Export Product: Soya-bean oil-cake & other solid residues, whether or not ground or pellet

Siccode: 2304

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INTRODUCTION

Soya-beans originate from place called Manchuria, which is a region in Northeast China, it is considered one of the five oldest cultivated crops as it was utilised by the Chinese as a source of food before 2500 BC. In the recent 30 years, world production of soya-beans increased to more than 100 million metric tonnes. The United States of America(US) is the by far the leading producer of soya beans accounting for, 51% of world production, followed by Brazil with 20% , Argentina with 10 %, China 10% and the negligible remainder being produced by the rest of the world. In South Africa it is reported that soya-bean seeds were first imported from China in 1903, however it is reported that germination was poor, plant developed fast and pods shattered prior to harvesting. Since then extensive research has been conducted in South Africa's leading research stations to breed for good adaptation seeds with remarkable success.

In recent years there has since then been renewed interest in soya-bean products in the world including South Africa because of the health benefits associated with these products. Soya-bean consumption in South Africa is estimated at 32% for oil and oilcake, 60% for animal feed especially in the broiler and egg industries and 8% for human consumption. Soya oil which is only 18% of the seed is processed to specific oil products for use in the food industry. Soya-bean products also have very specific advantages such as the lowering of cholesterol and combating of heart diseases. Soya-beans are also favored in the vegetarian and animal cruelty advocacy circles which have grown tremendously over years as they provide valuable source of proteins for vegetarians with minimal cruelty as it were.

SOYA-BEAN INDUSTRY OVERVIEW

Global Overview

Soya-bean production dominates the international oilseed market as it comprises about 54% of the world's total oilseed production. The compounded annual growth rate (CAGR) of world soya-bean area harvested was 3.2 % from 1991 to 2010 while the world production of soya-beans showed a CAGR of 4.4 %, indicating a slight increase in the world soya-bean yield. Leading soya-bean producing countries are the United States of America, Argentina and Brazil; these countries represent 35 %, 30 % and 27 % respectively of world soya-bean production. Argentina's soybean production grew by 13.32 % from 1995-97 to 2005/07.

Soya-bean oilcake production dominates the international protein meal market and Soya-bean oilcake is predominantly used for animal feed. China, the United States of America, Argentina and Brazil are the major soya-bean oilcake producing counties representing 78 % of the world's total production of soya-bean oilcake.

South African overview

South Africa's soya-bean production reached 566 000 tons in the 2009/10 production season, the largest soybean crop to date. Soya-bean area harvested in South Africa varied between 165 400 ha and 311 450 ha from the 2007/08 production season to the 2009/10 production season. During this period South African soya-bean yield averaged 1.9 tons/ha. From 1990/91 to 2009/10 soya-bean yields showed a CAGR of only 0.1 %, while production and area harvested showed CAGR's of 8 % and 7 %, respectively. The major soya-bean production areas are Mpumalanga (239 250 tons in 2009/10), the Free State (147 250 tons in 2009/10) and KwaZulu-Natal (73 250 tons in 2009/10). Soya-bean production in these three provinces represented 82 % of total soya-bean production in the country. The domestic uses of soya-beans consist mostly of soya-beans processed for animal feed. The 6 years average is 53 % of domestically produced soya-beans oilcake and oil represent 37 % of the domestic use of locally produced soya-beans and 7 % of the soya-beans produced is used for human consumption.

Soya-beans processed for oil-cake and oil increased by 20 % annually from 2005 to 2010. South Africa's processing capacity for sunflower and soya-bean crushing (dual processing plants) is estimated at 1 100 000 tons per annum of which approximately 364 000 tons was utilized for processing soya-beans in recent years. The processing capacity for soya-beans for animal feed is estimated at 534 000 tons with an additional 33 000 tons expected in the near future. Processing capacity for high protein soya-bean cake-oil for animal feed is currently 127 000 tons and it is expected to increase to 327 000 tons in the near future. Processing capacity for high protein soya-bean oil-cake for human consumption is 104 000 tons currently. Domestic soya-bean cake-oil production meets only 10 % of the domestic soya-bean oil-cake demand on average. The demand for soya-bean oil-cake is predominantly driven by the animal feed industry, especially the poultry industry. On average 90 % of the soybean meal consumed domestically is imported from Argentina. However soya-bean oil-cake imports increased by 9 % annually from 2005 to 2020 and during the same period domestic production of soya-bean cake-oil increased by 20 % annually.

The animal feed industry is the largest user of soya-bean oil-cake in the South African context and the global sphere. During 2009/10, 79.9 % of the total available soya-bean oil-cake was used by the Animal Feed Manufacture's Association (AFMA) members which amounted to 701 055 tons. AFMA member's use of soya-bean meal increased by 8 % per annum from 2005/06 to 2009/10 and continues to grow.

Processors

There are few major standalone soya-bean processors given the relatively low margins involved in soya-bean processing as well as the low investment cost required to use soya-bean processing facilities for other oilseeds. Globally, there are generally two main types of industry participants:

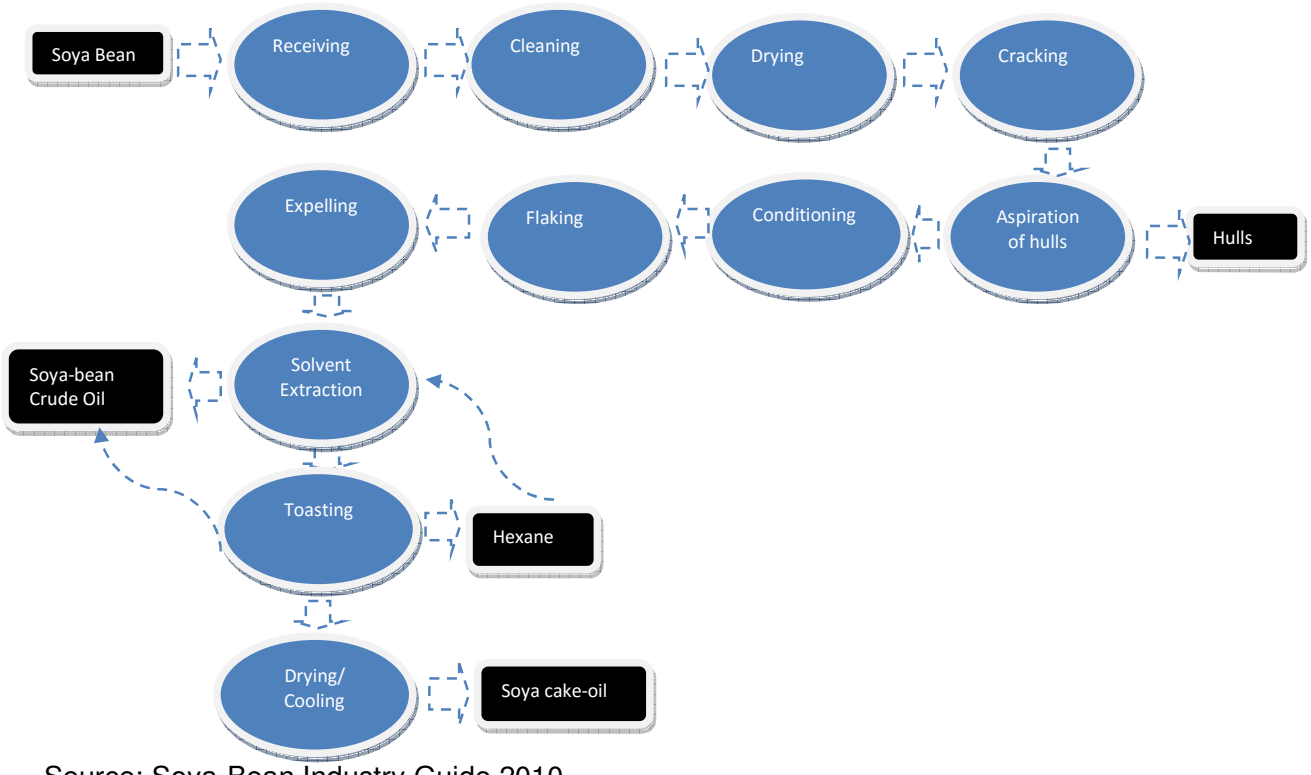
Global corporations that tend to have vertically integrated commodities trading and processing operations, and process soya-bean as part of a broader oilseed portfolio: e.g. Cargill. These players will

often be involved in raw soya-bean production in many key markets, with Cargill in particular involved in the cultivation of a substantial share of the US and Brazilian crop.

National players that tend to be either poultry/ feed producers that process soya-bean in order to secure supplies of soya-bean oil-cake, or local cooperatives that may be composed of local farmers, and tend to process soya-bean on a small scale. Corporations account for a substantial share of global soya-bean production and processing. These corporations are able to leverage substantial economies of scope and scale in production, processing, logistics and trading. For prospective African entrants, these factors can create substantial barriers to entry, which may justify the temporary use of levers to protect a nascent soya-bean processing industry during its 'infant' stage.

Also soya-bean oil-cake is widely consumed and has penetrated markets in most regions thanks to the progressive expansion of intensive livestock production methods which are mainly based on the use of high protein compound feed not only in developed countries but also in parts of the developing world, e.g. broiler production in South America. Although traditionally over 50 % of global utilization occurs in developed countries, annual consumption growth in developing countries by far exceeds the expansion recorded in developed countries, mainly reflecting changes in consumer habits triggered by income growth. However, it needs to be emphasized that in the diet of low-income and chronically food insecure populations meat consumption generally continues to occupy a secondary role as most of the protein consumed tends to come from vegetable origin.

Figure: 1 -The processing of soya-beans

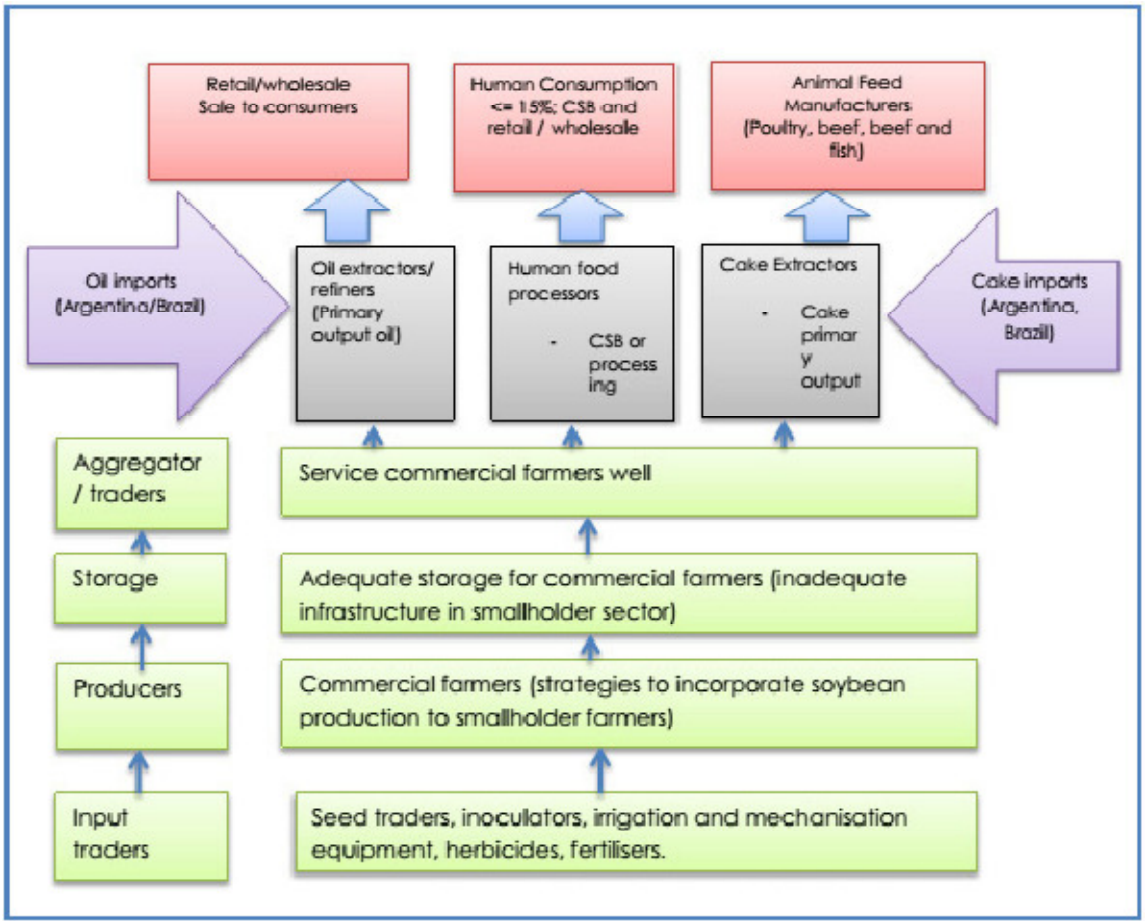


Source: Soya-Bean Industry Guide 2010

SOYA-BEAN VALUE CHAIN

The soya-bean value chain is made up of input suppliers which entails seed, fertilisers, herbicides, insecticides, inoculants, mechanisation and irrigation equipment, producers which consist of large-scale commercial, corporate commercial producers i.e. Cargill in the developed world and smallholder farmers in the developing world context, aggregators and traders that ensure that there is a ready market for soya-bean produce and that processors have reliable supply for their inputs, processors who process raw soya-beans into oil-cake, oil or soybean based foods for human consumption, feed manufacturers who use soybean meal produced by processors as an input for animal feed mainly poultry, as well as beef, pork and fish industries.

Figure 2: Soya-bean value chain



Source: Dlamini et al 2015

Production

Soya-bean is the world's most traded oilseed, accounting for 87% of trading volumes, this is mainly attributed to its physical properties which makes it is easy to store and transport as well as soya-bean being a key input for livestock production. When compared to other processed oilseeds, soya-beans dominate the oil-cake market with 77% share of traded volumes; however it has a significantly smaller share of the edible oils market. This is mostly explained by the physical constraints of soy-bean's oil content, as soya-bean converts to a relatively low share of oil by weight. In addition, soya-bean oil is considered 'mid quality' oil in comparison to other oils such as palm oil which is generally cheaper and more popular in price-sensitive emerging markets while sunflower oil and others with low saturated and trans-fat content are preferred in more health conscious customers in the developed markets.

The US, Brazil and Argentina dominate global production and export of soya-bean products accounting for 81% of global production and 88% of global exports in the 2010/11 season. India and several other smaller countries (e.g. Paraguay) are quickly expanding production but are moving from a small base, and have little role in shaping the global soya-bean market. As a result, overall global growth in soya-bean production is largely driven by the activities of the three major producing countries, and this is likely to continue over the medium term, as they continue to invest in production technology and in the case of Brazil expand the cultivation area.

In the Sub-Saharan African context soya-bean is mostly produced by smallholder farmers with more than 90% of farms that produce soya-bean being less than 5 hectares. For these farmers soya-bean is predominantly part of multiple cropping systems. The majority of production is concentrated in South Africa, Nigeria and Uganda, which accounted for 79% of total soybean production volumes since 2008. The relatively high level of South African soya-bean production in the Sub-Saharan African context is reflective of a relatively highly developed agro-processing sector with substantial poultry production, and is also a target export market for regional producers such as Zimbabwe and Zambia.

Trade

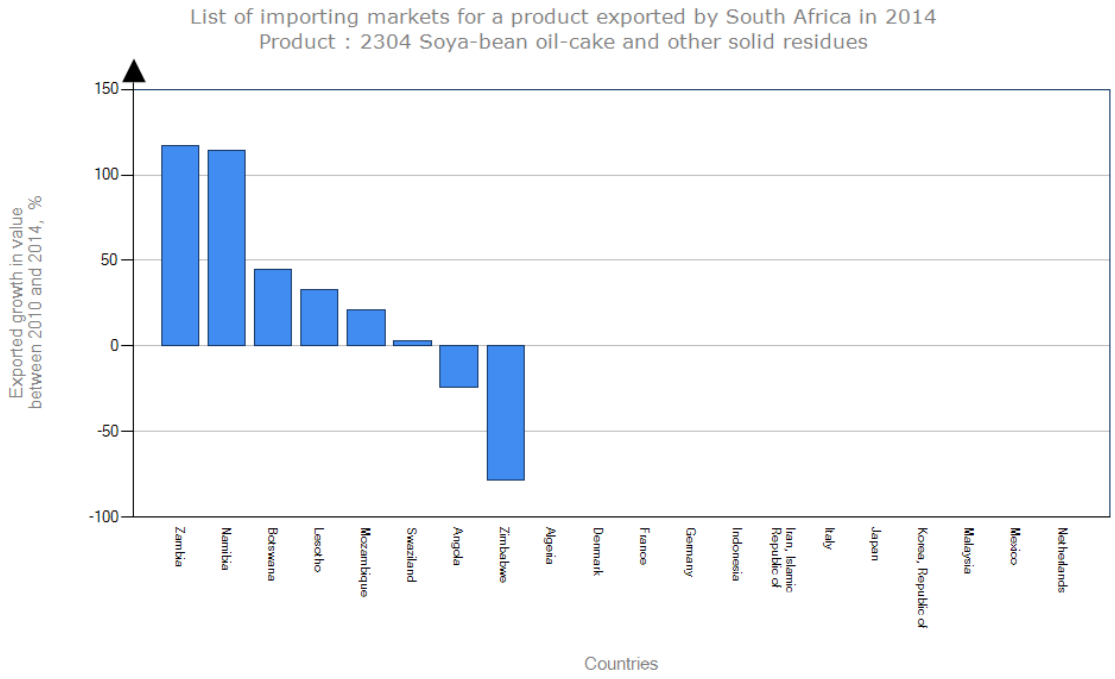
Trade in raw soya-beans can be largely captured by only a small number of inter country flow and the majority of global trade in soybeans can be considered a flow from the United States of America (US), Brazil and Argentina to China and the European Union (EU), where most of the processing occurs. China is the biggest importer for all three major producers, accounting for approximately half of the US and Brazil's exports and almost 80% of Argentina's Exports. Brazil is the key mainstay supplier to the European Union countries, as a result, global trade flows are highly consolidated, and offer few points of entry for prospective new soya-bean producers at the global scale. Overall export volumes are growing faster than production, as the market in undergoing a transition since there is a gradual global disaggregation of soya-bean production from soya-bean processing taking place. Leading producers such as Brazil, Argentina and the US, Are shipping larger quantities of raw soya-beans to China and, to

a lesser extent, the EU and smaller markets in Asia and the Commonwealth of Independent States where processing then takes place.

Growth in global soya-bean production and processing is expected to continue, with the trends that are currently shaping the market continuing to play out. China, India and other Asian countries will be key drivers of demand for vegetable oil and cake-oil meal in general, while the use of soya-bean oil as a biodiesel feedstock, especially in Brazil and the EU, will support demand and continued price growth.

In KwaZulu-Natal Province, soya-beans are exported mainly through the UMzinyathi District and the EThekwini Metropolitan Municipality. This province's export capacity is enhanced by the presence of the Durban harbor through which soya-bean exports can be channeled to the global markets.

Figure 3: List of South African Oil-Cake Importing Countries



Source: ITC Trade Map 2015

SOUTH AFRICAN INDUSTRY SIZE

South Africa has in recent years spent above R1 billion on soya-bean processing plants to unleash an additional 1, 2 million tons/year crushing capacity over the next coming years. Although soya-bean production has grown tremendously, with soya-bean hectarage increasing by 252% and production increasing by 376% since 2001, it will take more than five or six years for production to match capacity. This indicates that there is currently no window opportunity for investing in new soya-bean processing plants at least until production plays catch up.

In 2009/10, SA imported 829 000 tons soya-bean oilcake, which lifted to 989 112 tons in 2010/11 and 922 499 tons in 2011/12, according to the Animal Feed Manufacturers Association (AFMA). Local production is already expanding, progressing from 103 520 tons in 2009/10 to 152 000 tons in 2010/11 and 227 600 tons in 2011/12. As local production increases, local processors can displace more imports and export to neighboring countries. An estimated 516 500 ha is currently planted to soya beans and production is projected to reach 851 000 tons in 2012/13, 31% higher than 2012 and a 1 million tons of soya-beans was produced in 2013/14 season.

Industry dynamics

The largest of the new plants was the Noble plant based in Standerton, which is by far, the biggest soya-bean processing plant in SA with a crushing capacity of 620 000 tons. The RussellStone groups Protein's 250 000 tons soya-bean crushing facility based in Bronkhorstspruit is also one of the notable recent developments in the soya-bean processing industry as well VKB's new plant in Villiers which has capacity to crush 186 000tons and Nedan in Mokopane whose capacity expanded to 326 000 tons.

Willowton also converted their Isando plant to a soya-bean crushing plant with an estimated capacity of 1 000tons, and capacity already existed at Wilmar Continental in Randfontein (192 000 tons), Majesty in Krugersdorp (156 000tons), Gauteng in Nasrec (108 000 tons) and Drak in Winterton (48 000 tons). In all, total crushing capacity in SA now amounts to an estimated 2 million tons.

Table 1: Major Companies in Soya-bean processing

Company Name	Location	Capacity
Noble Grain	Standerton	620 000 tons
RusselStone	Bronkhorstspruit	250 000 tons
Nedan Oils	Makopane	326 000 tons
VKB	Villiers	186 000 tons
Willowton Isando	Isando	1000 tons
Wilmar	Randfotein	192 000 tons
Majesty	Krugersdorp	156 000 tons
Nasrec	Nasrec	108 000 tons
Drak	Winterton	48 000 tons
Total		1 701 000 tons

Sources: Authors own

Support

The Industrial Development Corporation (IDC) has been by far the leading financial institution supporting the soya bean processing industry in South Africa. In 2012, the IDC approved R76,4 million to fund RussellStone Protein's Bronkhorstspruit crushing facility and has assisted various other developers to investing in new green-field soya-bean processing in South Africa.

PRODUCT

Description as per product code: 23040000 - Oilcake and other solid residues, whether or not ground or in the form of pellets, resulting from the extraction of soya: bean oil.

Table 2: South Africa's Soya-bean Oil-Cake Trade Partners and Trade Barriers

Trading Partner	Barriers to entry				Trade Agreements
	Tariffs		Non-Tariffs		
	Tariff Regime	Applied Tariff	Non-Tariff Measures Code	Measures applied by importing country	Preferential traffic for SA
Zambia	MFN duties (Applied)	5%	None recorded	None recorded	None recorded
	Preferential Tariff for SA	0%	None recorded	None recorded	None recorded
Namibia	General Tariff	None recorded	None recorded	None recorded	None recorded
	Preferential Tariff to SA	0%	None recorded	None recorded	Intra SACU
Botswana	General Tariff	None recorded	None recorded	None recorded	None recorded
	Preferential Tariff to SA	0%	None recorded	None recorded	Intra SACU
Lesotho	General Tariff	None recorded	None recorded	None recorded	None recorded
	Preferential Tariff to SA	0%	None recorded	None recorded	Intra SACU
Mozambique	MFN duties (Applied)	7.5%	None recorded	None recorded	None recorded
	Preferential Tariff for SA	0%	None recorded	None recorded	None recorded

Source: http://www.macmap.org 2015

REGULATIONS

Notice 511 Of 2008 Department: Agriculture, Fertilizers, Farm Feeds, Agricultural Remedies and Stock Remedies Act, 1947 (Act No. 36 of 1947), South African Policy On Animal Feeds is intended to set out controls to avoid and ultimately eliminate these and other dangers. The regulations are intended to control the way in which animal foods are prepared and blended and to eliminate contaminants which present serious threats to the consumers of pet and animal foods, particularly vegetable oils and oil residues.

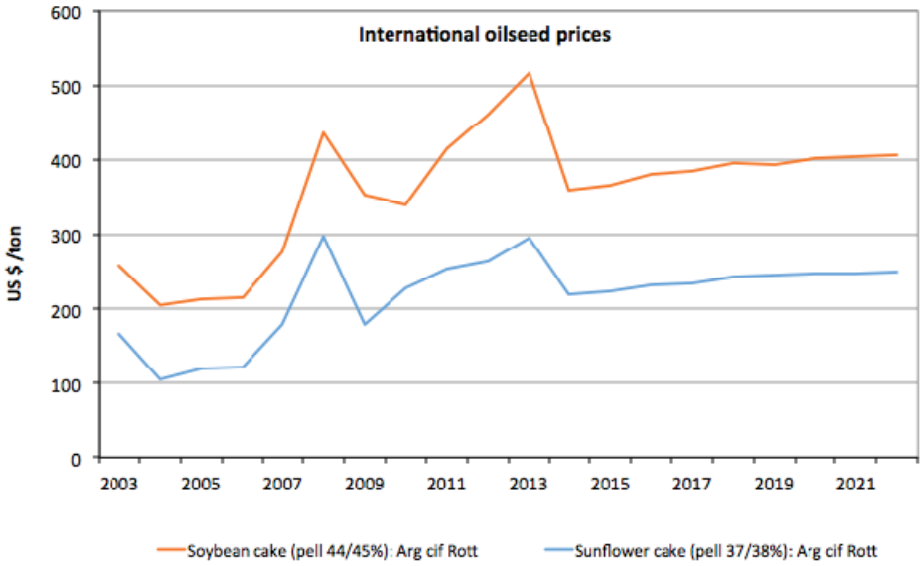
The Fertilizers and Feeds Bill 2012 seeks the amendment of the Fertilisers, Farm Feeds, Agricultural Remedies and Stock Remedies Act 36 of 1947, insofar as it relates to fertilizers, farm feeds and sterilizing plants in order to provide for:

- Licensing of facilities and rendering plants, registration of feed additives, raw materials, animal by-products, imported fertilizers;
- Establishment of the Technical Standards Advisory Council; and
- The regulation of the import, export, acquisition, disposal, sale or use of fertilizers and feeds.

OUTLOOK

Soya-beans contain approximately 78% oil-cake, hence the strong correlation between soya-bean and soya-bean oil-cake prices. High world soya-bean prices during 2012 due to tight stocks and a drought-reduced crop in the US provided significant support to international oilcake prices, which reached new record highs in 2012. However, larger soya-bean supplies from South America and prospects of an improved harvest in the USA during in recent years have resulted in a recent decline in prices.

Figure: 4 International Oilseed Prices



Source: BFAP 2013

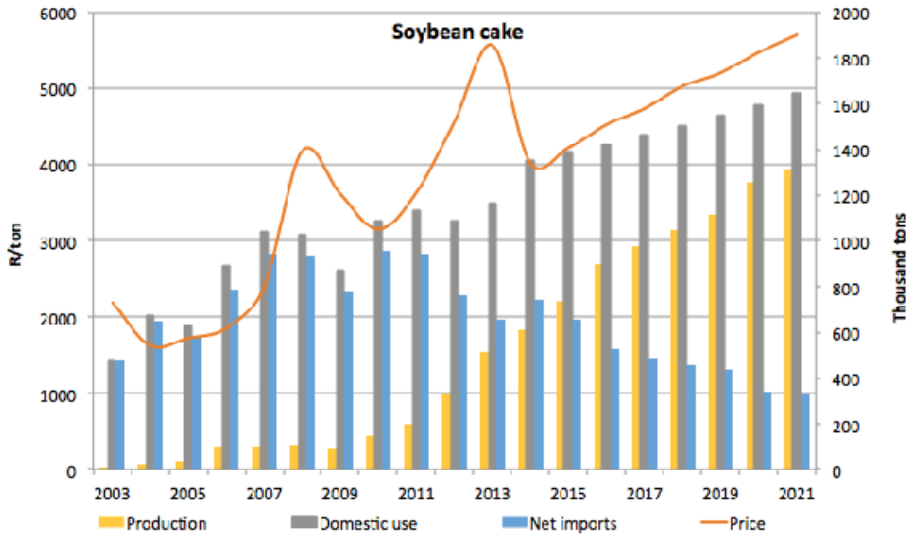
In general different oilcakes can be substituted to some extent in most feed rations depending on availability and prices. As sunflower oilcake is produced and consumed on a much smaller scale on the international feed market, world sunflower cake-oil prices take their cue from movements in international soybean prices (Figure 4).

Domestic soybean cake-oil status and trends

Over the past decade South Africa has had to import close to 90% of its domestic consumption of soybean oilcake on average. However, the continued growth in local soybean production and crushing capacity over the past 5 years has resulted in a significant growth in locally available soybean oilcake, making South Africa less dependent on imports and creating an opportunity for export especially for costal producers such as KwaZulu Natal. Despite higher domestic production of soybean oilcake, prices will still be determined by international prices and the exchange rate, hence the projected decline in the average from 2014 local soybean oilcake price before moving upwards again until 2020 (Figure 5).

Over the next years there will be fierce competition between the local and imported soybean cake with the quality and nature of the local product that has to be established and settled as it makes its way into the feed market. South African soybean oil-cake imports make up only a very small share of total soybean cake that Argentina supplies to the world and therefore, the product is of high and consistent quality.

Figure: 5 Soya-bean Cake-Oil Forecast

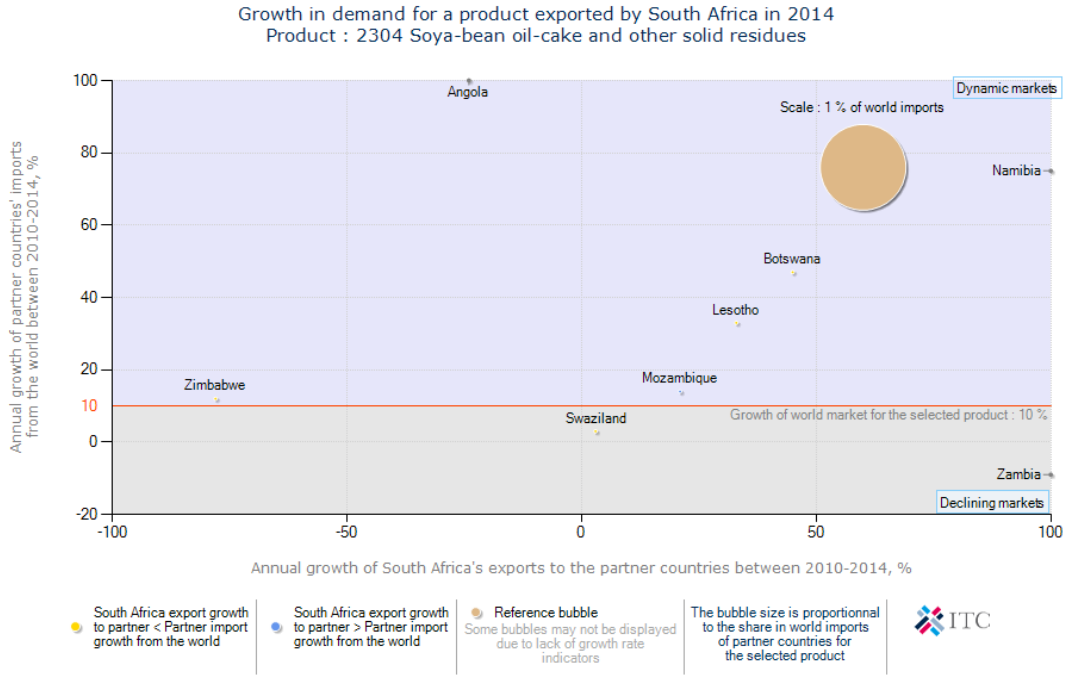


Source: BFAP 2013

Opportunity

Despite this decline, international soya-bean oilcake prices are still well above their historical levels. The average international soybean oilcake price dropped significantly in 2014 due to larger supplies. However, continued growth in the demand for animal products due to increased world income per capita and changing diet patterns in especially developing countries has provide long-term support to soya-bean oilcake prices. South Africa's exports of soya-bean oil cake currently represent **0.09%** of world exports for this product; its ranking in world exports is **27** even though South Africa's production is relatively small compared to the leading soya-bean producing countries. This clearly represents a huge opportunity for exports as South Africa's neighbors are still very far from increasing their production to meet their domestic demands thus they offer an export opportunity (See Table 3).

Figure 6: Soya-bean Oil-Cake Export Potential



Source: ITC Trade Map 2015

Table 3: List of importing markets for the product exported by South Africa in 2014

Importers	Exported value 2014 (USD thousand)	Total import growth in value of partner countries between 2010-2014(%,p.a.)
World	28,886	10
Botswana	8,259	47
Swaziland	7,613	3
Namibia	5,676	75
Mozambique	5,567	14
Lesotho	1,627	33
Angola	89	112
Zambia	55	-9
Zimbabwe	1	12

Source: ITC Trade Map 2015

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