agriculture, land reform & rural development
Department:
Agriculture, Land Reform and Rural Development
REPUBLIC OF SOUTH AFRICA

Volume 14, September 2024

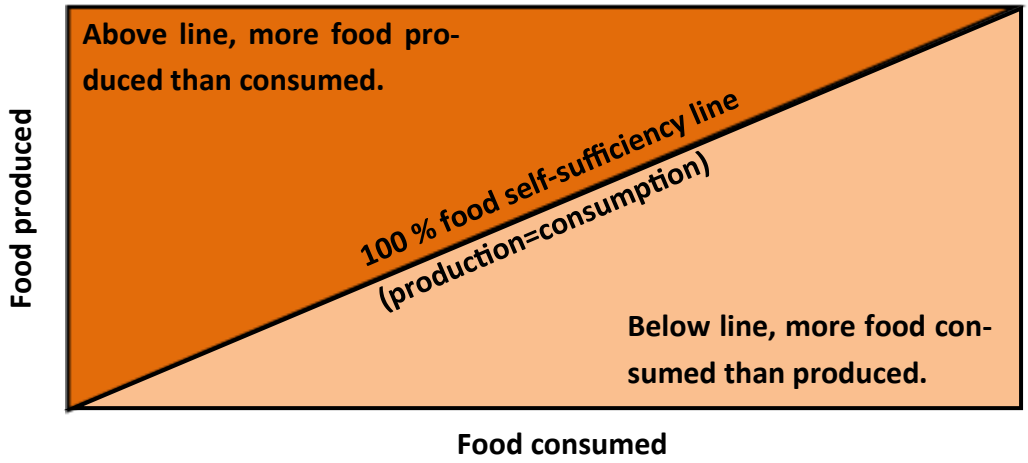
SELF-SUFFICIENCY INDEX

Directorate: Statistics & Economic Analysis

This is a bi-annual information leaflet 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 soybeans and sunflower seed. Future issues will focus on other commodities like maize and wheat.

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.

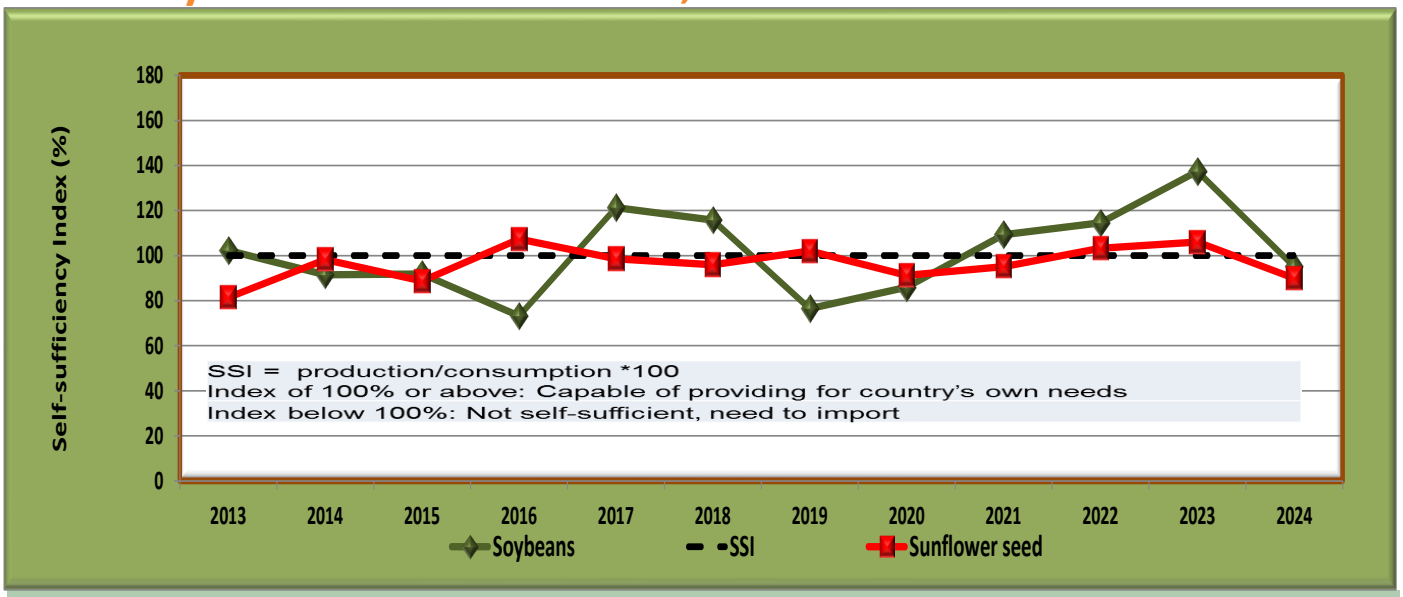
Soybeans and Sunflower seed:

South Africa has the capacity to be self-sufficient in most agricultural products. However, South Africa does rely on imports for some significant agricultural products, including soybeans and sunflower seed.

Over the past two production years, the summer rainfall oilseed crop area has stagnated at around 1,7 million hectares after a period of extensive growth over the past 10 years. This surge was driven by a 7-fold expansion in the soybean area planted as producers realised the benefits in using soybeans as a rotational crop with maize. In addition, a substantial local demand for soybeans through sizable investments in oilseed processing plants were established. Although soybeans are typically thought to be more susceptible to drought than maize, most South African farmers will base their planting decisions on price margins rather than weather predictions. The maize and sunflower seed area planted remained relatively flat the past 10 years.

The bulk of soybeans and sunflower seeds produced in South Africa are crushed to produce both edible oil for human consumption and protein meal for inclusion in animal feed rations. Sunflower seed is a higher oil yielding seed, therefore more oriented towards human consumption. Sunflower meal, a byproduct of the oil extraction process, is sold to local animal feed manufacturers. In contrast, soybeans yield higher protein meal and are mainly crushed to be used by the animal feed sector.

SSI of soybeans & sunflower seed, 2013 - 2024



Soybeans:

South Africa intermittedly produces sufficient quantities of soybeans to satisfy local consumption, thus resulting in a positive SSI (SSI>100) from time to time. The average 10-year index value (2014 to 2023) of soybeans is 102. The index value of soybeans for 2024 is 95, which is 30,6% less than the index value of 2023 (137). This decrease can mainly be attributed to the smaller commercial soybean crop of 2024, which is 35,8% lower at 1,8 million tons, as compared to the record crop of 2023 of 2,8 million tons. The oilseed crops have been affected by and El Niño induced mid-summer drought, resulting in an expected major decrease in crop volumes.

The smaller soybean crop contributes to a smaller production figure as compared to the consumption of soybeans, resulting in a lower SSI value for 2024.

However, producers in South Africa planted a record soybean area of 1,15 million ha, an increase of 0,2% compared to the 2023 season, surpassing yellow maize plantings for the second consecutive season.

South African producers benefit from international seed technology and investments into local multiplication of oilseed varieties that support yield gains over time. In addition, producers pay a statutory seed levy to the South African Cultivar and Technology Agency (SACTA) on an annual basis. SACTA was formed as a non-profit company to guarantee that breeding and technology levies are paid to seed breeding companies and plant breeder rights holders, ensuring continuous research and cultivar development.

In general, soybeans require fewer farming inputs, especially fertilizer, compared to maize. The generally higher commodity prices, specifically grains and oilseeds, provide financial support to absorb some of these costs. However, inflated input costs enlarged the risk of production in a mostly weather dependent industry. South Africa uses around 2,2 million tons of fertilizer annually (1% of global usage), of which about 50% is used by maize producers. South Africa imports more than 70% of its fertilizer annually.

Sunflower seed:

South Africa is regarded as a net importer of sunflower seed as local production is not sufficient to satisfy local consumption, resulting in a negative SSI (SSI<100). The average 10-year index value (2014 to 2023) of sunflower seed is 99.

The index value of sunflower seed for 2024 is 90, which is 15,1% less than the index value of 2023 (106). This decrease can mainly be attributed to a smaller expected sunflower seed crop, estimated at 649 250 tons for 2024, representing a decrease of 9,8% as compared to the 720 000 tons of 2023.

The 2023/24 production season was off to a reasonable start after decent rainfall was recorded between October and December 2023 over most of the summer rainfall producing areas. However, in the North West province, rainfall was limited and scattered during the first part of the rainy season resulting in low soil moisture. As a result, most producers in the North West province delayed planting until the middle of December after receiving some rain. Favourable conditions in most of South Africa's oilseed-producing areas during the early parts of January 2024 provided conducive growing conditions and improved the likelihood of another bumper crop. However, excessive heat and limited rainfall across South Africa during the later parts of January and February 2024, deteriorated the yield potential of the summer crops. The follow-up rainfall that was received in March 2024 did improve conditions in certain production regions.

For more information contact: Directorate Statistics & Economic Analysis (SEA) at MardaS@dalrrd.gov.za or 012 319 8033.