hub height varies from 30 to 70 meters.

The Farm "De Kandelaar"

In June 2000 the farm De Kandelaar was established. Prior to our current farm we ran a different dairy farm in Zeewolde, Flevoland. The reason for leaving was that our land was assigned to be reclaimed by nature. There is a policy in The Netherlands that part of the cultivated land has to be given back to nature to stimulate the return of wild animals and plants, i.e. in the frame of nature development.
The current farm is made up of dairy and arable farming and covers 120 hectares and the following crops are grown: 23 hectares of grassland, 20 hectares of corn, 24 hectares of winter wheat, 20 hectares of potatoes, 15 ha of sugar beet and the last 10 hectares of onions is let to another local farmer. Most of the land work is done by ourselves, except the harvest of grass and corn is being done by a contractor. The harvest of the winter wheat, potatoes and sugar beet is performed in cooperation with our neighbour. The grass, corn and a part of the winter wheat is used ourselves to feed our dairy cows, heifers and calves. We have 110 dairy cows and 90 young cattle, all of the breed Red Holsteins (100%). Our current milk quota is 900,000 kg milk. In 2000 we built a new cubicle house for our cattle. During the construction a lot of attention and detail is given to the comfort and wellbeing of the animal and farmer. The sides of the cubicle house is open but can be closed by a 'curtain' and this is automatically done by a 'climate' computer. Closing the curtains depends on temperature, wind speed and wind direction. Furthermore, the roof is insulated so it keeps the summer heat out and the warmth in during the winter months. Within the stable is a slatted floor. The slatted floor is kept clean by the robotic barn cleaner, named: Joztech (see also: www.JOZ.nl) up to 8 times a day. The Joztech is a fully automatic and animal-friendly system. The milking of the cows is done by two DeLaval Voluntary Milking Systems (VMS), this is a robotic milking system (see also: www.delaval.com). We started in June

2000 with milking with the VMS. The averaged milk production of the dairy cows is 8800 kg milk with 4.60% fat and 3.56% protein content in 305 days. The total mixed ration for the dairy cows contains 40% grass silage, 60% corn, 1.5 kg of mashed winter wheat, 1.5 kg of protein concentrate and 1 kg of grass seed hay. Next to it the dairy cows get an energy concentrate, when they go into the VMS. The amount of energy concentrate is related to the production level of the cows with a maximum of 9 kg of energy concentrate. All the female calves will stay on the farm. The bull calves are sold after 14 days. The female calves get the first 5 day milk of the cows. After that the calves get two months milk powder, with help of a automatic calves drink station. The first 5 months the calves stay on straw. After 5 months they are moved to a slatted floor with cubicles.

Food safety and use of drugs

Our farm delivers milk to dairy cooperative Friesland Foods, who have a quality system for farm milk called: Qarant. With Qarant quality system, Friesland Foods guarantees the way in which the farm milk is produced with specific attention to the safety and quality of the milk. Also attention is given to a good and hygienic production process, the avoidance of foreign substances on the farm, the well-being and welfare of the animals and of course the safety of the product. The Qarant quality system has regulations to which a farm needs to comply. These regulations cover 6 topics: (1) drug use, (2) animal health and welfare, (3) feed and water, (4) milk handling and installations, (5) cleaning and disinfecting methods, (6) administration and registration. Of course the quality of the milk is researched according to the traditional quality system, i.e. bacteria count, cell count, cleanliness, butter acid, fat acidity, freezing point and the presence of a bacterial anti growing substance. If the milk quality doesn't satisfy the Quality Assurance Scheme, then the farmer will be penalized in the payment of milk money.

As indicated above, one of the rules for the farmer is the registration of drugs (medicines) used in their cattle. The farmer is only allowed to use registered drugs. The farmer has to show which drug, when and which animal has been given the drug. On our farm the drug registration is done by the management system of Uniform Agri (see also: www.uniform-agri.com).
Society talks about the drug use in cattle, especially antibiotic use, with regards to food safety. The drug registration at Veterinary Practices and farms can be improved. That's why a project in The Netherlands has started called "Efficiency and transparency of medicine use". The project has the global goal that administration and registration of the use of drugs in animals will be efficient, appropriate, honest and also complies with current and future regulations with regards to food safety. Six groups of dairy farmers linked to six veterinary practices, which are spread over the country participate in the project. I myself also do participate, because I think it is important that the medicines registration is done correctly. With the project, I hope to achieve also a more efficient drugs' registration. The use of a hand computer (PDA) and linkage of different data flows is part of this approach. Especially the data flow between the veterinary and the farmer should be more efficient. Also the dairy cooperatives (milk processing

companies), the meat processing plants (slaughterhouses), and the Government are for various reasons very interested in information about the medicine use in the animal sectors and participate in this project. The dairy companies would like to classify farms in high risk, average and low risk farms. The meat processing plants request in the near future from each animal offered for slaughter a certificate showing that this animal has been treated correctly or not with drugs. The government likes to have a detailed insight in the level of use of drugs in the field. In our country a request is expected to come from Government side to build a central databank to collect all use of drugs in the animal sectors.