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Farming Connect Management Exchange

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Denmark

Efficient Farming on the Edge

25 – 27 June 2019



1 Background

The EDF Congress 2019 held in Denmark focussed on efficiency in the dairy sector. Denmark is considered to have the most innovative, high input farmers in the world. Accompanied by high labour costs and high environmental standards, this gave the ideal environment to learn how to manage and retain staff and to get the most from them.

There was an opportunity to learn new skills such as lean management techniques and their application within agriculture.



There was also a cost of production comparison exercise in which costs are compared in a standardised format across a cohort of global members, with workshops to discuss how lessons can be learnt from other members on driving down cost without compromising welfare standards or product quality.

One area of particular interest to me was staff motivation. Following the presentation by Paul Harris on day one 'Finding the hidden profitability within your labour force' I attended the workshop led by Paul on 'How to get more from your team through effective communication?'.

There were 6 farm visits over three days where we were able to see first-hand many staff and lean management techniques put into action.

With a population of 5.7 million inhabitants, Denmark is the smallest of the Nordic countries. About 60% of the Danish area is cultivated with agricultural crops intended for animal or human consumption. Agriculture and food production are an important part of the Danish economy as Denmark produces food for about 15 million people. The agricultural cluster contributes about one quarter of the total Danish exports of goods. Two thirds of Danish dairy production are exported.

2 Itinerary

Overview

Day 1

Danish Dairy Sector - Ida M.L.D. Storm, Danish Cattle Farmers Organisation

The Unique Structure of Advisory in Denmark and its Advantages - Anders Andersen, Director LandboSyd

Size, Yield and Efficiency: Danish Farmers Maximise it all – But Do They Have a Choice? Danish EDF farmers Cost of Production figures - Steffi Wille-Sonk, EDF

What Can We Learn from Our Danish Colleagues:

Labour Efficiency by Sjoerd Ydema,

High Productivity by Erik Wiltink

Environmental Sustainability by Heine Kuhr

Improving Feed Efficiency Using Real-Time Feed Intake on In-House Commercial Dairy Cattle Using 3D Camera System - Jan Lassen, Senior Project Manager, Viking Genetics R&D

Finding the Hidden Profitability within Your Labour Force - Paul Harris, Real Success, will outline the opportunity your labour force offers to improve your bottom line.

Day 2

Workshop Sessions: a choice from a variety of Cost of Production and technical workshops

Running Faster. Climbing Higher. But Are You Doing Better Today? An analysis of historical and latest Cost of Production figures - Steffi Wille-Sonk, EDF.

Farm Visits

Day 3

Dairy Farming on the Edge – Farmers from Different World Regions Share Challenges and Prospects,- Chaired by Sjoerd Ydema

Denmark: Malthe C. Holst, Vrejlev Kloster

Chile: Cristian Swett Pla, CEO Manuka S.A.

Ukraine: Iryna Tcareva, Tsarevy Farm, Zaporizhzhya

How to Approach a Rejecting Society? - Chaired by Sjoerd Ydema

Turning Climate Challenges into Business Opportunities - Morten Høyer, Executive Director Danish Agriculture & Food Council

Farming in the Spotlight - Eline Vedder-Monaster, dairy farmer, The Netherlands

Farm visits

Day 4 – post congress tours

Heine is operating together with his father and his brother on a 800 hectares farm, milking 600 cows in a 60 stands GEA rotary parlour. Heine tries to minimise costs by feeding and grouping cows according to yield and lactation stage. If cows do not exploit all energy, Heine hopes the biogas plant does!

Sjoerd is operating on 550 hectares and milking 450 cows. With outsourcing forage production Sjoerd focuses on feed efficiency evaluating feed intake of his herd on a daily basis.

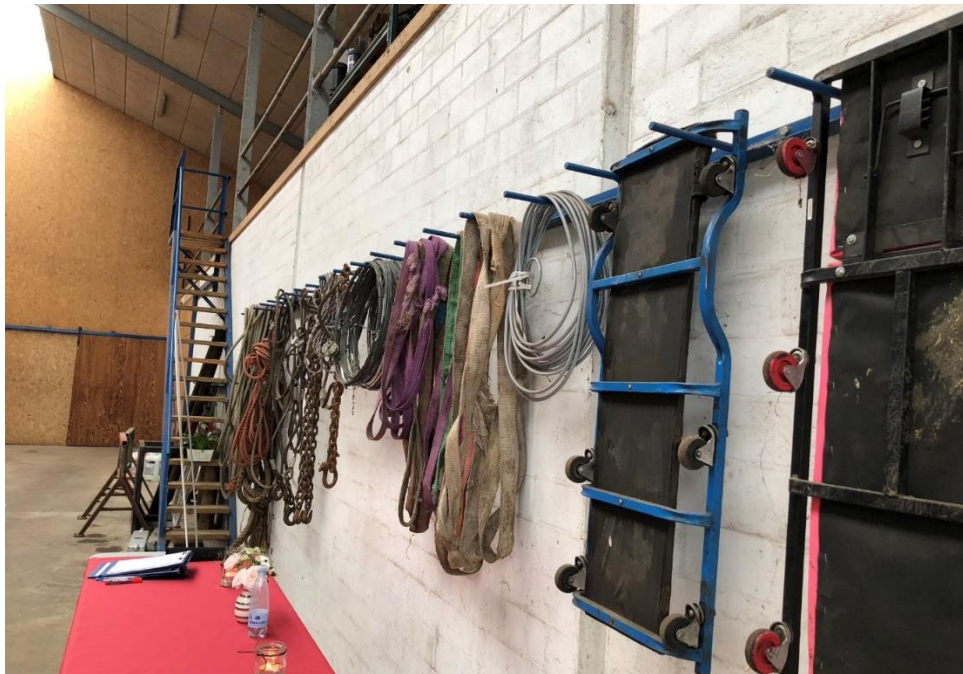
Details of visit

CO-OPERATION BRINGS THE SECTOR TOGETHER

Farmer-owned cooperatives are of big importance in the Danish agriculture as Ida Storm (Danish Cattle Farmers Organisation) and Anders Andersen from LandboSyd stated. The cooperative has a role in the processing for milk (ARLA) and meat (Danish Crown), in consulting (e.g. LandboSyd), in genetics and insemination (VikingGenetics), in milk recording, and many other aspects of the dairy industry in Denmark.

These cooperatives are often huge and have a high market share.

The advantages of this approach is as they own it, farmers have a say and they receive a share of the profits. On the flip side, the monopoly of the market is often so high that farmers no longer have a choice of who to work with in selling their milk and animals, and buying inputs.



Good educated farmers, constant knowledge transfer, close networking between different stakeholders and the intensive use of digital data are further characteristics of Danish agriculture.

GOOD NATURAL CONDITIONS

Denmark, and in particular the Kolding region, is characterised by good climatic conditions for milk production.

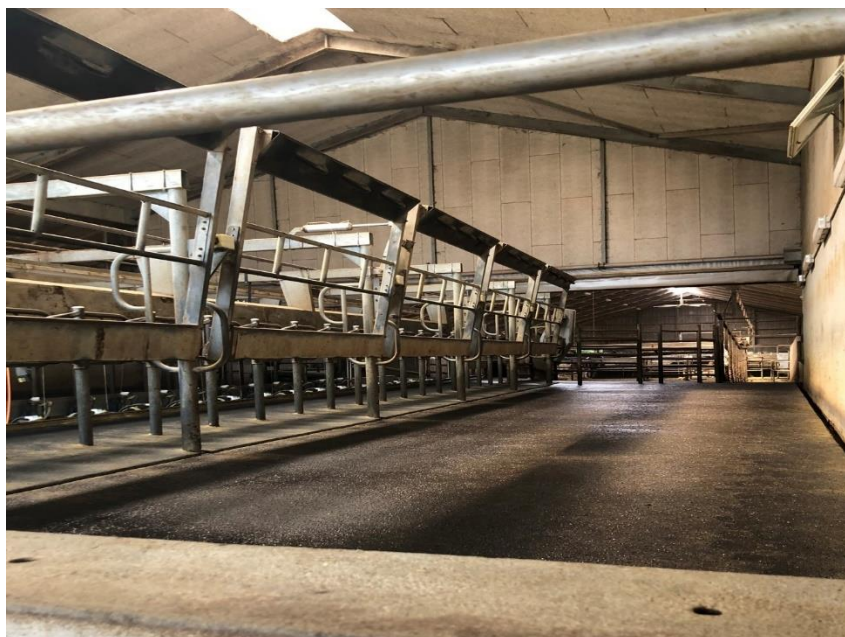
Denmark receives sufficient rainfall and mild temperatures; however, the sandy soils often require irrigation during the summer. The farms often have only a small area of permanent grassland.

Maize and grass for cows are mostly grown on arable land. Maize silage (and other maize-based feeds) are an essential part of the cows' ration.

HIGH COSTS

Denmark is an expensive country. Prices for agricultural land and in particular for labour are among the highest in Europe. In 2018, the Danish EDF farms had an average rental costs of €579 per hectare of forage area and labour costs of €23.4 per hour.

As in other countries, there has been a structural change towards larger farms in Denmark. However, it was much more pronounced. With an average herd size of 207 cows per farm, herd size of the Danish farms is well above the average of many other European countries. This also applied to the farms we visited.



These farms, as well as the other farms of the Danish EDF branch, illustrate very well the strengths of the Danish dairy sector. Danish farms produce a huge amount of solid-rich milk per cow (11,826 kg ECM) with little concentrates. Feeding efficiency is high. Within the EDF network, Danish farms even have the highest yields.

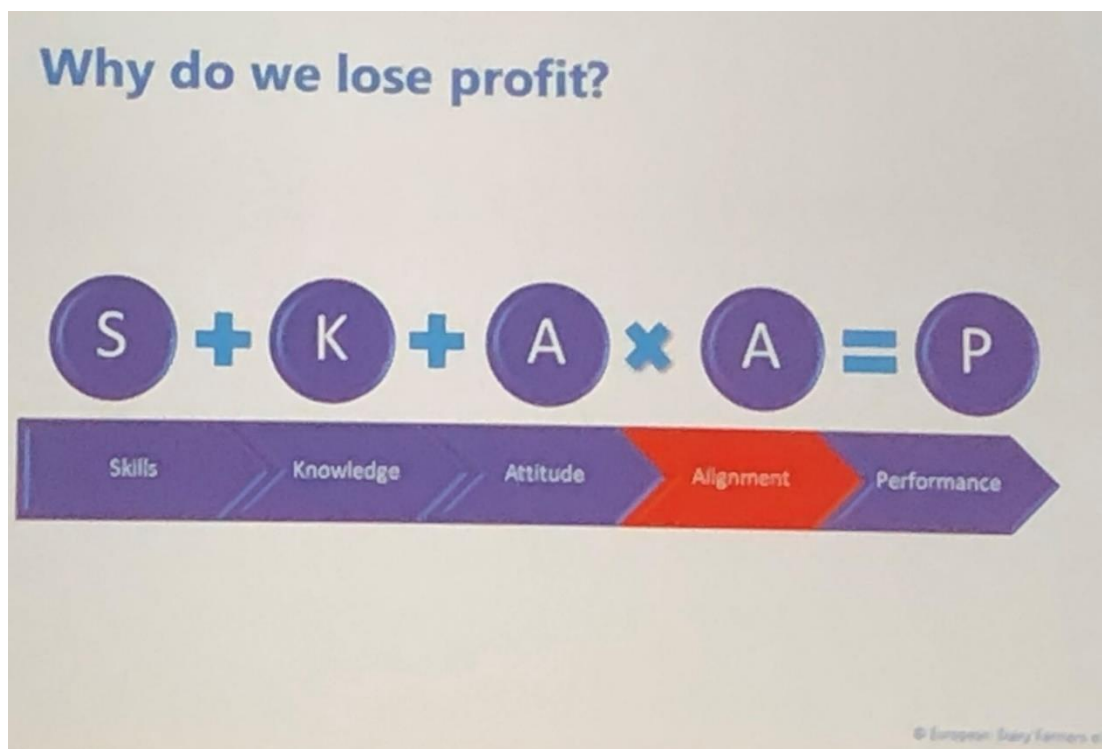
EFFICIENT USE OF LABOUR

Land and labour productivity and efficiency are high. Key points on labour are:

- The Danish EDF farms produce about 367kg ECM per hour worked by farm staff.
- A high milk production per cow contributes to the above figure but the farms also try to keep the input of labour low.
- They outsource part or all of their field work to an external contractor.
- They make use of management tools such as LEAN in order to optimise workflow.
- Modern facilities and the layout, as well as the size of the farms also favour efficient work.

Danish farms must strive for this maximum efficiency due to:

- The high prices for labour, land, services and other production inputs which drive up their costs.
- Due to the farms size, the demand for expensive external labour is particularly high.
- High investments in recent years have led to a high level of debts (EDF DK average debt is, €12,600 per cow).



The high expenses must be covered. The use of resources must be minimized by using them as efficiently as possible, while at the same time maximizing output.

Danish EDF members are doing well in this regard as Steffi Wille-Sonk, EDF researcher stated in her presentation. The total cost per kg of ECM is 39.6 cents. After deduction of the non-milk returns, the break-even point is 32.7 cents (35 cents if decoupled farm payments of 2.3 cents are NOT factored in).

Since the abolition of EU milk quota their break-even point has improved by 4 to 5 cents per kg. The increase in milk production due to intensification and in some cases also herd enlargement has significantly diluted production costs. Therefore, the end of milk quota enabled Danish EDF farms to actually exploit their production potential.



COWS AND PEOPLE IN FOCUS

To achieve this performance in terms of production, feed and labour efficiency, **cows and people** must be at the centre of attention. This has been confirmed by 3 Danish farmers, and also by Paul Harris from Real Success.

- Paul Harris (Real Success)

- Skills, knowledge and attitude of the workers are important for a farm's performance. In addition, their belief in the goals of the farm and their willingness to work in the team to achieve it. To maximise it, good communication and excellent staff facilities, salary, holidays and working hours must be provided. Always ask yourself: Would you allow your children to work in the conditions that you provide?
- Peter Timmerman (EDF farmer)
 - Take time to think through your options carefully before you make any decisions. Take time to motivate your employees as they are the key to labour efficiency. Invest in optimising your working lines and cow traffic.
- Erik Wiltink (EDF farmer)
 - Try to make all jobs easy-going so that they can be done by one person. Get it right for the cow by maximising cow welfare and reducing stress. Think in 'cow time' because a good timing of all work around the cows is key for yield and labour productivity. Change feed and rations as little and rarely as possible.
- Malte Holst (Farmer)
 - Always increase the level of education and skills of you and your employees. We must remember that people with different skills are needed. Innovation should come from within the farm:

More people = more heads = more innovation

During the farm visits we were able to see how the Danish farms had implemented the above. Excellent Danish EDF farms presented their ideas on efficient feeding (with one showing efficient compact feeding), animal-friendly cow housing, and care and people management

After a guided farm tours, the strengths and weaknesses of each farm were jointly worked out and discussed in small on-farm workshops.



ENVIRONMENTAL EFFICIENCY

It is not only production, feed and labour efficiency that are crucial for Danish farms. Environmental efficiency plays an important role as well. Danish farms have always been confronted with higher environmental requirements compared with other European countries. And it doesn't look like that's going to change. According to the latest plans, presented by Ida Storm (Danish Agriculture and Food Council), Danish agriculture has to be "climate neutral" by 2050.

Morten Hoyer (Danish Agriculture and Food Council) reported that significantly more food is produced today with fewer resources - which is good - but that agriculture has not succeeded in further reducing the amount of greenhouse gas emissions (GHG). He said that due to the current societal pressure, that's supposed to change now. The focus is on CO₂ in particular.

To achieve this, various paths must be taken such as fossil fuels being replaced by bio fuels, but intensification must continue.

New technical solutions may be necessary to address emissions. It was clear that in Denmark farmers are not considered the problem - they are part of the solution.

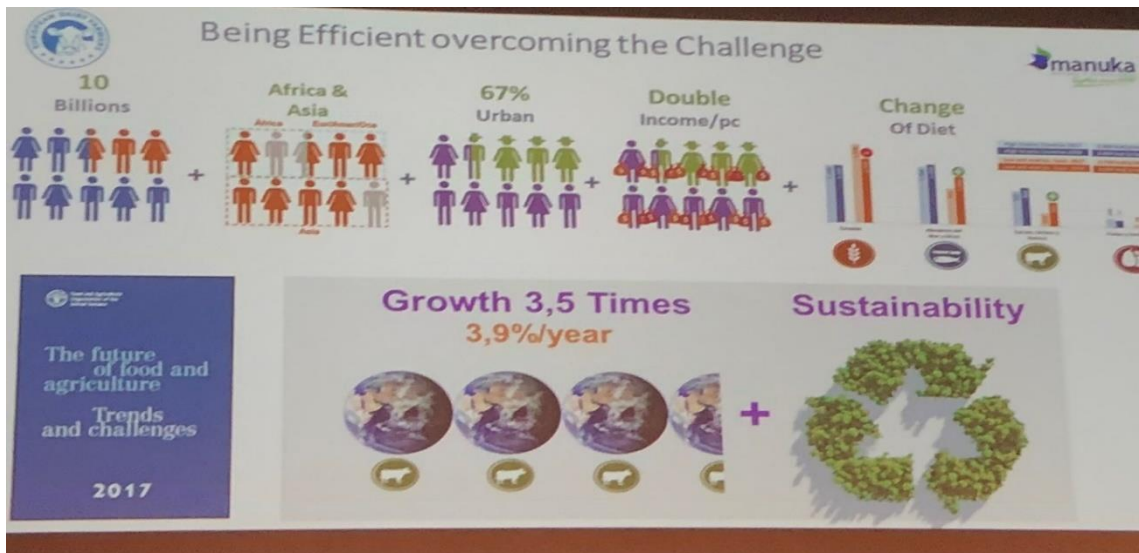
A LOT OF ENERGY IN WHAT WE CONSIDER AS WASTE

One of the Danish EDF farmers who is particularly interested in environmental efficiency is Heine Kuhr. Using resources at maximum, he combines different types of livestock and crop production with the production of green energy. Achieving synergies is the goal! The biogas plant is an essential part of his system. The organic material, which animals can no longer use (despite an efficient group feeding and high-quality forage) is converted into gas, which the dairy processor in the neighbouring village uses as an energy source. In the last 3 years Heine Kuhr has operated the plant, he has noticed that there is a lot of energy in what we consider to be waste. We can provide much more to the public than just food.

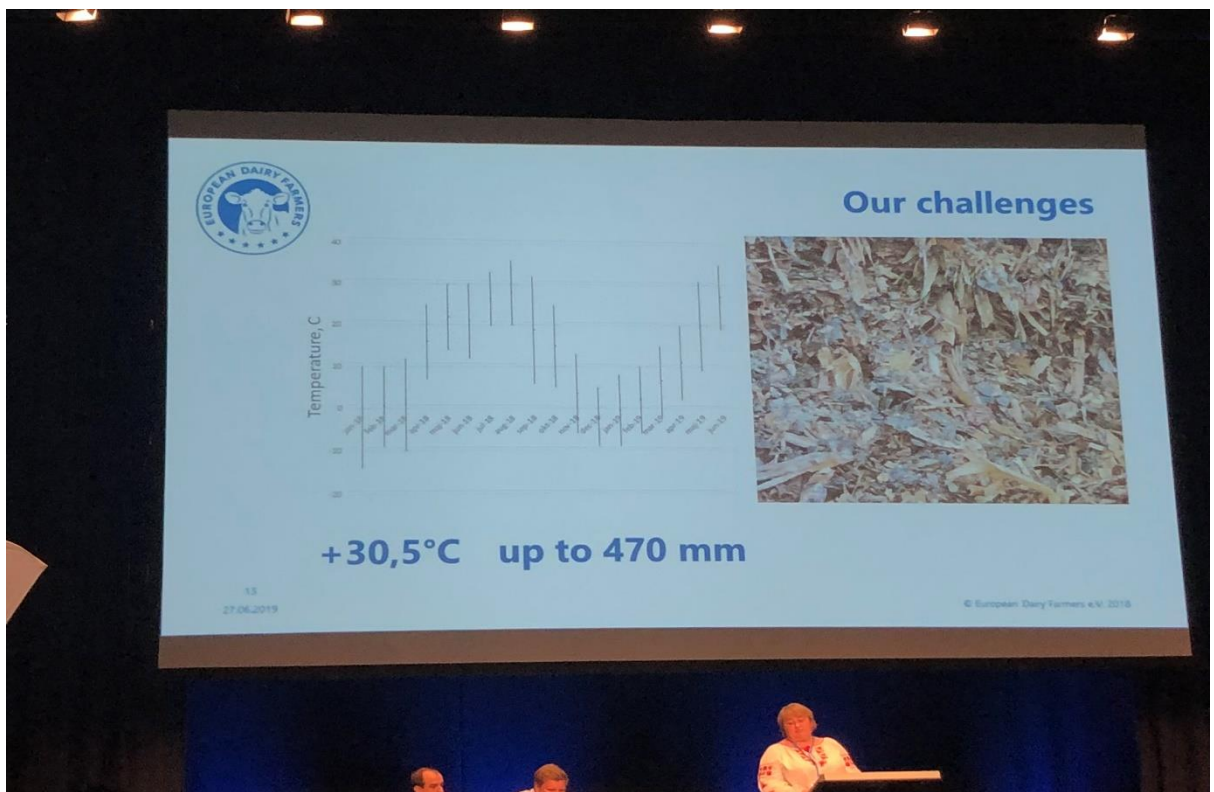
DIFFERENT CONDITIONS BUT SIMILAR GOALS

Farmers in other parts of the world face similar goals to those here: production must be profitable **and** sustainable. A key to this lies in people. However, conditions are different and so are the measures that can be taken.

- Christian Swett, Manuka, Chile
 - Manuka operates several farms with a NZ-grazing system (41,000 cows and 25,000 ha). The results of these farms differ a lot despite the exact same conditions and system. The reason for this lies in the motivation and capabilities of the staff. Therefore, Manuka is focusing on them with training and education according to plan, individual career plans for every worker, culture, fun and excellent working conditions. This will "automatically" improve/align the farm's results.



- Iryna Tcareva, Farmer, Ukraine
 - In the Ukraine, 71% of the milk is produced by family farms with very small herds (20 cows or less) in simple facilities requiring a lot of handwork. There is hardly any public support. Farm development is difficult mainly due to a lack of knowledge but also a lack of capital. Interest rates are 15% and higher. Improvements can only be done using their own money but making profits is not easy due to the low milk prices that family farms receive.



At production level, EDF farmers are doing well, as the Danish have shown.

But how do we actually sell to the public the good things we do? Currently, fewer and fewer people are taking a positive view of agriculture (50% in Denmark), as Morten Hoyer said. EDF farmers also feel inadequately valued by society for what they do and the food they produce, as Steffi Wille-Sonk has shown by the results of the 2019 EDF Snapshot Survey. How can mutual esteem of farmers and the public be increased? Eline Vedder-Monaster (Netherlands) has shown us that we still have a lot to improve in terms of communication. It is based on specific techniques but also requires listening, focus, personal strength and courage.



3. Next Steps

Action plan:

- Paul Harris to undertake a staff workshop with farm staff during late summer/autumn 2019

- Implementation of some simple lean management techniques
- Weekly staff 'whiteboard' meetings to be implemented during a Monday morning tea break
- Standard Operating Procedure to be drafted for all regular activities to ensure consistency

4. Key Messages to the industry

1. Staff are a valuable resource therefore make sure you get the best from them.
2. Learn to communicate in a way that suits your team.
3. Keep management systems simple.
4. LEAN management techniques can work on a farm – consider how you can implement them in your system.
5. Benchmarking and discussing cost of production means you can pick up tips and techniques to become more efficient.