

Are extreme weather events in the Northern Hemisphere highlighting a growing climate risk to global food production?

Global agriculture faces numerous challenges. The most recent one that requires close monitoring is the heat-wave in various countries in the Northern Hemisphere. Over the past weeks and months, the US, parts of Europe, and China have all reported cases of heatwaves.¹ There are growing concerns that the heat could negatively impact the summer grains which are still in the early growing stages in these regions. The livestock industry is equally anxious that the extreme heat could lead to increasing animal deaths. For example, in June 2022, over 2 000 cattle died of heat stress in southwestern Kansas.² Countries such as Italy and Spain are currently feeling the impact of drought and heatwaves on crops and livestock as farmers struggle to sustain their business operations.³

These challenging weather events come at a time when the world is in a food crisis and needs to improve agricultural output. Just last week, the Heads of the Food and Agriculture Organization (FAO), International Monetary Fund (IMF), World Bank Group (WBG), World Food Programme (WFP), and World Trade Organization (WTO) released a joint statement expressing concerns about the growing hunger and called for increased government support to boost agricultural production globally. The statement noted that "the number of acute food insecure people – whose access to food in the short term has been restricted to the point that their lives and livelihoods are at risk – increased to 345 million in 82 countries".⁴

For now, the United States Department of Agriculture (USDA), in its monthly update of the World Agricultural Supply and Demand Estimates report released this past week, has maintained an optimistic view about global grains production. The USDA believes that output in the 2022/23 season might not fall significantly. However, the estimates may not have fully accounted for these heatwaves as there are ongoing events, and it would be interesting to see if these projections change in the coming monthly updates the USDA will release. In the July release, for example, the USDA forecasts 2022/23 global maize production at 1,18 billion tonnes, only down 3% year-on-year (y/y). This is mainly because of an expected annual decline in the US and China's maize harvest, amongst others. Similarly, the 2022/23 global wheat production is set to fall by just 1% y/y to 771 million tonnes.

The expected lower harvest in various parts of Europe and Argentina is the cause of the expected decline in the overall world wheat harvest. This decline in production will weigh on stocks and could keep prices at relatively elevated levels for longer. Still, despite all these events unfolding, agricultural commodity prices have softened over the past couple of weeks from the levels we witnessed in the days and weeks following Russia's invasion of Ukraine and the disruptions this caused to global agricultural commodity markets. Positively, the global rice and soybean production is large, well above the previous season. This will help keep prices of these commodities at softer levels than what we saw at the start of this year.

18 July 2022

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¹ The Guardian, "[Dangerous heatwaves engulf parts of China, US and Europe](#)", July 12, 2022.

² PBS, "[Heat stress blamed for thousands of cattle deaths in Kansas](#)", June 17, 2022.

³ Financial Times, "[Farmers feel heat as northern Italy suffers worst drought in decades](#)", July 8, 2022.

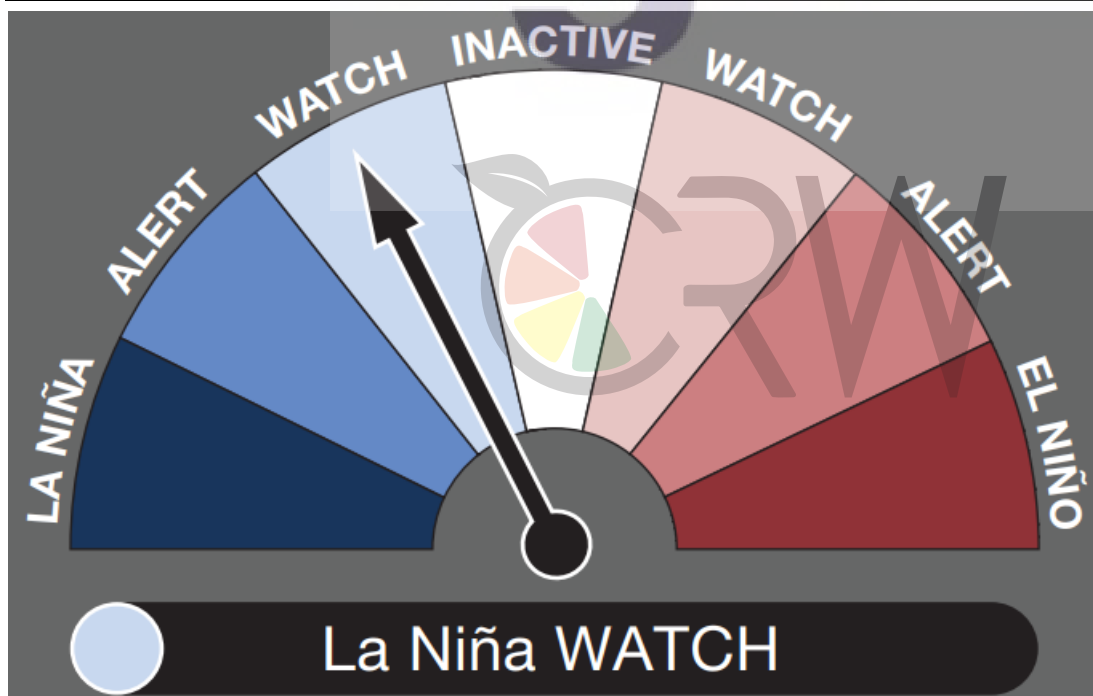
⁴ The statement is available [here](#).

The extreme weather events in the Northern Hemisphere are a warning signal for farmers across the rest of the world. We believe that one important signal for the Southern Hemisphere is that it could also face weather events that are more extreme. This region will start its 2022/23 summer crop planting in October 2022. The current weather forecast suggests that we are still in the La Niña phase. The Australian Bureau of Meteorology estimates that “there is a 50% chance of La Niña forming later in 2022. This is approximately double the normal likelihood.” For the Southern Africa region, this implies that we will likely have another rainy season.

Meanwhile, the East Africa region and South America could experience dryness. Given that South America is a major producer of grains and oilseeds, the possible dryness is a major risk to monitor. Brazil and Argentina, for instance, collectively account for 14% and 50% of global maize and soybean production, respectively. Depending on the intensity of the expected La Niña, the relatively optimistic estimates of the USDA could change, which would have implications for prices. The risk in the future, which is worth monitoring, is the possibility of intense dryness in South America and East Africa and excessive rains in the Southern Africa region. Such weather events would add pressure on global food production and could lead to prolonged higher levels of hunger in the world, especially the developing regions.

For South African farmers, we are two months away from the new summer crop planting season. The challenge of heavy rains in the 2021/22 season could be a reality again in the new season if the unpredictability of events in the world is anything to go by. Therefore, farmers should be on alert for such weather events and use any planting strategies they applied in the 2021/22 season, which allowed South Africa to have a large harvest despite the heavy rains. The same goes for the fruits, wine-grapes and vegetable industries. For the livestock industry, the possible heavy rains typically bring a range of diseases that veterinarians should be on alert for.

Exhibit 1: La Niña WATCH



Source: Australia's Bureau of Meteorology

Weekly highlights

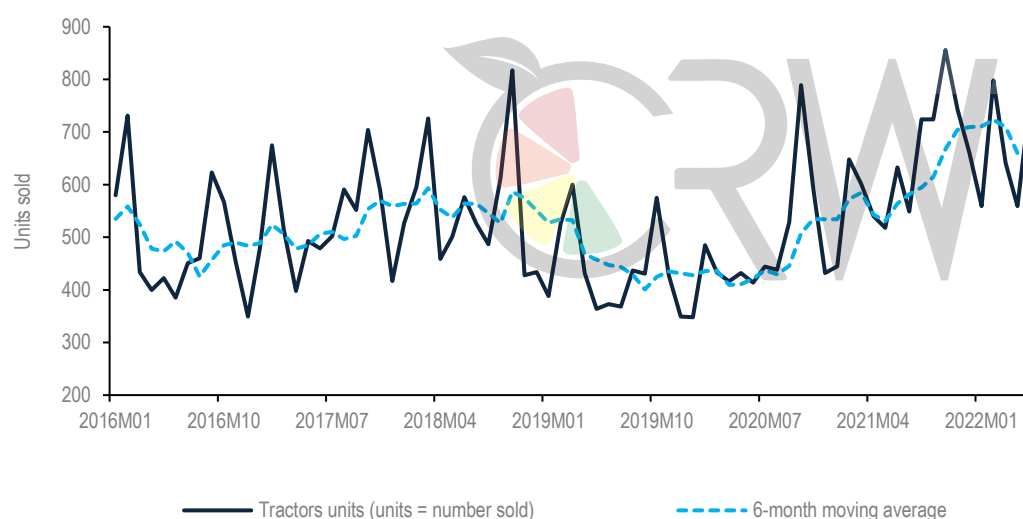
Will the robust performance of SA agricultural machinery sales be sustained in the second half of the year?

South Africa's agricultural sector currently faces numerous challenges, ranging from foot-and-mouth disease, protectionism in the EU, rising farm input costs, and deteriorating network industries, amongst others. Still, the benefits of the solid production performance of the sector in the past two years, when commodity prices, specifically for grains and oilseeds, were elevated, are reflected in the machinery sales, which have been robust in the first half of the year. For example, tractor sales amounted to 4 133 units in the first half of this year, up 18% from the corresponding period last year. At the same time, combine harvester sales amounted to 213 units, up by 37%.

Nevertheless, we remain doubtful about the outlook for the sector. In addition to the core challenges, we mentioned above, three major factors could slow agricultural machinery sales in the second half of the year. First, the higher farm input costs, such as fertilisers, fuel and agrochemicals, and increasing interest rates could weigh heavily on farmers' finances in the coming months. Second, the strong agricultural machinery sales in 2020 and 2021 could lead to a lower replacement rate this year. South Africa's tractor sales for 2021 amounted to 7 680 units, up 26% from the previous year. Combine harvester sales amounted to 268 units in the same period, up by 46% from 2020. Notably, 2020 was also an excellent year for South Africa's agricultural machinery sales, so surpassing it meant 2021 was exceptional. In 2020, tractor sales were up by 9% from 2019. Combine harvester sales increased by 29% from 2019. Last, the 2021/22 summer crop harvests are down from the 2020/21 season, which will likely have negative financial implications for farmers.

In sum, we see the robust agricultural machinery sales of the first half of this year at a tail end of the good financial gains of the past years. The coming month, and probably the coming year, will bring some level of normalisation in the agricultural machinery market.

Exhibit 2: South Africa's tractor sales



Source: South African Agricultural Machinery Association and Agbiz Research

Data releases this week

We start the week with a global focus, where, today, the United States Department of Agriculture (USDA) will publish its weekly **US Crop Progress** data. In these data, our focus is on the crop-growing conditions. In the previous release, in the week of 10 July 2022, about 64% of the maize crop was rated good/excellent, which is down by 1% from the rating in the same week a year ago. Moreover, about 62% of the soybean crop was rated good/excellent, compared with 59% in the same week last year. On Thursday, the USDA will release the **US Weekly Export Sales** data.

On the domestic front, on Wednesday, SAGIS will release the **Weekly Producer Deliveries** data for the week of 15 July 2022. This data will help us get insight into the progress of the maize harvesting activity. In the previous release of the week of 08 July, about 5,54 million tonnes of maize had already been delivered to commercial silos, out of the expected harvest of 14,68 million tonnes. Moreover, the soybean harvesting process is nearly complete. In the week of 08 July 2022, about 2,08 million tonnes had already been delivered to commercial silos, out of the expected harvest of 2,09 million tonnes. In terms of sunflower seed, in the week of 08 July 2022, about 730 611 tonnes had already been delivered, against an expected harvest of 961 350 tonnes (second largest on record).

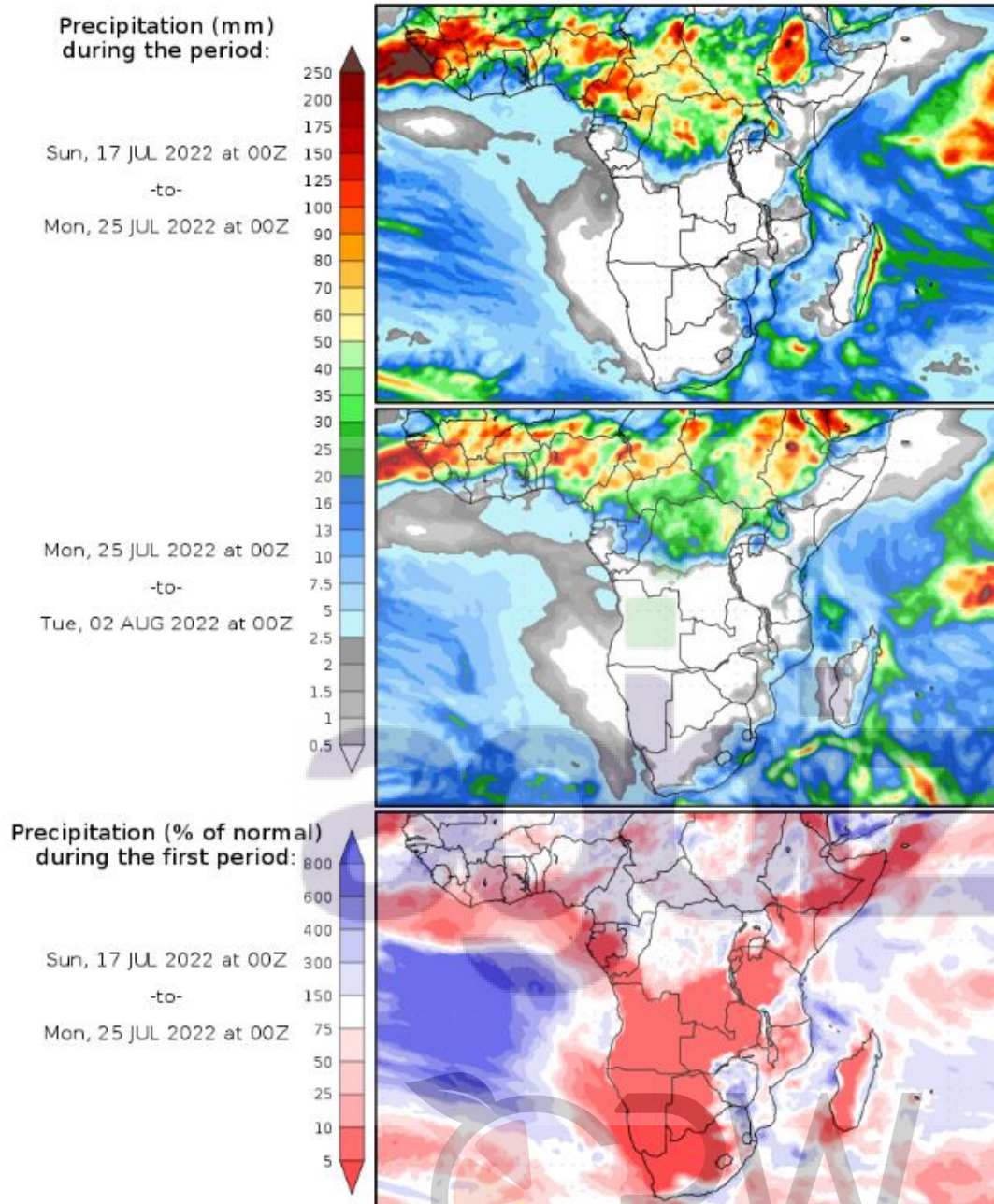
Also on Wednesday, Statistics South Africa will release the **Consumer Price Index (CPI)** data for June 2022. In May, South Africa's consumer food price inflation accelerated to 7,8% y/y, from 6,3% in the previous month. This is the quickest pace since March 2017. The increase was broad base on all food products in the inflation basket. This largely mirrored the uptick we have been seeing in the global agricultural commodity prices, and indeed the domestic market. Importantly, the data showed the spillover the Russia-Ukraine war had on agricultural commodity prices transmitted into retail food prices.

On Thursday, SAGIS will publish the **Weekly Grain Trade** data for the week of 15 July 2022. In the previous release on 08 July 2022, which was the tenth week of South Africa's 2022/23 maize marketing year, the weekly exports amounted to 124 908 tonnes. The key markets were Japan, South Korea, Vietnam and the Southern Africa region. This brought the total 2022/23 exports to 905 847 tonnes out of the seasonal export forecast of 3,20 million tonnes. This is slightly down from 4,10 million tonnes in the past season due to an expected reduction in the harvest.

South Africa is a net importer of wheat, and 08 July was the 41st week of the 2021/22 marketing year. The total imports are now at 1,27 million tonnes out of the seasonal import forecast of 1,48 million tonnes (slightly below the 2020/21 marketing year imports of 1,51 million tonnes because of a large domestic harvest). The major wheat suppliers are now Argentina, Lithuania, Brazil, Australia, Poland, Latvia and the US. But if one looks into South Africa's wheat imports data for the past five years, Russia was one of the major wheat suppliers, accounting for an average share of 26% a year. This has now been replaced by the above-mentioned suppliers.

Exhibit 3: South Africa's precipitation forecast

Precipitation Forecasts



Source: George Mason University (wxmaps)

The weather forecast for this week shows clear skies over most regions of South Africa.

This is with the exception of possible light showers in the eastern and western coastal regions.

This drier weather outlook bodes well for the summer crop harvesting process that is currently underway.

Simultaneously, the rainy weather in the Western Cape will benefit the winter crops.