Dairy farming around the world

by Dr Torsten Hemme, IFCN Dairy Research Center, Kiel, Germany.

Dr Torsten Hemme is the leader of the IFCN Dairy Network, a scientific association between farm economists in over 30 countries, which have analysed dairy farms in 34 countries. At the recent 27th IDF Congress that took place in Shanghai, he addressed the following 12 questions.

A barn in the USA.

● Are dairy farms really affected by globalisation and the ongoing liberalisation of trade?
The simple answer is yes. Dairy farms and the families behind them are most affected by the milk price and the feed prices. The most important factor, the milk price, is determined on the one hand by the local supply and demand of milk and on the other hand by the world markets for dairy products.To make it simple, we can say that the maximum milk price a milk processor can pay to his suppliers is determined by the world market price for milk plus the tariff applied in the country. For example, in the EU, the upper price bound in 2004 was around €35 per 100kg milk.

● How can a local dairy farmer be really affected if only a very small share of world milk production is traded?
This is indeed difficult to understand. Let me clarify some figures. Based on our IFCN Dairy Sector Model analysis only about 7% of the world milk production is traded. If you have a look at the processed dairy products like butter, cheese, condensed milk and the various milk powders, the traded share increases to 24%. This figure would be significantly higher if we included the trade within the EU-25 countries.

● Does the price the dairy farmers receive matter for the price of the dairy products?
The biggest cost component of a dairy product is the price for buying the milk from the farmers. In some cases the 'farmers' milk price' counts for about 70% of the cost to produce a dairy product.

● What does this mean for the dairy sector?
It means a competitive milk price is the starting point to be viable in the market for dairy products, dairy regions where farmers have low cost will gain market shares and dairy regions where farmers need a higher milk price will lose market shares. These drivers become more and more relevant as we liberalise the trade of dairy products.

● How do we know which region has high or low costs?
We have established the IFCN, a research network, to create a better understanding of milk production worldwide. One part of our work is the analysis of typical dairy farms and their costs. The local researchers participating in the IFCN do the data collection. The cost analysis is standardised by the software TIPI-CAL.

Based on that, we are able to compare the costs of a farm in the USA with 2000 cows with the costs of a farm in India with two cows. We are happy to have research organisations from 34 countries joining the network at the moment. Moreover, we cooperate with 20 agribusiness companies 'around' the dairy farm, which use the IFCN knowledge as a navigation system in the rapid changing world.

Peru.

● Can you give us some results about the low cost dairy regions?
In our IFCN Dairy Report 2005 we have identified Oceania, South Asia, South America and Eastern Europe as low cost regions. In 2004, larger dairy farm types of these region were able to produce milk at costs below $15 US per 100kg milk.

● What is the magic about a low costs system?
Usually people expect large farms with high yield to be most competitive. A common

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Switzerland.

New Zealand.

Pakistan.

Dairy farming in India.

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belief is that an 'optimum farming system' exists, which would be the right one in all parts of the world. Both are wrong!

The most important for low cost milk production is to have the optimum region specific farming system and the ability to adjust it to changes in milk prices, input prices and the social developments in the country.

● Can you give us some examples?

For 2004, among the top 10 farm types measured by cost of production, we found a Pakistani three buffalo farm with a milk yield of 2,200kg per year next to an Argentine farm with 350 cows and a milk yield of 5,300kg, and a 50 cow farm in Poland with a milk yield of 6,800kg per cow per year.

This means that farmers with completely different production systems are able to produce milk at very low costs. The challenge for the farmers is to find the 'right farming' system for their region.

● Are the very efficient farms in the USA with their high yield not among the most competitive in the world? What about New Zealand and their very efficient grazing system – I thought they are the most competitive dairy farms.

You mentioned two very interesting cases. Let's start with the USA. In the year 2004 we found that the high yield farming systems (10,000kg milk/cow) in the Western States produce at costs of $24-26 US per 100kg milk. This is much higher than in the most competitive farms worldwide. The main drivers are the high feed cost.

In New Zealand we have a very efficient farming system which was the cost leader in the past. In 2004 an average farm type with 260 cows produced at costs of $20 US per 100kg milk. Our preliminary estimate for 2005 shows in New Zealand costs at a similar level as in the large US farms.

● Why is New Zealand not a cost leader any more?

Basically we have two effects. Firstly, the costs based on US $ in New Zealand have increased as land prices increased and the currency has been appreciated against the US $. Secondly, other regions in the world have reduced costs of milk production by the devaluation of their currency against the US $ and the benefit of lower feed prices.

● How do you see dairy farming in China?

At the moment, we do not have a formal partnership with a Chinese research institution. First results show different trends but it seems that in China also small scale farms might be quite competitive. I hope that we can improve our research contacts in order to have more concrete results in the future.

● Do you have a general comment for other dairy regions of the world?

We have to realise that strong economic forces will change the dairy world. This creates opportunities and at the same time also threats. In this framework the most important thing is to know your competitive position and the direction it is developing. This knowledge is a starting point to define farm and region specific dairy strategies. ■