

The international competitiveness of the South African dairy industry

2013



By Koos Coetzee

February 2014

1. Introduction

This report is based on the research done within the International Farm Comparison Network in 2013. The comparison of farms is based on the actual income and cost figures for the 2012 year. The International Farm Comparison Network is a network of dairy experts in many countries. The IFCN mission is to create a better understanding of milk production worldwide. Scientists from 95 countries cooperated in the work of IFCN in 2013. It analysed the production and cost of 178 typical dairy farms in 57 countries and published the results in the 2013 Report.

The IFCN is managed by a group of dedicated dairy scientists at the IFCN Dairy Research Centre in Kiel in Western Germany. The Milk Producers' organization has been involved in the work of IFCN since 1998. South Africa became a full member of the IFCN in 2008. South Africa's participation in the IFCN work is partially sponsored by Milk SA.

2. Country comparison

The work of IFCN is based on two different comparisons namely a country comparison where total country statistics are used and a farm comparison where typical dairy farms from the different countries are compared. Ninety-five countries featured in the 2013 country analysis.

2.1 Size of dairy farms

The average dairy farm has 2,8 cows. Larger dairy farms are found in Saudi Arabia, New Zealand, South Africa, Argentina, the USA and Canada. The 2012 South African average herd size of 238 is the third largest in the world. Average herd sizes for selected countries are shown in Table 1.

Table 1: Average herd size, selected countries 2012

Country	Average herd size
Saudi Arabia	8 125
New Zealand	393
Australia	241
South Africa	238
Czech Republic	175
USA	160
Argentina	147
Denmark	147
Israel	134
United Kingdom	128
Uruguay	102
Canada	76

2.2 Milk production

IFCN estimates total milk production during 2012 at 739 million tonnes. Of this total 33% is produced in Asia and 21% in the EU. Only 62% of total milk production reaches processors. While India is the world's largest milk producer, less than half the total milk production is processed. South Africa delivers nearly 98% of total commercial milk production to processors.

South Africa is one of the countries that deliver a high volume of milk per farm to processors. Total milk supplied per farm per year is shown in Table 2.

Table 2: Milk delivered to market, selected countries 2012

Country	Milk to market (ton/year)
Malaysia	86
Belarus	118
Chile	124
EU-27	137
Norway	147
Switzerland	161
Iceland	197
Uruguay	279
Jordan	286
Korea	307
Japan	341
Canada	633
South Africa	1083
Israel	1215
USA	1242
Australia	1245
New Zealand	1596

2.3 Milk processors

Milk processors are relatively small and regionally concentrated. The 20 largest milk processors have a combined market share of 24% in total global milk production. The top 10 milk processors are shown in Table 3.

Table 3: Top 10 milk processors, 2012

Company	Country	Global market share
Fonterra Cooperative Group	New Zealand	3,0%
Dairy Farmers of America	USA	2,4%
Groupe Lactalis (Parmalat)	France	2,1%
Nestlé	Switzerland	2,1%
Dean Foods	USA	1,7%
Arla Foods/MUH/Milk Link	Denmark/Sweden	1,7%
Friesland/Campina	Netherlands	1,4%
Danone	France	1,1%
Kraft Foods	USA	1,1%

Source: IFCN, 2013

3. Farm comparison

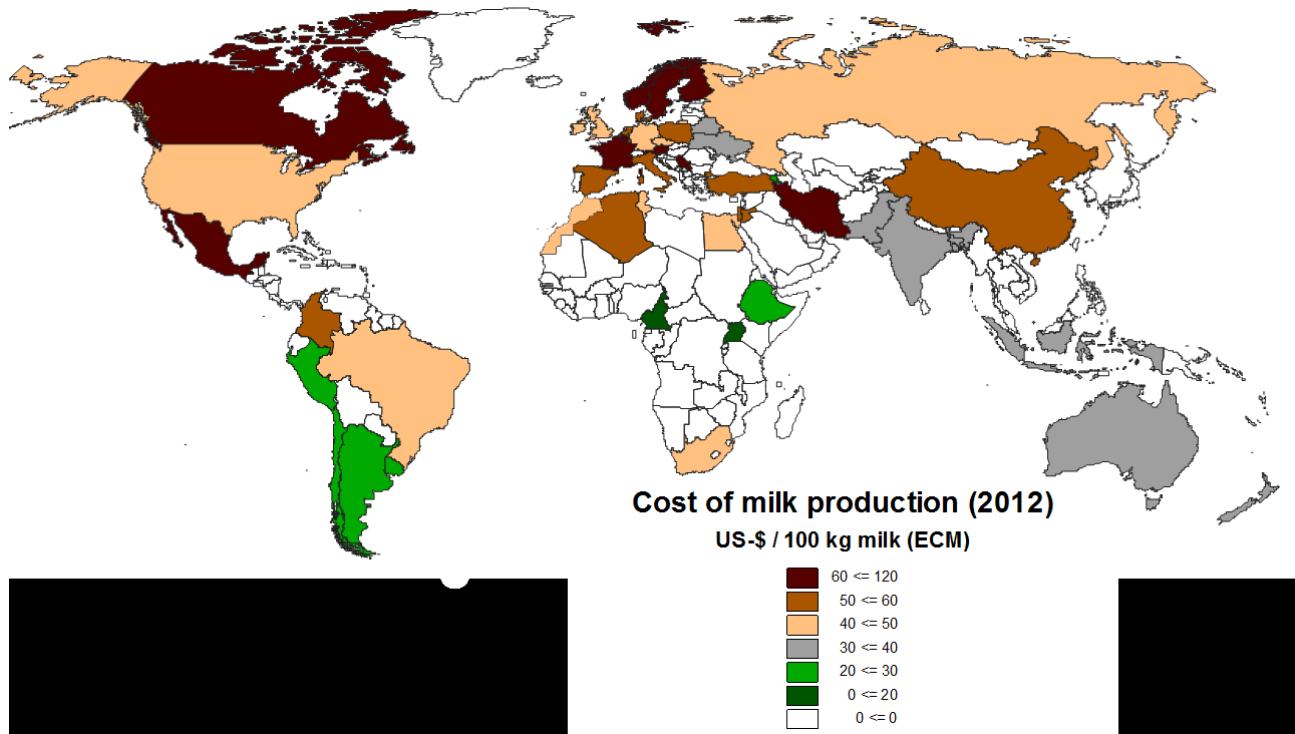
One hundred and seventy eight different typical farms from 51 countries were compared in the farm comparison. Three South African typical farms namely a 230 cow mixed farm, a 520 cow grazing farm and a 630 cow intensive total mixed ration farm were included in the farm comparison. These three farms cover an estimated 80% of milk produced in South Africa and are thus typical of the South African primary sector.

3.1 Cost of milk production

Cost of milk production varies widely between countries. Lower production cost occurs in countries where very little extra concentrates and forage are fed, where the owners opportunity cost of labour is low and where the bulk of milk is not sold to the market. Seventeen percent of the farms produced

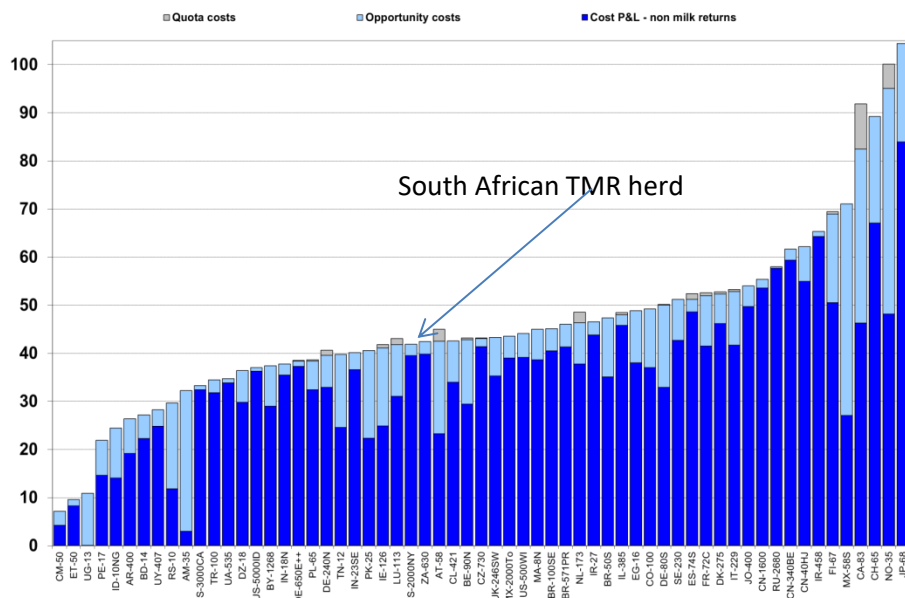
milk at more than R 4,70 per litre and 14% at cost below R2,70. The lowest production cost occurred in Cameroon, closely followed by Uganda, Ethiopia, Peru and Armenia. Switzerland has the highest cost of production, followed by Japan, Norway, Canada and Finland. South African production is comparable to production cost in most of the important exporting countries. The following figure indicates the different cost regions in the world.

Figure 1: Cost of milk production per country, 2012



The following figure compares total cost of milk production on typical larger farms in different countries in 2012. South African TMR farms produce milk at lower cost than subsidised farms in other countries. The SA production cost has in the last five years increased compared to countries in South America, mainly as a result of higher feed cost.

Figure 2: Cost of milk production for larger farms, 2012



3.2 Detailed analysis of selected farms

In this section the performance of the three typical South African farms are compared with similar farms from Argentina, New Zealand and the USA. The following figures 3 - # indicates the comparable variables for these farms. In addition to the three SA farms (ZA-230, ZA-520 and ZA-630) a 400-cow Argentinian (pasture plus concentrate), a 500-cow US farm (TMR) and a 348-cow New Zealand pasture farm was used.

Figure 3: Farm size (number of cows in herd) comparison

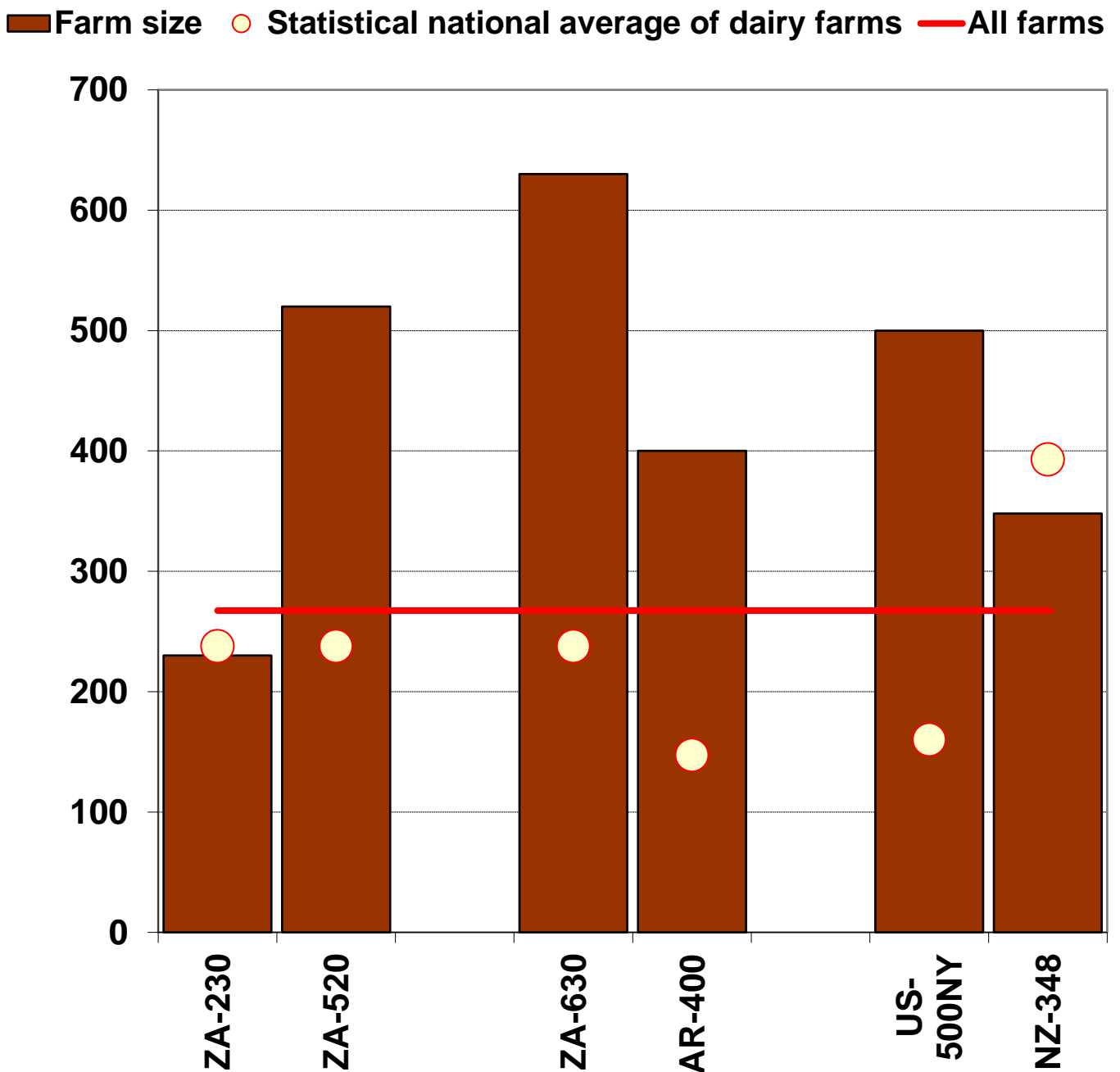


Figure 4: Milk yield (1000 kg of energy corrected milk per year) comparison

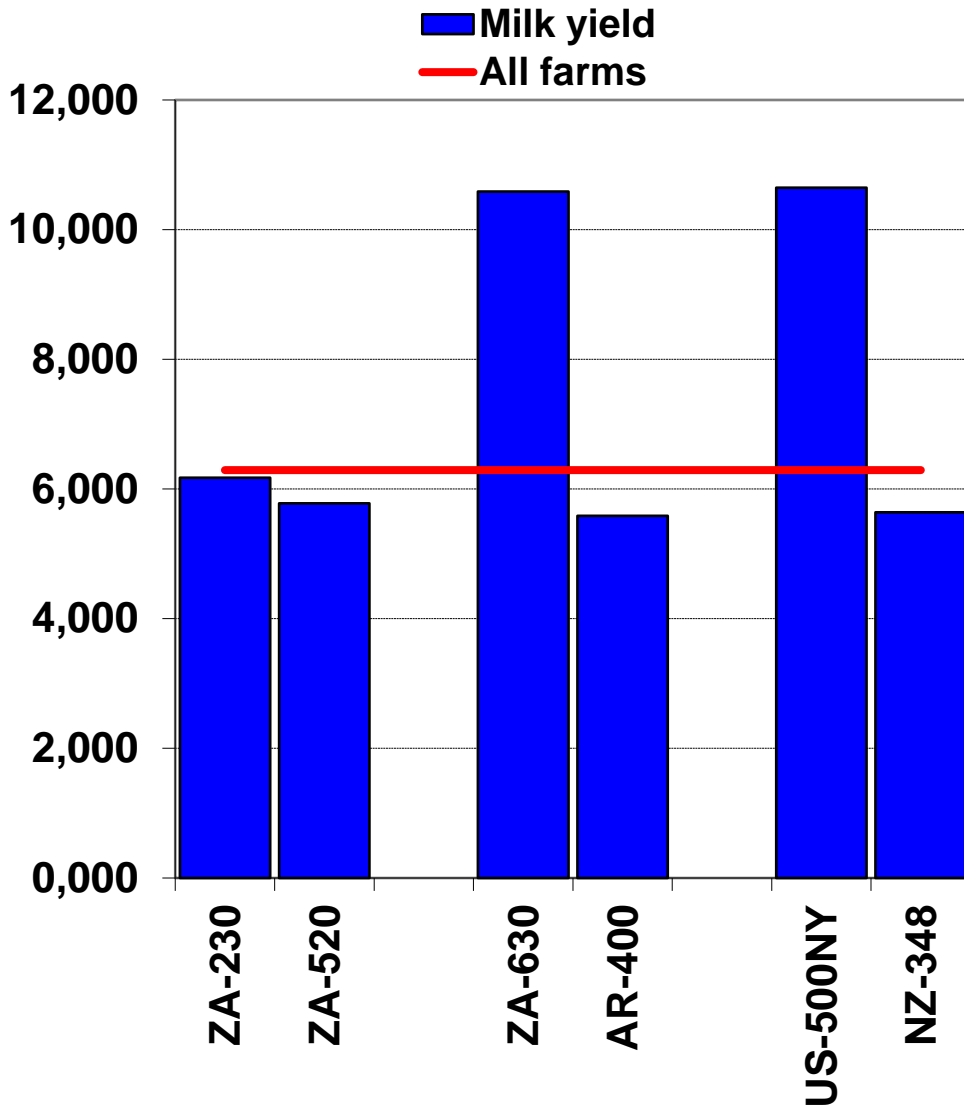
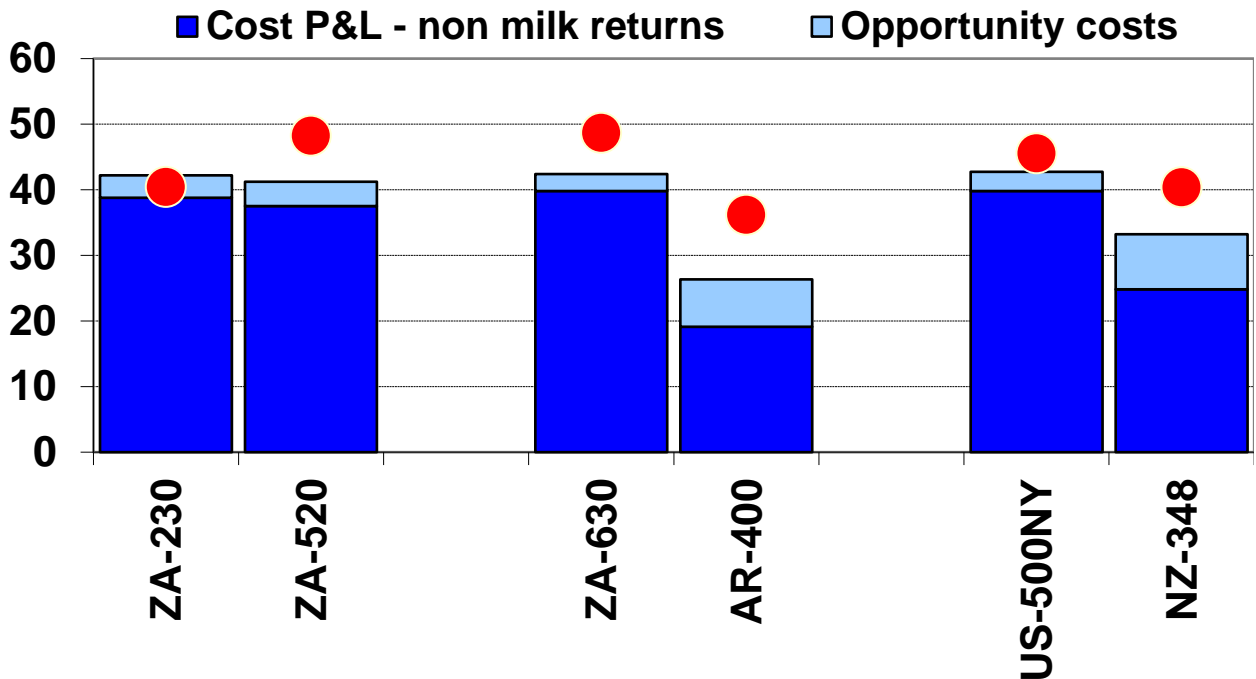


Figure 4: Production cost (US\$ per 100 kg energy corrected milk) comparison



Summary

South African dairy farms are larger than farms in many other countries. Milk yield and cost of production is comparable to dairy farms in developed countries. However production cost is higher than in South America and New Zealand. Argentinian dairy farmers pay less for grain as there is an export tariff on grain while South African farmers buy grain at import parity prices. Both the large TMR and large pasture farm in South Africa can compete with similar farms in other countries.