New comparison of world milk production costs

(The following article is a direct contribution by the International Farm Comparison Network (IFCN)).

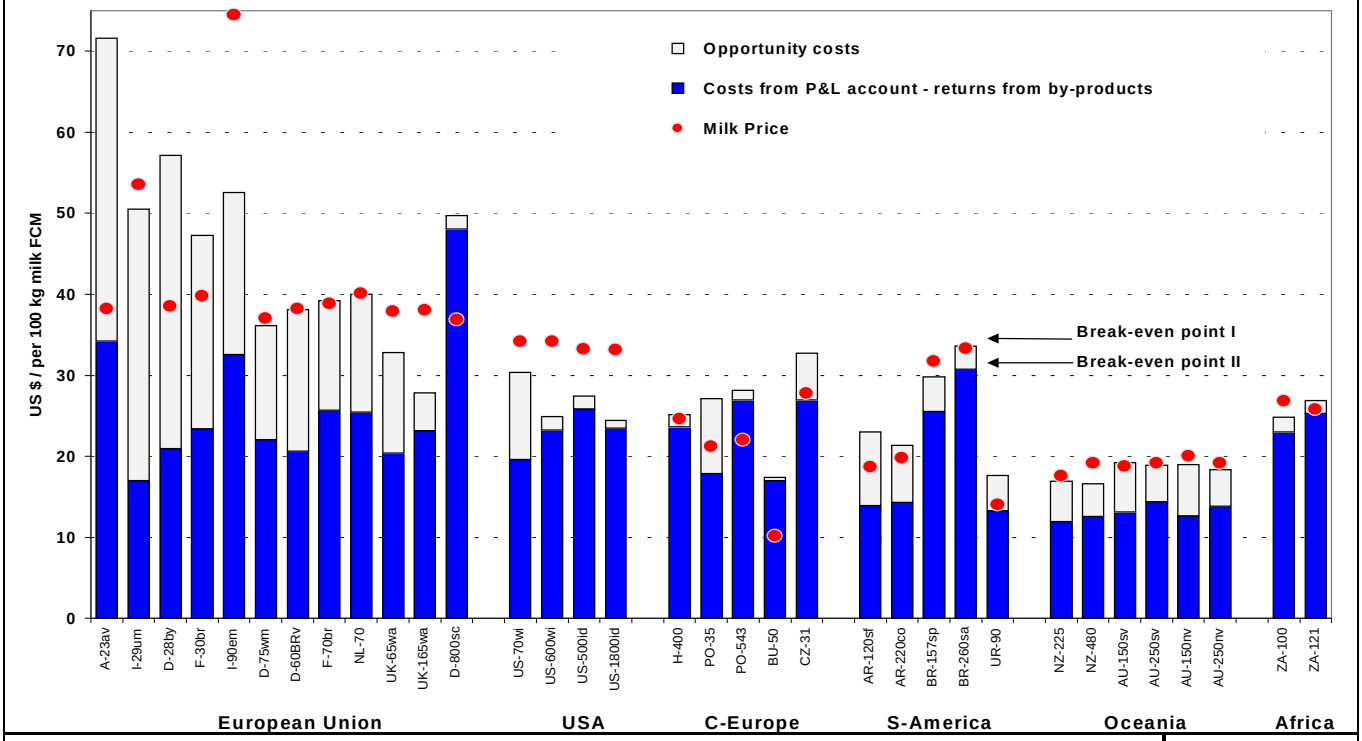
Total production costs for milk are an important factor in assessing a country's competitive position in milk production. The first results of an analysis* comparing total costs of milk production on a world-wide scale were presented recently at the first meeting of the International Farm Comparison Network (IFCN) (see box below).

In addition, the potential of future milk production in the participating countries was assessed by experts (see list of participants on page A/3). This article focuses on production costs, while next week's issue of *Agra Europe* will also touch upon the potential for milk production.

Figure 1 (see below) provides an overview of the 1996/97 total production costs of milk production of 34 typical farms in 17 countries worldwide. The costs are adjusted to 4% fat corrected milk and are stated without VAT. Figures were recalculated into US dollar terms using 1996/97 exchange rates.

Total costs are shown split into cash costs and non-cash costs, as well as opportunity costs for own production factors. These can be compared directly with the milk price.

Figure 1: Milk price and total costs of milk production in typical dairy farms 1996/97



Countries are abbreviated with their initials, numbers indicate herd sizes

Source: IFCN Meeting, April 1998 Braunschweig, Germany

IFCN / FAL-BW
DEBLITZ / HEMME
GOERTZ / JACOBI
(1998)

IFCN

The International Farm Comparison Network (IFCN) aims to establish a basic network of typical farms in all sectors of agriculture in the main producing countries of the world. The idea of IFCN goes back to FAL in Germany and AFPC in Texas/USA. IFCN is based on a partnership approach and uses internationally harmonised methods of data collection and cost calculation. For policy and technology assessment on the typical farms simulation models (FLIPSIM, TIPI-CAL) are used for projection of farms up to 10 years into the future. Farm data are derived from so-called panels, each consisting of four to six farmers, one advisor and one scientist. The first meeting of IFCN, where some 30 international experts were assembled, took place at the Federal Agricultural Research Centre (FAL) Braunschweig, Germany in April. Participants from outside the EU were asked to provide typical farm data in order to develop a farm data base that could provide a basis for comparison of production costs. The figures and conclusions in the paper presented here are derived from a comprehensive report from that meeting.

Break-even points assessed

Two break-even points are shown. Compared to the milk price, break-even point I indicates the cost level where full economic costs are covered. Break-even point II is calculated as break-even point I minus opportunity costs, indicating the cost level at which the farm generates a positive family income.

Four cost levels can be observed:

1. Approximately **$US50/100 kg milk and above** for EU farms with around 30 cows.
2. Costs of around **$38** for EU farms with 60 to 75 cows.
3. USA, Central Europe, Brazil and South Africa with costs of **$25 to 30**.
4. Costs of around **$20** in Argentina, Uruguay, Australia and New Zealand.

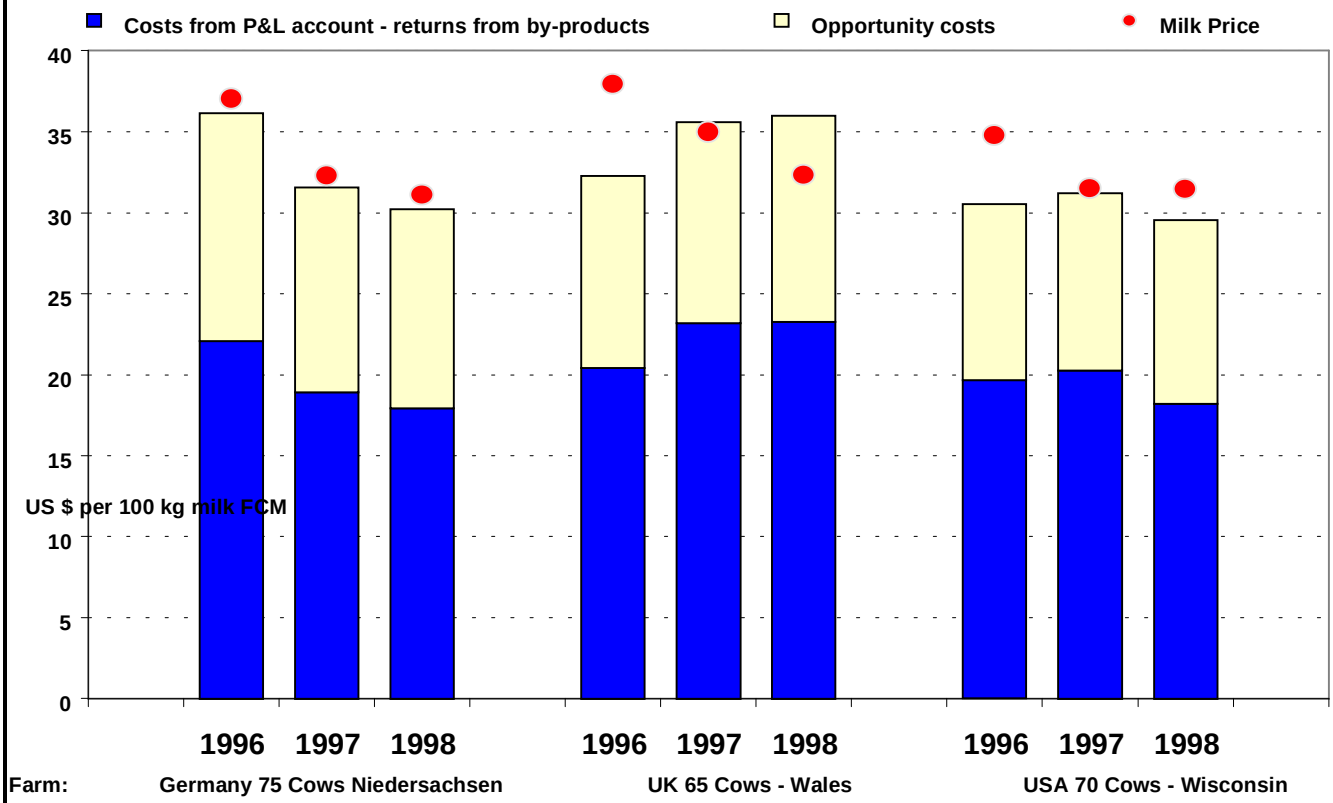
The reasons for the cost disadvantages in the EU countries, as against many of the other countries, include the following:

- Unfavourable weather conditions, requiring housing of cows in wintertime
- High wage rates leading to high labour costs, in particular for the labour-intensive dairy sector.
- Small herd sizes mean that farmers cannot benefit from advantages of scale
- Traditional land use patterns (small plots) cause extra costs
- The EU, as well as national authorities, tend to over-regulate the economy
- The milk quota system has a negative impact on international competitiveness

Good grazing systems,low labour cost

By contrast, the low-cost countries (Australia, New Zealand and Uruguay) manage to run their herds on grass-based systems. Weather and soil conditions allow them to keep cows on pasture all year round, thereby reducing building costs to a minimum. In addition, either grazing systems are either very well developed (Australia and New Zealand), or labour is available at very low prices (Uruguay), resulting in high labour productivity.

Figure 2: Impact of exchange rates on prices and costs in typical dairy farms in Germany, UK and USA 1996/97



Total cost of milk and by-prodcuts less returns from by-

Source: IFCN Meeting, April 1998 Braunschweig, Germany

IFCN International Farm Comparison Network

IFCN / FAL-BW
DEBLITZ / HEMME
GOERTZ / JACOBI
(1998)

DM rate boosts German competitivity

Further analysis indicates that exchange rates used for converting the figures into a single currency have an important impact on the level of production cost. As Figure 2 illustrates, the cost disadvantage of a German 75-cow farm has virtually disappeared between 1996 to 1998, due to the revaluation of the DM against sterling and the US dollar in this period.

List of Participants of the first IFCN-meeting April 16-19, 1998

Argentina Eduardo Guardini (Ministry of Agriculture, Buenos Aires) **Australia** Russell Cummings (Dairy Research Development Corporation, Melbourne) **Austria** Hubert Janetschek, Hubert Pfingstner (Federal Agricultural Research Centre, Vienna) **Brazil** Marcelo de Carvalho (Nutricell Ltda, Sao Paulo) **Bulgaria** Jens Adler (Institute of Agricultural Development for Central and Central Europe IAMO, Halle) **Czech Republic** Frantisek Vanicek (Research Institute of Agricultural Economics, Praha) **France** Bruno Guermonprez, Fabrice Rabourdin (Institut Supèrieur d'Agriculture ISA), Lille); Alain Revel, Sébastien Thery (Unité d'Economie et de Sociologie Rurales, INRA ESR, Grignon) **Germany** Claus Deblitz, Dieter Goertz, István Heinrich, Torsten Hemme, Folkhard Isermeyer, Elgin Jacobi, Lutz Knölke, Joachim Riedel (FAL, Institute for Farm Economics, Braunschweig); Christof Möller (University of Kiel) **Hungary** Csaba Borbély (Pannon Agricultural University, Kaposvar) **Italy** Francesco Ansaloni (University of Bologna); Fabio Santucci, Andrea Marchini (University of Perugia) **Netherlands** Bram Prins (European Dairy Farmers EDF); Wim Zaalmink, (Agricult. Economics Res. Inst. LEI-DLO, Den Haag) **New Zealand** Mark Leslie (Livestock Improvement Centre, Hamilton) **Poland** Michael Switlyk (Academy of Agriculture, Szczeczin) **South Africa** Koos Coetzee (Milk Producer's Association, Pretoria) **United Kingdom** Alun Davis, Tim Jenkins (Welsh Institute for Rural Studies, Aberystwyth) **Uruguay** Jorge Alvarez (University of the State, Montevideo) **USA** Ron Knutson, David Anderson (Agricultural and Food Policy Center AFPC, Texas A&M University, College Station)

* *"First results on international competitiveness of dairy production."* C. Deblitz, T.Hemme, F.Isermeyer, R.Knutson, D.Anderson. Contact: Institute of Farm Economics, Federal Agricultural Research Centre (FAL) Bundesallee 50, 38116 Braunschweig, Germany.

E-mail: torsten.hemme@fal.de
folkhard.isermeyer@fal.de

Internet:
http://www.bal.fal.de/de/ifcn/publications.htm