



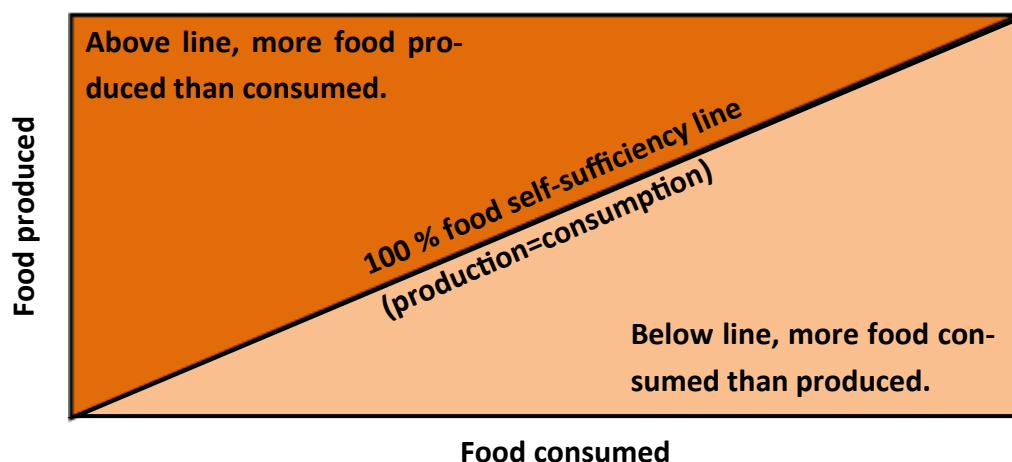
## SELF-SUFFICIENCY INDEX

Directorate: Statistics & Economic Analysis

This is a new bi-annual publication by the Directorate: Statistics and Economic Analysis. The aim of the publication is to inform decision makers on the extent to which South Africa is food secure. The production of sufficient volumes of agricultural commodities forms an important part of food security in South Africa. Thus, selected commodities has been identified that will be addressed in this volume, namely oilseeds (soybeans, sunflower seed and groundnuts), as well as fresh milk.

## What is a Self-sufficiency Index?

The concept of food self-sufficiency is generally taken to mean the extent to which a country can satisfy its food needs from its own domestic production. This understanding is illustrated in the diagram below, whereas the diagonal line indicates 100% food self-sufficiency, i.e. where food production is equal to food consumption.



The key point is that if a country is food self-sufficient, it produces an amount of food that is equal to or greater than the amount of food that it consumes. The self-sufficiency index (SSI), expresses food production as a ratio of consumption.

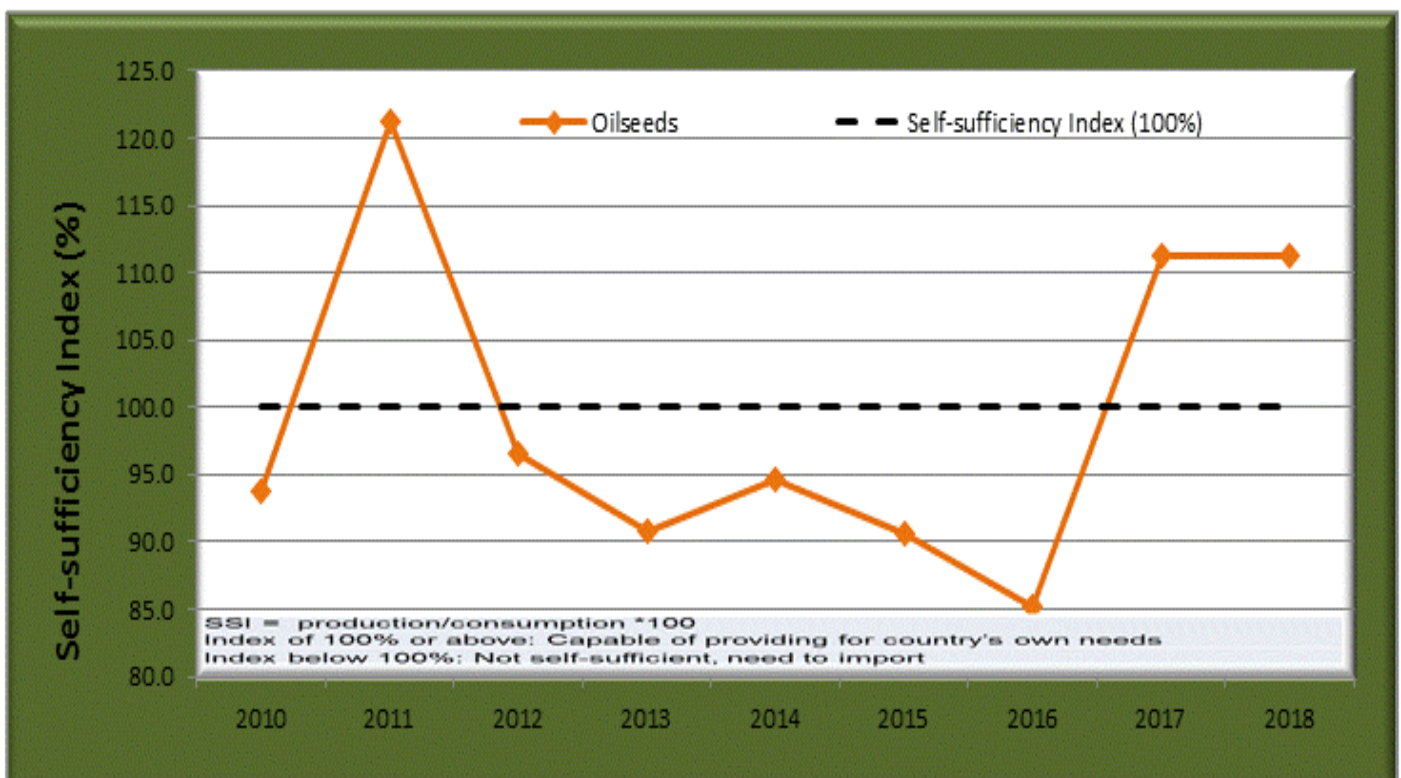
## 1. Oilseeds:

Oilseeds mainly include sunflower seed, soybean and groundnuts. With reference to the self-sufficiency level of oilseeds for the period 2012 to 2016, the self-sufficiency index (SSI) was negative (SSI<100), as South Africa was highly dependent on oilseed meal imports for the production of feed (livestock). These imports were necessary to compensate for insufficient levels of production that did not meet consumption levels. Soybean meal and sunflower meal are the major protein meals used by feed manufacturers in South Africa and represent more than 90 % of protein meal usage. The average inclusion rate of oilseed meal in feed rations is about 20%. Maize is the major product used by feed manufacturers with a 52% inclusion rate in feed rations. The use of fishmeal as protein source in feed rations is determined by availability, product mix and price in relation to other available protein sources. However, the inclusion rate of fishmeal has been small in recent years at less than 1%.

Given the fact that South Africa has expanded its soybean processing capacity in recent years to replace soybean meal imports resulted in a demand pull situation, which lead to an increase in the area planted with and production of soybeans. About 1,5 million tons of additional oilseed processing capacity has been added, bringing South Africa's current total oilseed processing capacity to an estimated 2,5 million tons per annum. South Africa produced a historical high summer oilseed crop of 2,5 million tons in 2018. According to the Crop Estimates Committee (CEC), from 2017 to 2018 soybean production increased by 18% to a record 1,6 million tons. Sunflower seed production decreased marginally from 874 000 tons (2017) to 858 605 tons (2018), while groundnut production decreased by 42 % from 92 050 tons in 2017 to 53 750 tons in 2018.

Thus, the increased production levels of mainly soybeans in South Africa resulted in sufficient quantities of oilseeds being available to satisfy local consumption, resulting in a positive SSI (SSI>100) for the period 2017 to 2018.

### 1.1 SSI of oilseeds, 2010 - 2018



## 2. Fresh milk:

The self-sufficiency index of fresh milk remained positive (SSI>100) for the period 2010 to 2016 as production exceeded consumption for the mentioned period.

During 2017, milk equivalent imports exceeded exports by 8 million litres. The SA dairy market changed in 2017 from a nett export status to a nett import status industry.

Feed cost is the most important cost item for milk producers. Internationally the price of maize and soybeans are used as a proxy for feed prices. A derived feed price is thus defined as the weighted price per kilogram of maize and soybeans (70% maize, 30% soybeans).

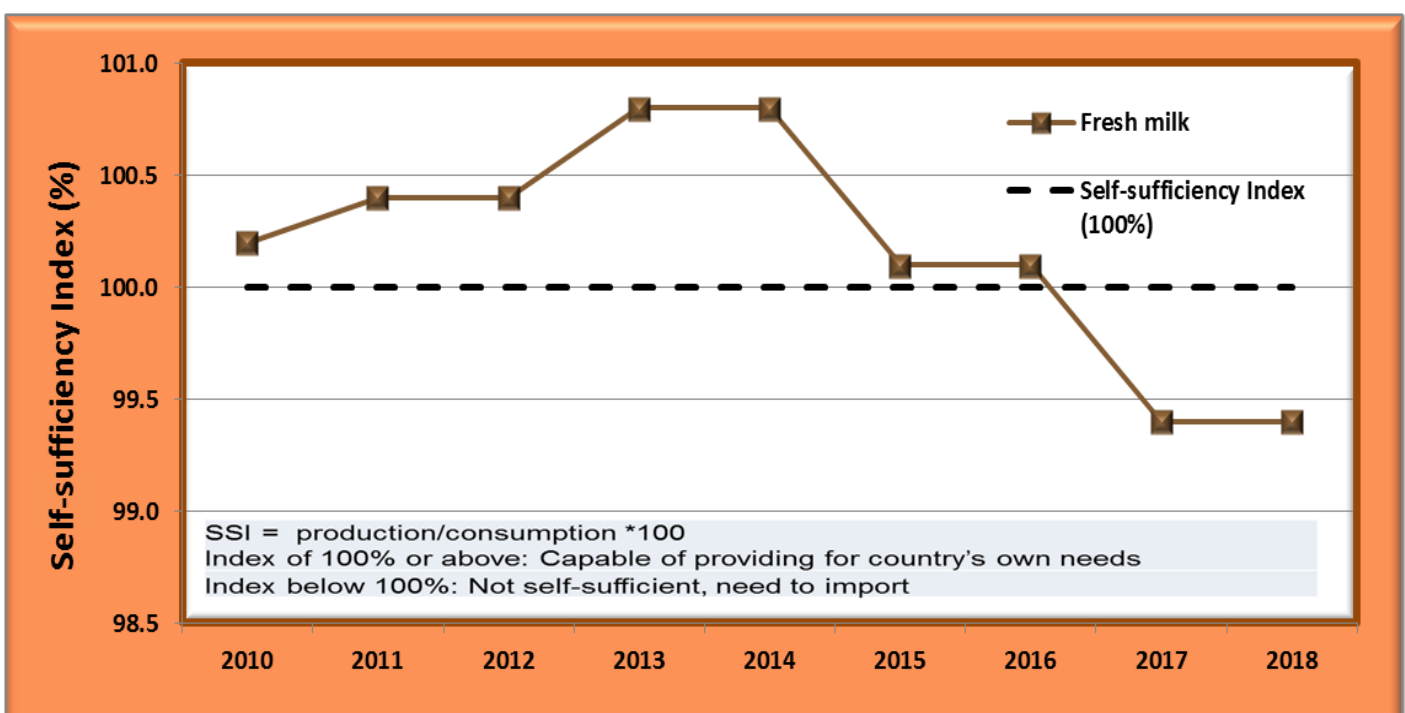
The milk:feed price ratio early in 2018 was 1:7, which favours milk production. However, the reduction in the producer price for milk that occurred at the beginning of May will reduce this ratio which will start to influence milk production negatively. Milk buyers have announced a price decrease of between 20 cent per litre and 30 cent per litre from 1 May 2018. The August 2018 milk: feed price ratio of 1:4 is less favourable compared to earlier in 2018 and is reflecting the reduced producer price and the increased feed cost due to the weaker Rand.

Farmers' production decisions are not based on absolute prices, but on relative prices. If producer milk prices decrease in relation to feed prices, farmers will tend to produce less, and if prices increase relative to feed prices, production will increase. Unfavourable milk:feed price ratios will result in slower production growth or lower production over time. According to the ABSA Spring 2018 Outlook of ABSA Agribusiness, the number of milk producers has decreased from approximately 2 500 in 2012 to an estimated 1 500 in 2018, which also have a negative impact on the production of fresh milk.

Fresh milk producers and processors remain under pressure due to the lower demand for fresh milk in and increased UHT milk imports during 2018.

Given the above, the SSI for fresh milk during 2017 and 2018 dipped slightly below 100 resulting in a negative SSI (SSI<100) for fresh milk.

### 2.1 SSI of fresh milk, 2010 - 2018



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