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Competitiveness of South African broiler production



Poultry is a critical subsector within South African agriculture, as the single largest contributor to gross agricultural production value. Its contribution is further amplified through substantial up- and downstream multiplier effects associated with a long, integrated value chain. In 2015, 40% of total animal feed consumption in South Africa was attributed to broiler production (AFMA, 2016).

The industry is also central to food security, as it provides the most affordable source of animal protein to South African consumers.

Since 2010, however, more than half of the growth in chicken consumption has been supplied through imported products. From 2010 to 2015, imports increased by more than 90% from 240 000 to 457 000 tons, raising concerns related to the industry's ability to compete in the global context – and consequently its long-term sustainability.

In collaboration with the *Landbouw Economisch Instituut* (LEI), a research institute at Wageningen University and Research (WUR) in the Netherlands, the Bureau for Food and Agricultural Policy (BFAP) conducted a benchmarking analysis of both technical and economic efficiency. South African producers achieve high levels of technical efficiency, reflected in production efficiency factors that are comparable to top broiler-producing countries such as Brazil and the United States (US) (Davids, 2013; Lovell, 2012; Louw, Schoeman & Geysler, 2011).

Efficient production

The value chain structure is similar to that of leading global producers and lends itself to technically efficient production. Improvement in both genetics and housing facilities, combined with improved management practices, has resulted in continuous efficiency gains over the past 20 years.

As the single greatest contributor to variable production costs (up to 70% in South Africa), the cost of feed remains the most important consideration. Broiler feed costs are calculated as a weighted average

of the different feed mixes used throughout the production cycle. The average cost of feed across the sample space was €352/t, with South African feed costs recorded at €343/t in 2013.

From *Figure 1* it is evident that feed costs in surplus feed grain-producing countries, which tend to trade at export parity levels such as the US, Brazil, Argentina and Ukraine, are significantly lower at an average of €285/t. By contrast, most countries within the European Union (EU) are net importers of maize and protein meal, and consequently the average feed price within the EU amounted to €380/t.

As a net importer of protein meal but exporter of maize, feed prices in South Africa are close to the sample average. However, the country produces a lighter bird than most other countries in the sample, which allows producers to optimise the feed conversion through a shorter production cycle. Therefore, considered in terms of cost per live kilogram chicken produced, South African feed costs remain below the sample average, but not as low as production costs in the US, Argentina and Brazil.

Figure 1: Aggregate primary production costs in selected countries in 2013.

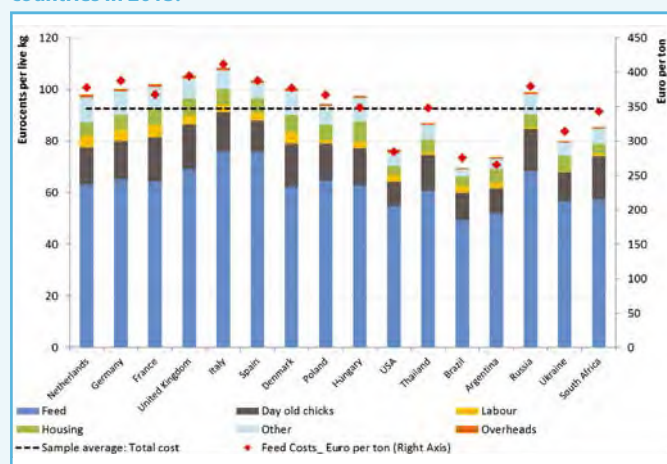
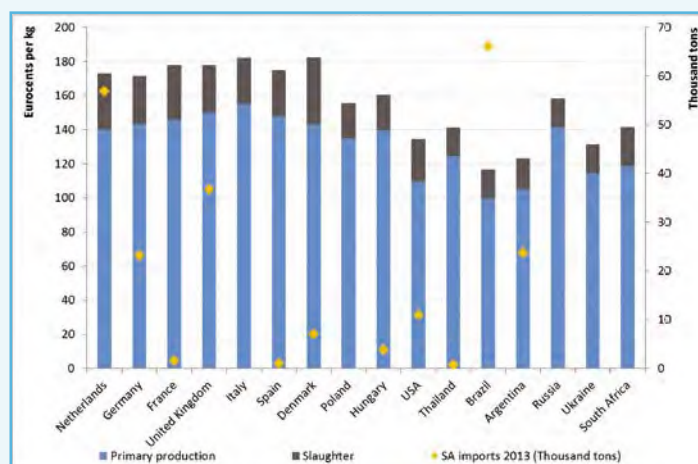


Figure 2: Total production costs in selected countries in 2013.



Effect of the exchange rate

After feed, day-old chicks represent the second largest variable cost to broiler producers globally. Broiler breeders are imported into South Africa at great-grandparent or grandparent level, as regulations prohibit imports of commercial day-old chicks. Consequently, the complete biological cycle involves the breeding and rearing of parent stock prior to commercial day-old chick production and requires twelve to 18 months. Accordingly, the cost of feed remains a key driver of day-old chick costs, effectively influencing the cost of production at two different levels of the value chain.

With genetic material being imported, the exchange rate represents another key component of day-old chick costs, as a depreciating exchange rate increases the cost of genetic material relative to the rest of the world. On a per-chick basis, South African prices are in line with the sample average, but lower slaughter weights result in chick costs considered as a cost per live kilogram of chicken produced, being among the highest in the sample space (Figure 1).

On average, local producers paid 28,4 euro cents per chick, compared to a sample mean of 30,3 euro cents. The lowest day-old chick cost was recorded in the US, at only 22,1 euro cents per chick, almost 25% below the South African price. Throughout the EU, day-old chick costs remained similar at an average of 32,9 euro cents per chick.

The most significant differences

between countries were found in feed and day-old chick costs, which combined accounts for 76 to 86% of the primary production costs. Housing costs tend to be higher in the EU relative to the rest of the sample, partly as a result of

regulations that govern stocking densities. Labour costs in South Africa compare favourably to the levels reported in the US, Argentina and Brazil – well below the EU average and higher only than Russia and the Ukraine.

Total production costs

Given the integrated nature of the poultry value chain globally, total production costs relate to both primary production and slaughter costs. Figure 2 presents slaughter costs based on large commercial slaughterhouses, comparing the total cost of a carcass.

Across the international sample, carcass weight represents 70% of the live weight delivered from the farm, but in South Africa the carcass weight is generally 72% of the delivered live weight (Lovell, 2014). In addition, South African producers have the added benefit of edible offal being sold to provide additional income, whereas this is not the case in the EU.

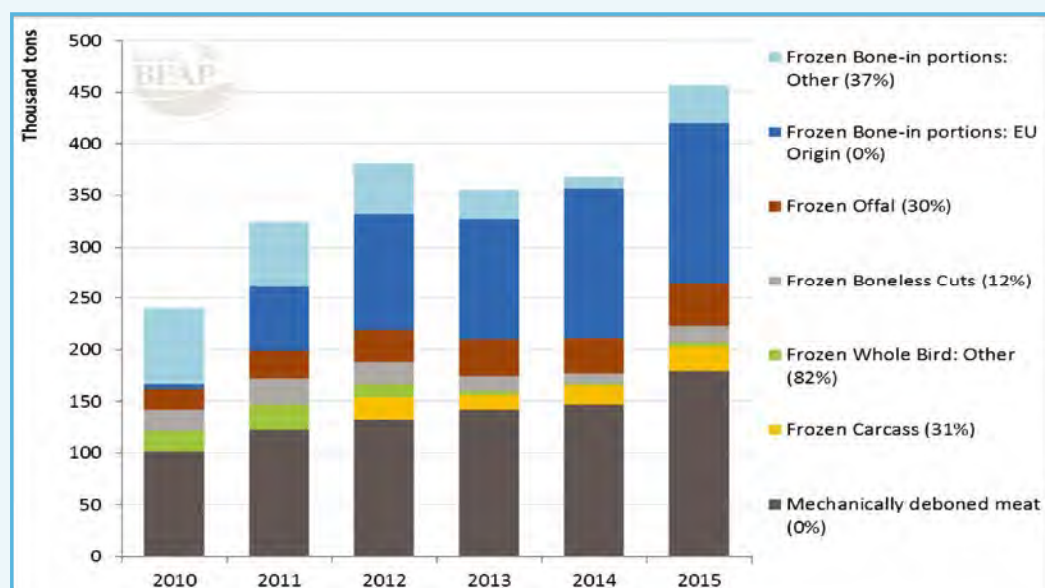
Within the global context, the largest components of slaughter costs are labour (30%) and buildings and equipment (40%), with the balance being comprised of transport, energy, water, quality control and offal disposal.

Competitiveness ultimately boils down to economic efficiency, which includes the cost of production.

While slaughter costs throughout the EU vary, the use of similar modern technologies results in labour costs accounting for the bulk of variation across countries (Van Horne, 2013). In South Africa, labour and packaging account for the largest share of total slaughter costs (50% between them), followed by energy, transport and sanitation.

Figure 2 indicates that South Africa imports substantial quantities of chicken from countries such as the Netherlands, Germany and the United Kingdom (UK), where production costs are higher. This implies that rising import volumes are not simply a result of a failure to compete in the basic cost structure. Therefore, Figure 3 presents a more detailed view of import growth since 2010, suggesting that the bulk of import growth is attributed to a single tariff line representing bone-in portions – particularly those imported duty-free from the EU.

Figure 3: Composition of chicken imports into South Africa: 2010–2015. (Source: ITC Trademap, 2016)



Contrary to the EU where producers obtain a significant premium for chicken breasts, the demand structure in South Africa favours bone-in portions. Therefore, producers in the EU and the US optimise carcass value by marketing breast meat domestically at a premium, while exporting bone-in portions at very competitive prices. In the South African market, these imports essentially balance the demand, providing only the most popular cuts.

Domestic producers must compete in respect of prices, without obtaining the same premium for other parts of the carcass. The abolition of traditional anti-dumping tariffs on a quota of 65 000 tons of bone-in portions originating from the US, that was negotiated under the renewal of the African Growth and Opportunity Act (AGOA), is exposing South African producers to further competition in the production of these cuts.

Balancing the domestic market

Faced with a demand structure biased to individually quick-frozen (IQF) pieces and competitively priced bone-in portion imports arriving from countries with different demand preferences, the possibility of balancing the domestic

market through exports should also be considered. The local beef sector has been successful of late in obtaining a higher carcass value through exports of high-value products, particularly to Middle Eastern markets.

Considered in terms of cost per live kilogram chicken produced, South African feed costs remain below the sample average.

Potential exports of high-value products are, however, dependant on sanitary and phytosanitary (SPS) protocols which must be adhered to, and the process of opening new export markets can be lengthy and cumbersome. Furthermore, the production cost benchmark suggests that South Africa will be unable to

compete with leading exporters such as Brazil and the US, unless it is faced with favourable transportation rates to the destination of exports, or obtains preferential access to certain markets.

The importance of broiler production within the agricultural subsector cannot be denied and its long-term sustainability must be prioritised. While faced with higher feed costs than leading global producers, growth in imports has not accrued from these regions, suggesting that the inability to compete in the basic cost structure is not the only reason for rising import levels.

As bone-in portions exported to South Africa from the EU are effectively subsidised by premiums obtained for high-value cuts in the domestic EU market, a combination of actions may be required to ensure sustainability. Possibilities include duties to level the playing field with EU producers, the cost of which will ultimately be borne by the consumer, as well as reduced exposure to the IQF market. These would explore the potential for high-value exports and actions aimed at ensuring a competitive, sustainable oilseed crushing industry that would ultimately be able to reduce the cost of protein meal for domestic producers. 🌱