Dairy farming in the Czech Republic

A key to efficient farm management? Focus on details!

The EDF Congress 2017 was held in *Prague* from 27th to 29th June. Czech EDF members invited members, partners and dairy professionals from all over the world to share knowledge & experiences in dairy farming. The delegates experienced a well organised congress with interesting farm visits.

The Czech Republic is a state in Central Europe. It is surrounded by well-developed Western European countries as Germany and Austria but also by countries that have undergone a difficult and exhausting process of transformation after 1989 when the Eastern-European Socialistic regimes have collapsed.

In fact, the Czech have also experienced that: Political and economic conditions in the former Czechoslovak Socialistic Republic changed completely due to the Velvet Revolution in 1989. The Czech Republic, as we know it today, was founded in 1993 by separating Czechoslovakia into two countries: Czech Republic and Slovakia.

The formerly planned economy (since the 1950's under the rules of the Communist Party with almost no private farming) was transformed into a market-driven economy which lead to fundamental changes in legal structures (privatization), capacities, labour requirements, trade rules, business planning and also in decision making… not only in industrial production but also in crop and livestock production.

In transforming the formerly collectivized farms into profitable private and cooperative businesses Czech farmers and farm workers have proven an **incredible adaptability**. Many people working on the farms today still have experienced both political and economic systems.

The Czech Republic is not a major player in dairy production in the European Union: Only about 1.7% of the total EU milk volume is supplied by Czech dairy farms. So you may wonder why we look at it. We do **because Czech dairy farms are out of the ordinary!** There is definitely something to learn from them.

Large dairy farms dominate

Czech farms have undergone a difficult process of transformation since 1989 (see box). As a result, the Czech dairy sector is highly consolidated today. This was impressively presented by Ing. *Jiří Šír*, Deputy Minister of Agricultural Commodities, Foreign Relations and Organic Farming Section. The number of dairy farms has declined by almost 60% in the last 20 years. Today there are only about 1,125 farms with milk production.

Czech agricultural, in general (all types of production), is dominated by **few large scale and diversified farms with various alternative business activities:** Only 3.8% of all Czech farms have more than 500 ha of land per farm, but these farms use more than 2/3 of the total agricultural area of the Czech Republic. Farms with 100 to 500 ha per farm (= 6.5% of all Czech farms) use another 19% of the agricultural area.

Less than 4% of the CZ farms farm 2/3 of the agricultural land.

However, almost 90% of the 45,855 Czech farms are family farms (or part time farms) with less than 100 ha per farm, but they only farm a very small part (about 13%) of the agricultural area of the Czech Republic.

National herd stabilised after 20 years of strong decline

Cow numbers have declined strongly for many years but now it seems

that it has stabilised to some extent. To prevent a further decrease in the number of dairy cows, Czech farms are subsidised with cow payments (per head) which is still possible in the EU. In general in the Czech Republic, 13% of the Direct Payments are used for voluntary coupled support targeting dairy cows, veal & beef, sheep & goats, fruit & vegetables, potatoes, hops and sugar beet.

Today, there are about 373,000 dairy cows in the Czech Republic. The **average herd size is 314 cows per farm**. A number of large-scale farms operates more than one barn or even site with dairy cows. 70% of the Czech dairy cows are kept in barns with a capacity of 255 cows and above.

Low costs is a must

But not only farm size is impressive. Farms are also low-cost-producers as *Steffi Wille-Sonk* (EDF) showed. Within EDF, Czech farms have **outstanding CoP results**:

The 8 Czech dairy farms that have joined the EDF Cost of Production Comparison in 2017 produce milk at **full economic costs of 28.7 Euro Cent per kg**... on average! Half of the farms is even much better than this! It is significantly below the average of all conventional EDF farms from EU countries which was 35 Cent per kg of milk.

Production cost? Impressively low!

Moderate costs (3,384 Euro) and especially the very high milk yield (10,118 kg ECM) per cow are reasons for the good results in this national EDF group. And, of course, also the large size of the farms matters. Economies of scale can make a difference. But it is not that only the size makes the difference in cost efficiency. This was impressively demonstrated by the one Czech family farm with 70 cows represented in the EDF group: They have realised the same low costs of production like the large scale Czech farms with 500 cows and much more!

One could also expect that lower prices for land and labour, compared to other European regions, are particularly contributory to the low production costs. However, due to a lower productivity of these factors (in particular with regard to labour) the effect is limited.

So what is key? A meticulous, target-oriented and pragmatic management of the herd and also of the farm itself. Otherwise it would not be possible to achieve these high milk yields, wouldn't it? Within the EDF club there is only a small number of farms which achieve such high yields today.

Key to success? High yields at moderate costs

And it is also the strong market pressure: Low cost is a must in the Czech Republic. Low milk prices, not only in the last two years but in general, strongly force farms to lower cost of production. Especially large and diversified farms with various business alternatives and almost only hired labour and land which need to be paid all the time can and will only continue with milk production if it is profitable on a perennial average: Czech farms are good because they must be good.

Poor milk prices since years

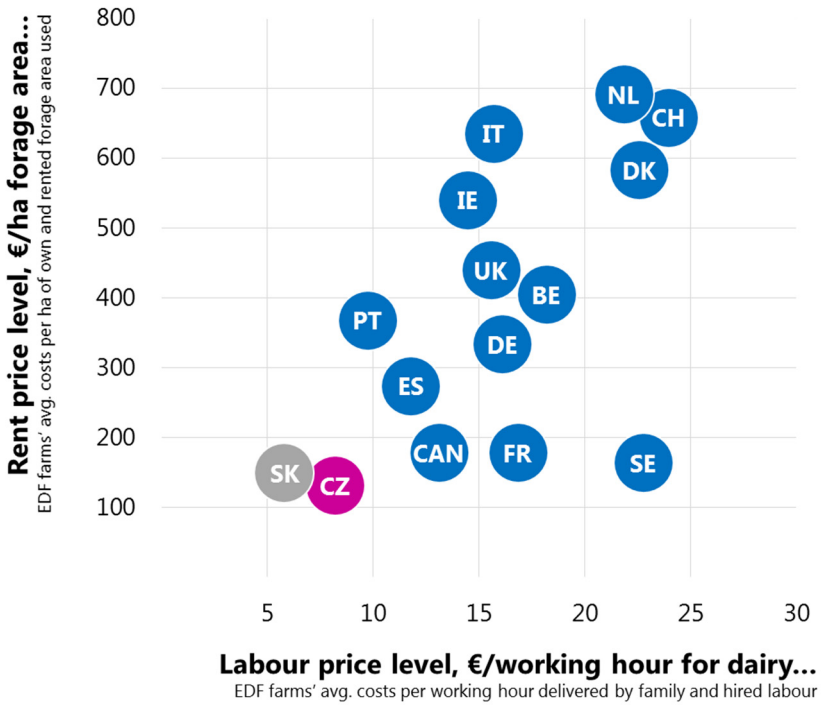
In the past, Czech farms have received farm-gate **milk prices significantly lower than EU average**, like other Eastern European countries. This can also be seen in the EDF figures (24.9 compared to 29.4 Cent per kg of milk for conventional EDF EU farms). The structures in the processing sector but also the extreme market power of food retail (multinational companies) and their unfair trade practices are reasons.

In the Czech Republic, we can find

Forage alternative: Alfalfa

Natural conditions in the Czech Republic are less favourable for dairy production: In most regions annual rainfall is only modest (between 400 and 700 mm per year) with strong fluctuations between the years. The share of natural grassland is low: 24% on average with a low yield potential.

Feeding of dairy cows is based on forage from arable land: corn silage (good yield potential), alfalfa and grass-clover mixtures. Many farms do not only grow forages but also the concentrates directly on farm which makes them less dependent on the feed market and the volatility in feed prices. But, of course, a much bigger land base is required.



35 industrial dairy processors. The 10 biggest process 2/3 of the milk. **All processors are private businesses**, in some cases even owned by foreign companies. There are no cooperative dairies… so, no "personal" ties between farmers and processors. To get a better milk price Czech farms also supply milk to German dairies close to the Czech-German border.

Today, the import of processed dairy products at the expense of domestic products is also an issue. But there is some light at the end of the tunnel: Czech consumers are increasingly interested in food origin. This will help to increase the demand for domestic food.

Production standards go up further

Despite the very poor milk prices, investments into dairy facilities have been made. Typically, barns for 400 to 500 cows are built. Animal welfare conditions are in special focus. Some of the Czech EDF farms, that congress delegates could visit, are among those who have **replaced old barns and facilities by new ones. Those now meet very high standards** in regard to animal welfare and support a more efficient management. And this is crucial as *Teun Sleurink* (Dairy Tuner B.V.) confirmed: Only cows whose individual needs for feed, water, resting time & comfort and social behaviour are satisfied will deliver highest yields for a long time.

A key for success? Give your cows what they need to feel well.

Sustainable production systems and animal welfare are issues of increasing importance for Czech consumers. The Czech government gave it a high priority in the Czech Rural Development Programme for 2014-2020. But it is not only of importance for the Czech.

Sustainability: Measure your efforts and talk about it

Sustainability will become THE topic for dairy farming in developed countries in the coming years as *Folkhard Isermeyer* from the German *Thünen Institute* pointed out, driven by the requirements of multinational food retail companies. Farmers must focus on that: They must **measure** what they already do today for a sustainable and animal-friendly production and also **communicate** it actively to the consumers. Farms must be prepared to do more if it is demanded… of course, supported by governmental efforts to offset for negative effects on income which can be linked to the implementation of higher standards.

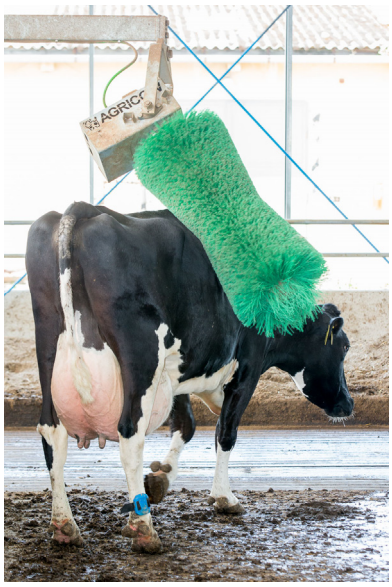
High yields are realised

The high yields of the Czech cows, which are one reason for the good economic figures, are really impressive… not only with regard to the Czech EDF farms but also with regard to the national herd in total.

Breeding lays foundation for the performance

The **genetic potential of the cows is very high**. Czech Holstein cows (56% of the national herd) are among the most high-yielding dairy cows worldwide: In 2016, 9,744 kg of milk per Czech Holstein cow have been recorded on average but with rather poor solids (3.8% fat, 3.32% protein). Czech Fleckvieh cows (36% of the national herd) milk less but also their performance is notable: 7,334 kg per cow.

Breeding is an important issue for Czech dairy farms. The Czech breed-

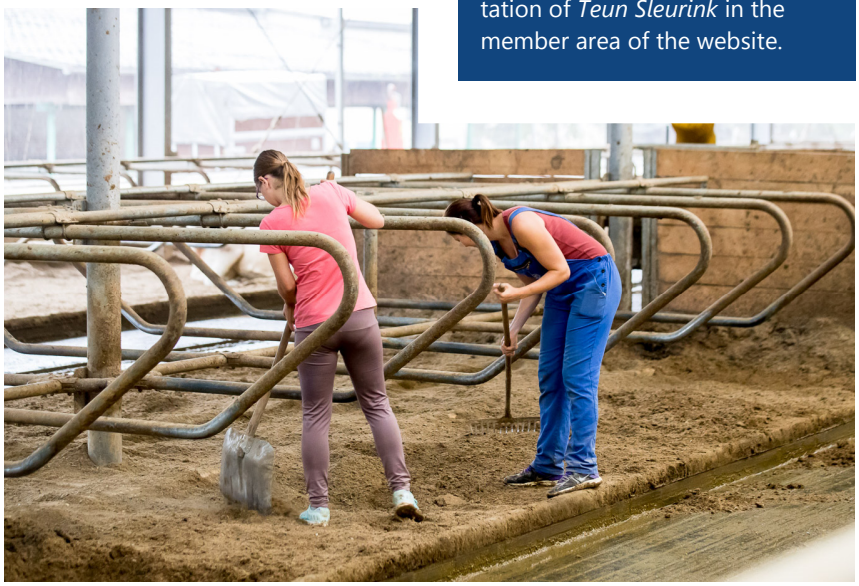


Test yourself

Teun Sleurink, Dutch dairy expert, asked the delegates to check core aspects of optimal housing for cows at home:

- A minimum bunk space of 0.65m per cow.
- At least 3 waterers per pen: 1 on each end, 1 in the middle and a minimum trough space of 9 cm per animal.
- Dry and comfortable free stalls with sand bedding.
- A separate group for the cows in first lactation.
- Wide pass thru's of at least 4 meters and no dead ends.

What about you? Do you provide this? Please see the presentation of *Teun Sleurink* in the member area of the website.



Czech milk production in figures

Number of dairy cows:
373,000

Number of dairy farms:
1,125 professional farms plus many small holders

Annual milk deliveries:
2712.6 million litres in 2016

Milk density:
776 litres per ha UAA

ing market is open and highly competitive with a strong focus on U.S. genetics. This has contributed to the strong development in the past years. Further progress will be supported by selective breeding. To fully use their genetic potential cows must be housed under **optimal conditions for maximum welfare**. This is what the Czech EDF farms are working on. It was presented during the farm visits. But some of the farms were also able to realise very high yields with very well-conditioned cows under less optimal housing conditions. And this is interesting! So, you can offset less optimal conditions to some extent if you really focus on optimising cow care and feeding, can't you?

Make use of the aids offered to maintain health & fertility

Nevertheless these high yields are also linked to some challenges: Maintaining health and fertility of the cows are the most important ones. This is an area also Czech farms need to work on as *Jiří Davídek,* Czech Vet expert, reported.

Against the background of the large size of farms and high yields, it is probably necessary to make full use of all available reproduction programs and aids: heat detection, devices for Automatic Activity Monitoring & Timed AI protocols. Czech farmers are not afraid of new technologies. They are ready to implement it in order to monitor their herds more efficiently.

Challenges are ahead

During the congress, we have seen progressive and very focussed Czech farms with good results for whose future we are not afraid. But nevertheless dairy farming in the Czech Republic is not without challenges:

How to satisfy the huge labour requirements in large-scale farms?

Big farms have huge labour requirements. **Where to find skilled workers and how to motivate them?** Labour prices (page 2) are much lower in the Czech Republic than in other countries in Europe. This could be an advantage but lower prices are connected with a lower productivity as seen on the farms. This is an area were Czech farms can still work on.

Finding workers is a big problem

But the availability of workers is the main problem. In the Czech Republic, we can find strong industries all over the country attracting many workers. And with 5.3% the unemployment rate is low. So, how to satisfy the farm's high labour requirements tomorrow: Workers from third countries e.g. from Ukraine? Automated systems for milking and feeding? Even more technical devices for herd monitoring?

How to ensure the land base?

The farms mainly rely on land rented from hundreds of owners = hundreds of rental agreements… only in 1 single farm. There are about 1.2 million land owners (former members of the collectivized farms and descendants) in the Czech Republic who own on average 3.23 hectares.

How to secure a farm's land base in light of increasing (non agricultural) **demand for land, and the steadily decreasing personal relationship of the land owners to an individual farm** and agriculture in general?

This is also an issue when building new barns: Farms build new barns

directly "across" the old barns during ongoing operation. Some of our Czech EDF farms did that! Because changing to a new site (or even extending the existing site to the left or right) would mean that they would need to buy this land from many, many land owners… which becomes more and more impossible. Land prices are still low but increasing by high rates. This leads to short-term rent contracts and more uncertainty.

How to ensure financial liquidity?

Large-scale farms have a high share of cash costs as they rely mostly on hired resources. So, how to ensure a sufficient cash flow also in times of low milk prices? Securing the milk price at the commodity exchange is one option as *Joe Spader* (Dairy Visor, Inc.) from the U.S. explained. Large U.S. farms often make use of it in order to reduce price risk. In Europe, we are still behind this development. Cash flow management must be based more on "classical elements". The diversity in production, seen at the Czech farms, is one alternative.

Farm logistics?

A large farm often has logistic (but also administrative) challenges: e.g. long ways between fields and sites. How to manage logistics to prevent economic advantages due to economies of scale from being eroded? Currently barns with capacities of 400 to 500 cows are built. It is not expected that barns will become much bigger in the future. Land structures but also the increasing societal demands will probably prevent the development of super large-scale barns. If Czech farms want to enlarge their herds further they will probably increase by buying (already existing) sites.

Focus on details

So, what remains after 3 congress days? We experienced a well organised congress with interesting lectures. We have seen remarkable and competitive farms with high-yielding cows. We got an insight into Czech dairy farming which is somehow out of the ordinary. The Czech congress team has, without ruffle and focussed on the goals, paid attention to details that can make a difference. And this is also a key for an efficient herd & farm management: **A focus on these details that really matter, pragmatic and solid.** □

@Congress team: Thank you!

We say thank you to the Czech Holstein Association and the congress team for giving us a very interesting and well-organised congress. We, particularly, also say thank you to the Czech EDF and non-EDF farms which have opened their barns and their minds for us!

We would be very happy if we could meet and discuss with you again at the next EDF Congress in Spain in 2018!

EDF Congress 2018 in Spain: Watch the invitation video!

What did you take home? Here are some of the delegates personal comments:

"Czech Republic — another EU country with low milk prices and a reasonable profit. Congratulations!"

"Optimising your barn for cow comfort is essential for maximising milk output per cow."

"Attention to the detail is vital to ensure milk production is maximised […]"

"Increasing milk production is necessary. Yields of 10000 to 12000 kg per cow are possible."

"We have to work on the costs."
"How low (in costs) can I go?"

"Family spirit is a driver for motivation and entrepreneurship."

"Sustainability is an opportunity to bring added value to our milk, not a constraint."

"We must increase cow comfort, watering and conditions for close-up cows."

"Cows, world market, finance… it is like playing cards! You have to make the correct move."

"The dairy sector has to think about animal welfare before other organisations say us how to handle it. "

Will we meet again next year in Santiago de Compostela, Spain, 27-29 July 2018: **Let's walk along the Milky Way together?**

In case of any questions please contact:

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