



Perspectives on **AGRICULTURE's PERFORMANCE** in Q4 of 2023

This publication contextualises the latest GDP release by StatsSA and provides insights on the major factors driving agriculture's contribution to GDP.



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The release of the country's GDP results for the final quarter of 2023 brought several surprises, which we unpack in this Brief. For the total economy, GDP increased by 0.1% in the fourth quarter of 2023. For the full year 2023, GDP expanded by 0.6% in real terms. The big surprise, however, was that agriculture contracted by 12.2%. While BFAP has long since projected a decline, we believe this contraction was more in the region of 3-5%.

South Africa's economy narrowly escaped a technical recession in the fourth quarter of 2023, recording a mere 0.1% growth, after the contraction reported in quarter 3. The growth in the past quarter was supported by a 2.9% growth in the transport sector, 2.4% in mining and 2.3% for utilities. On the other hand, the sectors that had the most negative impact were the agriculture, forestry, and fisheries sector (-9.7%), trade (-2.9%) and the construction sector (-1.4%).

Agriculture's 4th quarter performance compared to the same quarter in 2022 shows a 35% contraction, which followed the previous decline of -30%. This is shown in **Figure 1**. There are several factors behind this, the most important of which are the usual impact of seasonality, declining field crop producer prices, and the impact of avian influenza on farm incomes. When the impact of seasonal shifts is taken out of the equation, the reported numbers suggest that agriculture declined year-on-year for three out of the four quarters in 2023.



Figure 1: Real agricultural GDP per quarter and annum
Source: Stats SA, 2024

As is the custom in this quarterly brief, we unpack the performance of the sector by primarily focussing on the income side of the agricultural economy. In this regard, nominal income increased by 1% in the fourth quarter of 2023, compared to the same period in 2022, i.e. these values must still be deflated to get to the real values. The poor quarter-on-quarter performance can largely be attributed to a 10% decline in the gross production value (GPV) of field crops (**Figure 2**), which contributes 22% to total agricultural GPV. Animal

products and horticulture, with a contribution of 53% and 25% to total farm output respectively, grew by 2% and 10%. Seasonality also contributed to the performance of the sector, with the summer crop, which was very strong, harvested in quarters 2 and 3, whereas quarter 4 performance is mainly driven by winter crops, animal products, vegetables and summer fruit.

The biggest driver of field crop performance in the fourth quarter is winter crops, with wheat and canola accounting for 48% and 10%, respectively, of the sub-sector GPV. The gross production value of wheat declined by 16% on account of a 14% decline in prices, despite a 2% increase in output. Similarly, the GPV of canola dropped by 11% due to a 10% decline in prices, despite a 12% rise in output.

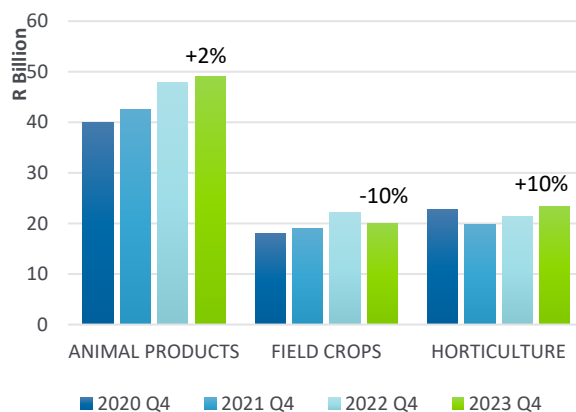


Figure 2: Nominal gross value of production per subsector
Source: DALRRD, 2024

Revenue from horticulture and animal products was largely supported by higher prices, as poultry production volumes declined as a result of the Avian Influenza outbreak. Chicken production is the largest subsector in animal products, but higher prices more than offset volume declines to result in increased revenue compared to a year ago. In cattle production, the adverse is true, with slaughter volumes 16% higher in Q4 of 2023 compared to 2022, but weaker prices resulting in a revenue decline.

In our annual Baseline publication presented in August 2023, we projected a real agricultural GDP decline of around -0.5%, which was updated towards the end of last year to be more severe at -2.2%, due to ongoing challenges such as Avian Influenza.

With the officially published number around 5.5 times worse than our updated estimate, we investigated the various data releases thoroughly and dedicate the remainder of this brief to discussing the annual real decline of 12.2% as reported by StatsSA. To put this decline into a wider perspective, **Figure 3** shows the long-term performance of real agricultural GDP since the time such data were compiled back in 1946. In this 77-year history the agricultural sector has experienced only 8 occasions in which annual real GDP contracted by

a rate larger than 10%. The last substantial decline (of -19.9%) occurring in 1995 largely due to a severe El-Nino induced drought which affected large parts of the agricultural economy three years after the severe subcontinental drought of 1992. Other large declines occurred in 1949 (-11.3%), 1964 (-11.4%), 1968 (-12%), 1973 (-12.6%) and 1983 (-22.7%). Four of these larger than 10% declines followed strong growth the year before, which suggests that the base effect can also contribute to large declines.

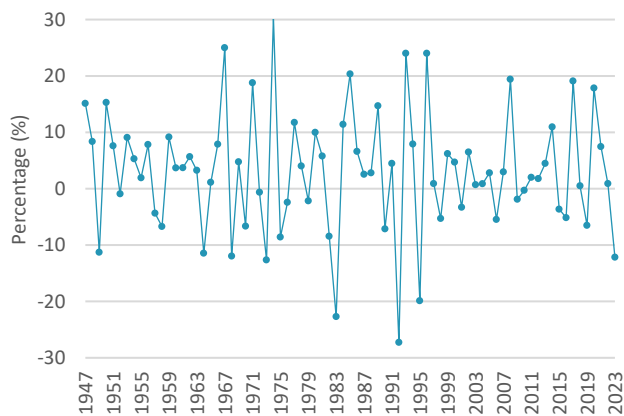


Figure 3: Long-term real agricultural GDP growth

Source: SARB, 2024

This context is essential in trying to assess the 12.2% decline in 2023, which is excessively large given the agricultural economy grew by only 0.9% in 2022. Naturally one might infer that the impact of animal disease, in particular avian influenza, has had a severe negative impact on farmers' incomes, or that other factors such as the declines in field crop prices, or the impact of logistics and electricity supply shortage were affecting farmers' incomes. Although these factors are indeed important, the GDP calculation is made up of factors affecting both the income side as well as the cost side of the sector. **Thus, a decline in the real agricultural GDP encompasses a combination of declining income and/or increased expenditure.**

Our assessment of the income side of the equation from the Production Accounts as published by the Department of Agriculture, Land Reform & Rural Development (DALRRD) suggests that **the total gross value of production increased by 3.6% in nominal terms.** Despite notable declines recorded in the field crop category of -12.7% year-on-year, income from livestock industries increased by 2.5% (despite the prevalence of animal diseases), and horticulture by 20.4%, thus largely offsetting the declines in field crops. Unfortunately, DALRRD does not publish the income account in real values, but if we apply agriculture's annual Producer Price Index (PPI) as reported by StatsSA, **we conclude that gross farm income decreased by 3.05% in real terms in 2023.**

This implies that the large decline of 12.2% in agricultural GDP was the result of sharp increases in

farm costs rather than of declines in farm income. This is confirmed by the data, which shows that total intermediate expenditure increased by a substantial 13.9% in nominal terms (whilst income increased by only 3.6%). There can be only two possible explanations for increased nominal expenditure of this magnitude: 1) The actual quantities or volume of input use increased substantially in the past calendar year, and/or 2) input unit prices increased.

Input prices for many items like fertilizer, feed and chemicals declined significantly during 2023 after the price spikes during 2022, as a result of the Russian invasion of Ukraine and other factors. **Figure 4** presents the annual cost inflation for agricultural inputs and the trends in producer prices. One source is from StatsSA's PPI for agriculture and the other three are from DALRRD's calculations on which the GDP numbers are based. It confirms our view that in general, agricultural input prices declined from their high base in 2022, declining overall around 3.6% if one uses DALRRD's Farm Requisites Index, which is a weighted farm cost index.

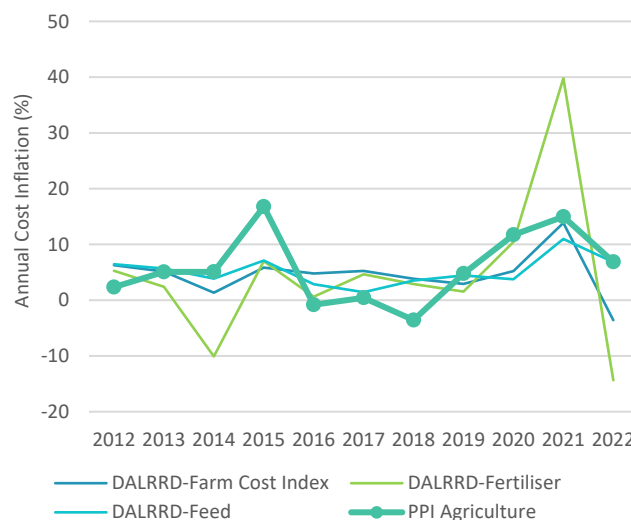


Figure 4: Producer cost and price inflation for agriculture

Source: DALRRD, 2024; StatsSA, 2024

The logic that we then follow is that, if the prices of input costs declined by 3.6%, **the only other possible way in which intermediate expenditure on farm inputs could have scaled to 13.9% was if agriculture physically used, on average, 17% more inputs in the past year.** This seems unlikely, particularly given that two substantial cost items driving this increase in intermediate expenditure seem to be animal feed and fertiliser. These two comprise a combined 49% of the basket of cost items used in the GDP calculation for agriculture.

According to DALRRD, feed expenditure increased by 20% in nominal terms from R87.9 billion to R105.5 billion in 2023. If we assume that prices increased by 6.8% from the 2022 value according to the DALRRD feed cost index, this implies that the volume of feed purchases by farmers had to increase by 13.2% to get

to the reported value of R105.5 billion. Some statistics regarding animal feed sales in Q4 may still come in over the next month or two, but such a rise in feed use is unlikely given the decline in production of poultry, which was fighting a severe bout of avian influenza through quarter 4. The impact of avian influenza in an industry that consumes more than half of the animal feed produced in South Africa suggests that feed use would likely have declined. According to the Animal Feed Manufacturers' Associations' (AFMA), total feed output in volume across all the livestock feed types for the year-to-date up until November 2023 was around 1% down from the previous year. Simply put, the estimated feed expenditure seems too high, disproportionately causing a larger-than-expected real decline in the agricultural GDP.

The other notable oddity picked up in the data was the fertiliser expenditure, which increased by 22% from R26.2 billion to R31.9 billion the past year in nominal terms. However, fertiliser prices declined substantially in the past year, with DALRRD's fertiliser cost index suggesting a decline of 14.4%. This, using the same logic applied to feed, indicates that the volume of fertiliser applied on South African farms needed to increase by 42% to realise the reported nominal increase in the value of fertiliser use. Based on production patterns of all field crops and horticulture in 2023, a 42% increase in the use of fertilizer is not realistically achievable. Furthermore, the bulk of fertiliser used in South Africa is imported, hence, while stock changes can also play a role, import volumes provide some indication towards use. Considering the total volumes of imports entering the country over the same period, import volumes decreased by around 2.6%, hence a sharp increase in use seems unlikely. Again, this has a significant bearing on how deep a contraction the agricultural sector experienced in 2023.

BFAP's best estimate of the real agricultural GDP for 2023, using a manual adjustment of different input expenditure items in line with our own projections and information received from within the industry, is in the range of -2% to -5%, depending on which deflators are used to get from nominal to real values. Given that DALRRD does not publish real, deflated data, one cannot fully replicate the official calculation.

Given the current economic setting, producers have been looking at possible ways to cut expenditure and so the sharp reported rise in intermediate expenditure does not seem plausible. It is true that many of the data sources related to use of intermediate inputs are released with a lag and, as this information comes in over the next month or two, it is possible that official expenditure numbers may be revised downwards, which would have a bearing on the GDP performance.

The evaluation of the agricultural GDP and the estimates of actual performance do not negate the fact that the sector experienced a difficult year, with abundant challenges along with declining prices in some sectors and reduced volumes in others. BFAP has noted its expectation of a contraction in 2023 since the first quarter, but correct quantification of the magnitude of the decline is critical, given that it informs budgeting and policy planning.

IN SUMMARY...

- The agricultural sector experienced a difficult year, with significant producer price declines in major subsectors such as grains, oilseeds and beef, along with reduced volumes in several horticultural industries and the poultry sector.
- While BFAP was expecting a decline in agricultural GDP, given the extent of challenges such as delays in the ports, animal disease, and weak consumer spending power, the magnitude of the decline was a surprise.
- Given that some data is yet to be released, it is possible that official numbers may be revised, but BFAP estimates at present suggest that the contraction was between 2% and 5%, as opposed to the current official estimate of 12.2%.

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