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U.S. DEPARTMENT OF AGRICULTURE

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Global Market Analysis
International Production Assessment Division
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Commodity Intelligence Report

South Africa's 2025 Soybean Production Rebounds from Last Year's El Niño Drought

USDA estimates South Africa's marketing year (MY) 2024/25 soybean production at 2.4 million metric tons, up 30 percent from last year's El Niño drought. Harvested area is estimated at 1.1 million hectares, nearly equal to last year and up 21 percent from the 5-year average. Yield is estimated at 2.08 metric tons per hectare, nearly equal to the 5-year average, and up 30 percent from last year's El Niño drought. The early planted MY2024/25 soybean crop suffered from a one-month dry spell from mid-November through mid-December 2024, but the crop recovered from above-average rains from January through March 2025. Harvest for the irrigated crop begins in March with the bulk of the rainfed soybean harvest delivered to grain silos during April and May (Figures 1-2).

South Africa's seasonal rainfall anomalies and corresponding crop yields are influenced by cold (La Niña) and warm (El Niño) sea surface temperatures in the central and eastern Pacific Ocean. El Niño is a natural climate phenomenon marked by warmer-than-average sea surface temperatures in the Pacific which occurs, on average, every 2 to 7 years. The relative strength of these cold La Niña and warm El Niño water episodes are measured by the Oceanic Niño Index (ONI) published monthly by the Climate Prediction Center (CPC) of the National Oceanic and Atmospheric Administration (NOAA). The ONI is the standard metric used to identify the El Niño Southern Oscillation (ENSO) phase and defined as the running 3-month mean Sea Surface Temperature anomaly for the Niño 3.4 region in the Pacific Ocean (Figures 3-5).

Annual warm El Niño and cold La Niña water events defined by the ENSO phase have significant rainfall anomaly teleconnections worldwide and potentially impact crop yields for certain regions, as illustrated by Figures 6 and 7. The impact on regional and seasonal crop yields, however, depends on the ENSO phase, timing, geographic location, and the strength of cold and warm water anomalies in the Niño 3.4 region, as measured by the ONI (Figure 5).

South Africa's seasonal rainfall anomalies and potential impact on crop yields during El Niño and La Niña years are measured over global croplands by the Standardized Precipitation Index (SPI) and the satellite-derived Percent of Average Seasonal Greenness (PASG) index (Figure 8). SPI is used by the U.S. Drought Monitor, and it measures seasonal precipitation anomalies during a crop season by ranking drought severity from DO through D4 categories. The satellite-derived PASG index measures relative crop conditions or vegetation vigor with 8-day time steps, and it compares current vegetation or crop conditions to the long-term average.

In most cases, South Africa's major grain belt will experience above-average seasonal rainfall anomalies (SPI) and crop yields (PASG) during La Niña years, and below-average rainfall (SPI) and crop yields (PASG) during El Niño drought years (Figures 1 and 8). For example, the monthly ONI was measured as an ENSO neutral to a weak La Niña event during South Africa's 2024/25 crop season which provided above-average seasonal rainfall (three-month SPI) and near to above-average crop conditions (three-month PASG) at harvest time in early April 2025 (Figure 8).

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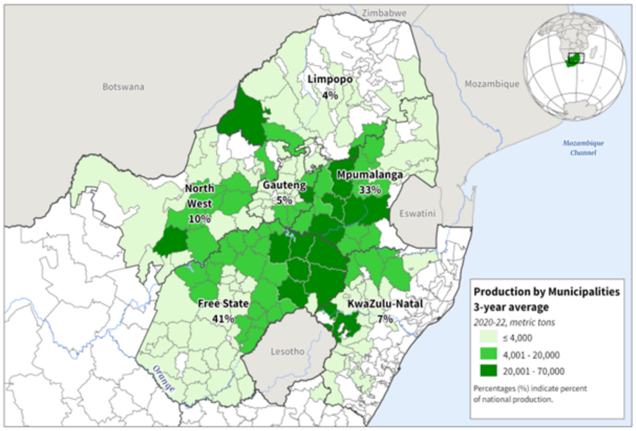
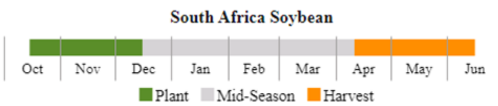
https://ipad.fas.usda.gov/highlights/2016/06/southafrica/index.htm

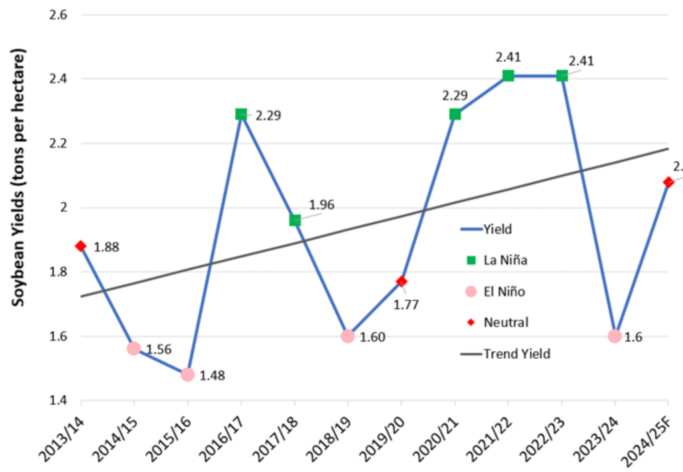
South Africa Soybean Production





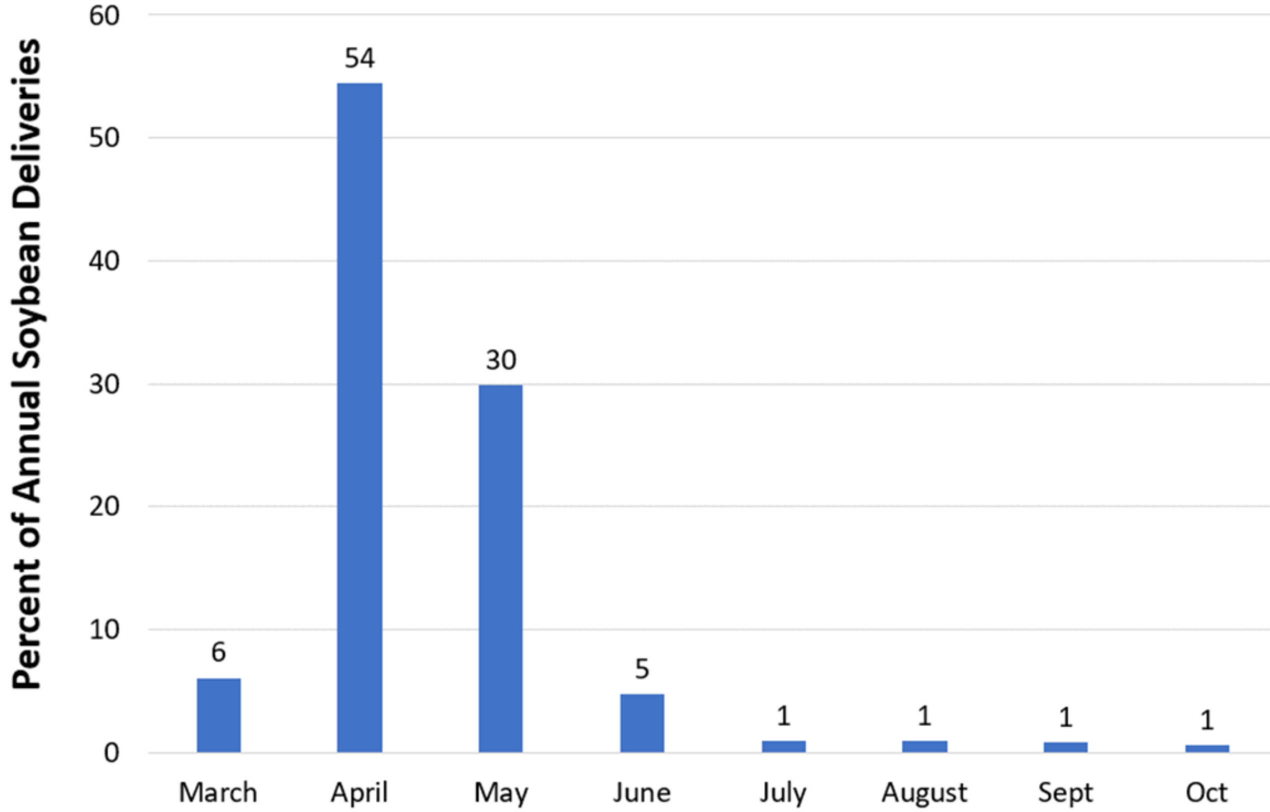
Source: Province-level soybean production statistics from South Africa Crop Estimates, Department of Agriculture, Land Reform, and Rural Development, 2023. District-level Production from South Africa Census of Commercial Agriculture, 2017.

South Africa Soybean Yields



Sources: El Niño and La Niña years defined by NOAA's Oceanic Niño Index (ONI). Soybean yields from PSD Online, April 2025.

Figure 1. South Africa Soybean Production and Trend Yields during three ENSO phases (El Niño, La Niña and ENSO Neutral).



Source: South African Grain Information Service (SAGIS); Weekly Producer Soybean Deliveries to Silos

Figure 2. Average Monthly Soybean Deliveries to Silos (5-year average from 2020-2024).

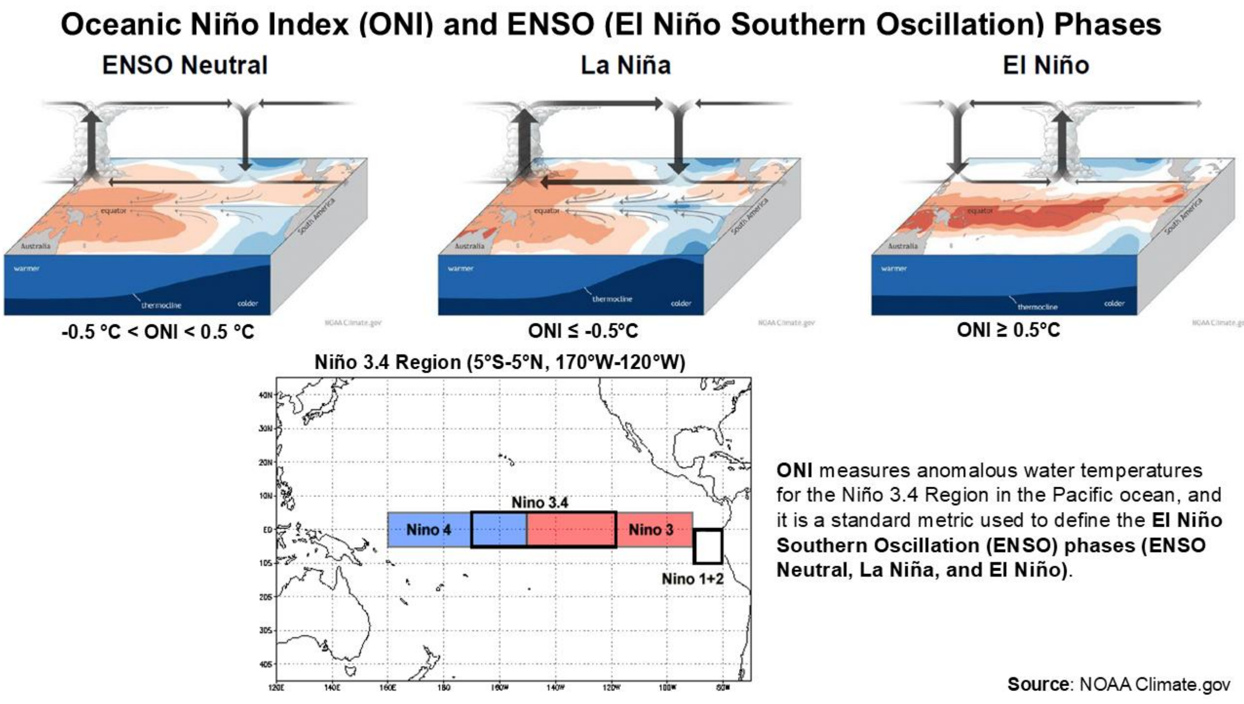


Figure 3. The Oceanic Niño Index (ONI) defines and measures the relative strength of the three ENSO phases (ENSO Neutral, La Niña, and El Niño).

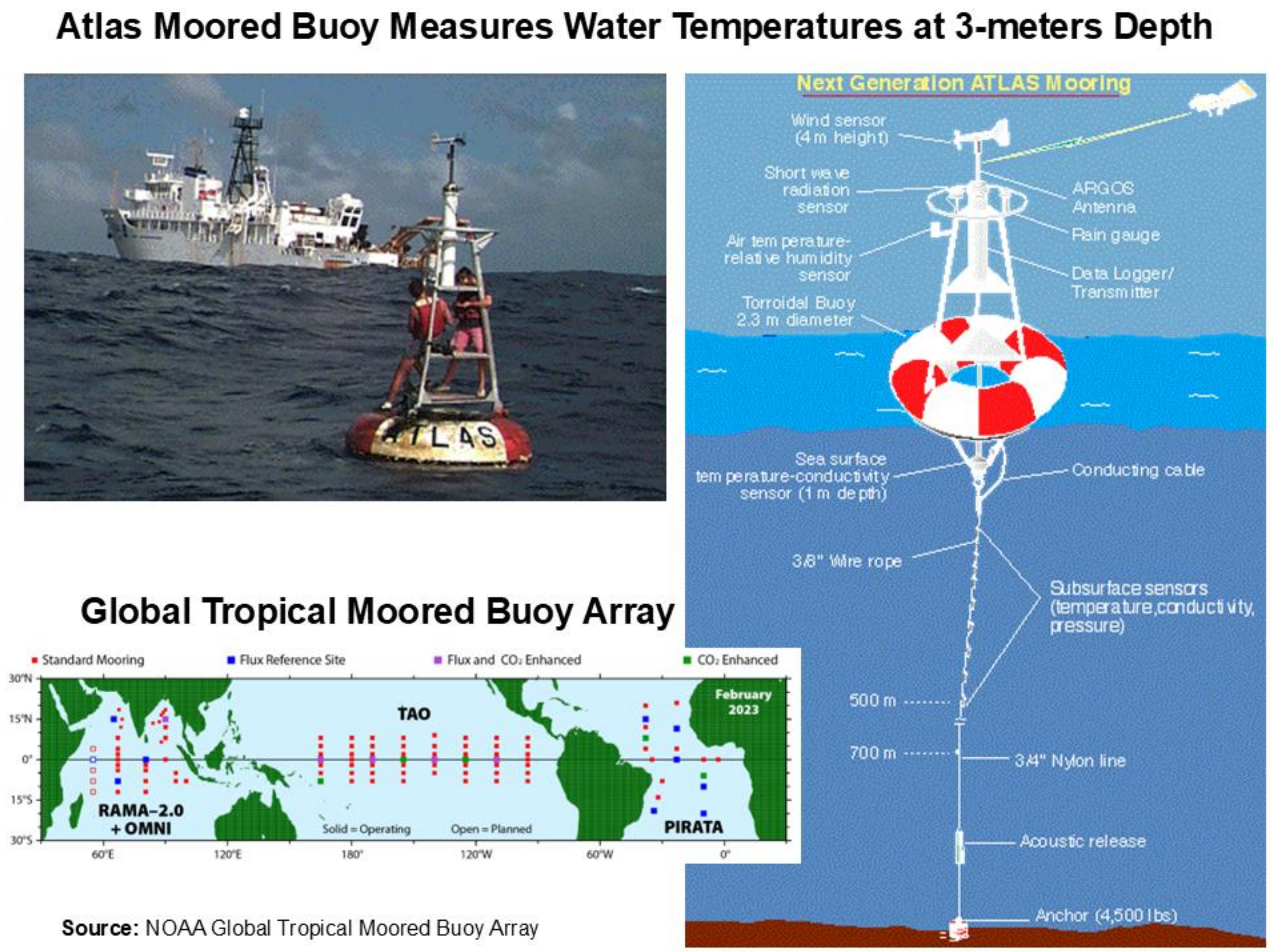
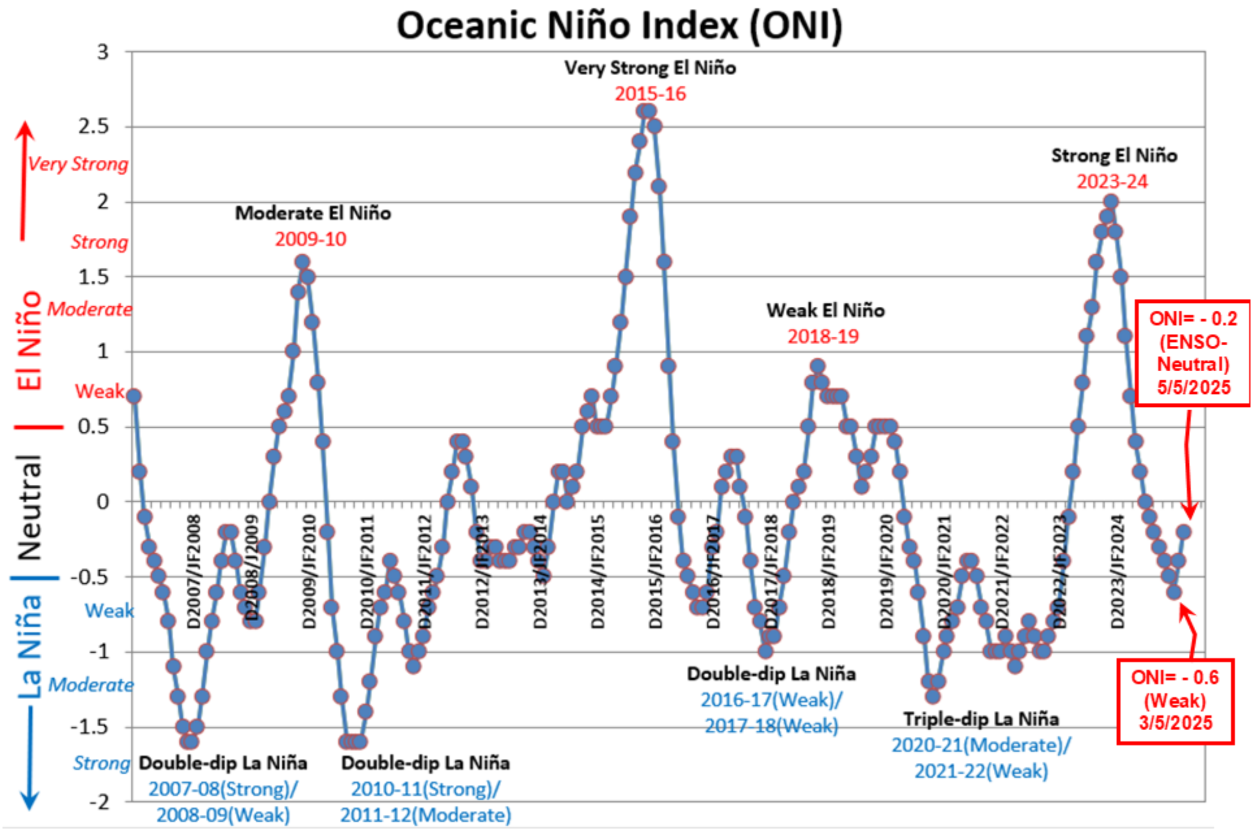


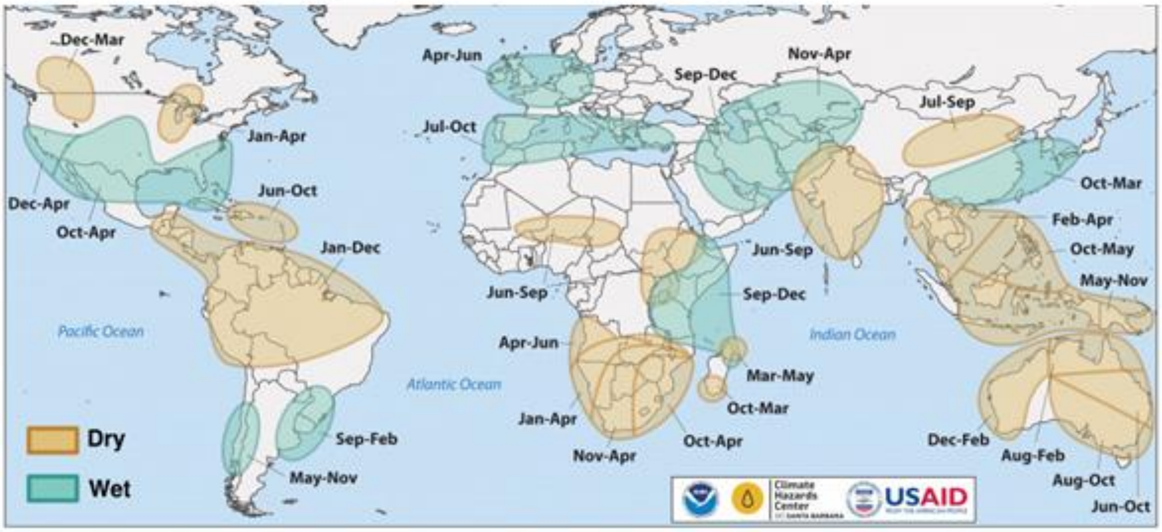
Figure 4. An array of tropical moored buoys help to measure the sea surface temperature anomalies in the Niño 3.4 region of the Pacific Ocean.



Source: ONI from NOAA/CPC, May 7, 2025

Figure 5. Recent ONI values indicate a ENSO Neutral phase in early May 2025.

Typical El Niño Rainfall Anomalies



Source: FEWSNET, 2020: El Niño/La Niña and Precipitation, Agroclimatology Fact Sheet Series

Typical El Niño Crop Yield Teleconnections

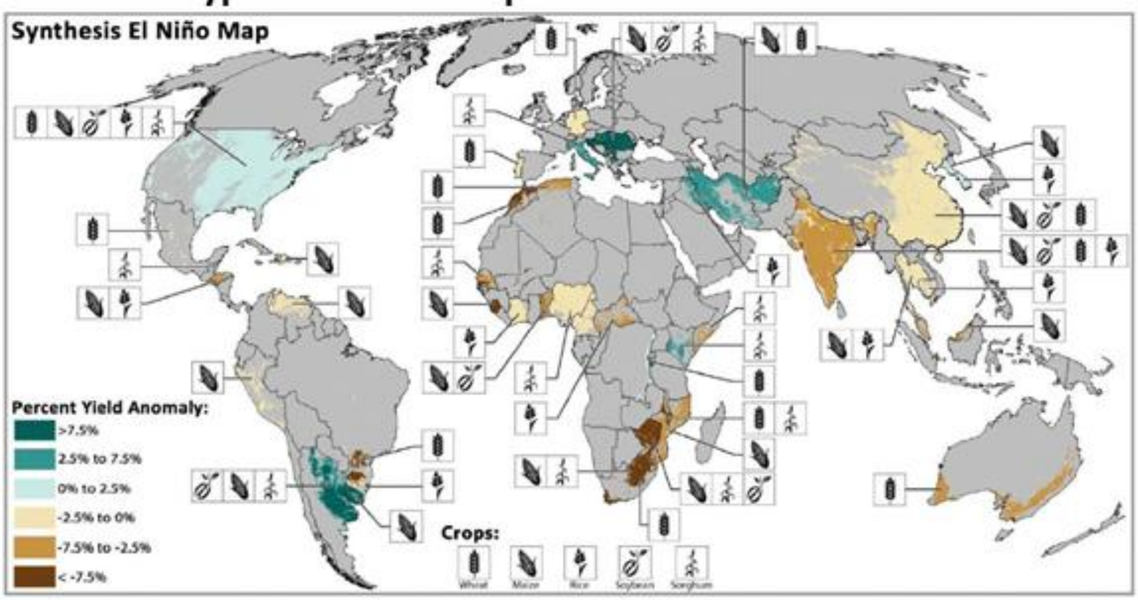
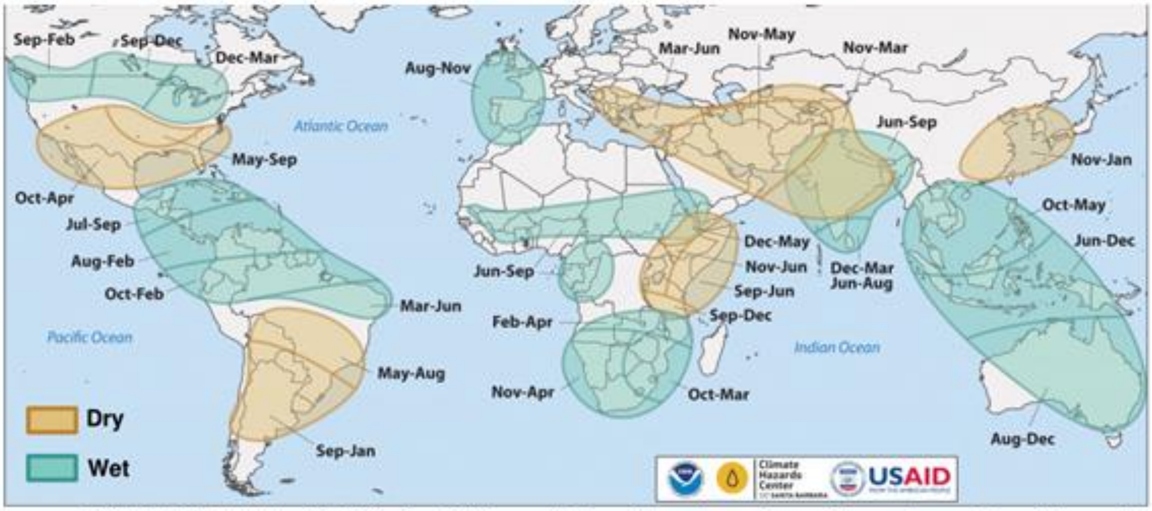


Figure 2: Historical crop yield conditions during El Niño events for wheat, maize, sorghum, rice, and soybeans. In countries with more than one crop affected the color reflects the strongest effect.

Source: El Niño: Implications for Food Security, FEWSNET Briefing, July 27, 2023

Figure 6. Typical precipitation and crop yield anomalies during El Niño years

Typical La Niña Rainfall Anomalies



Source: FEWSNET, 2020: El Niño/La Niña and Precipitation, Agroclimatology Fact Sheet Series

Typical La Niña Crop Yield Teleconnections

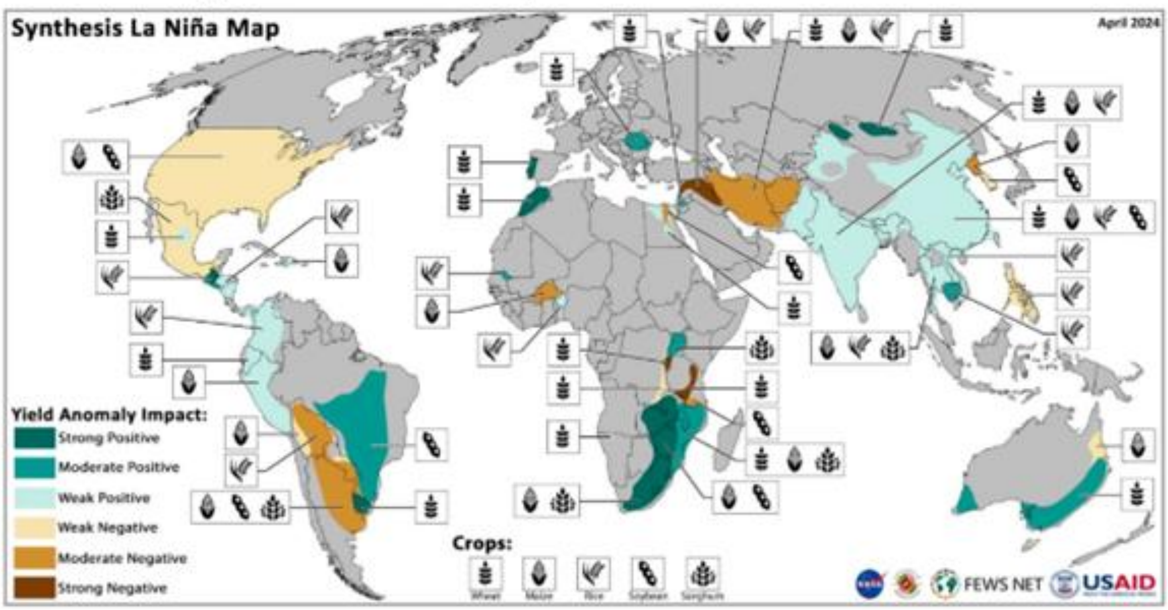


Figure 2: *Historical crop yield conditions during La Niña events for wheat, maize, rice, soybeans, and sorghum using FAO country-level yield data and ERSSTv5 from 1961-2020. In countries with more than one crop affected, the colour reflects the strongest effect. Note: FAO data is national and annual resolution, which masks expected relationships in areas with multiple crops (e.g. the Horn of Africa).*

Source: AMIS Crop Monitor, No. 116 – May 2024

Figure 7. Typical precipitation and crop yield anomalies during La Niña years

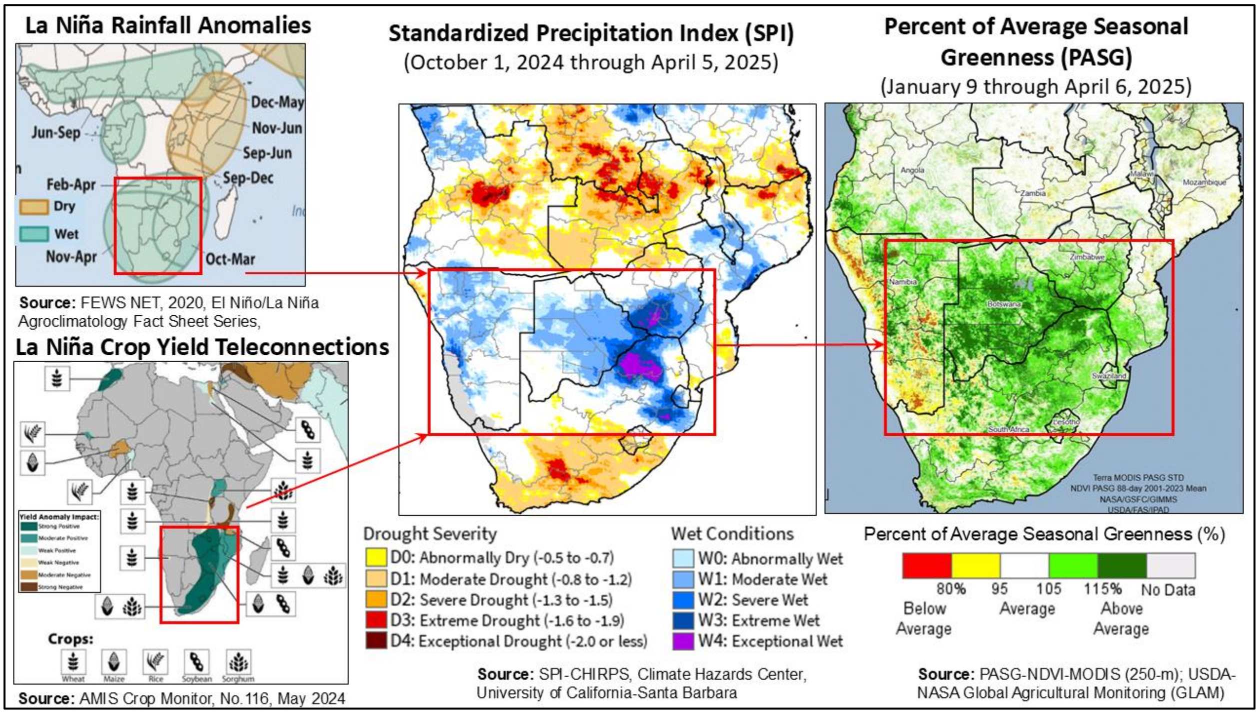


Figure 8. South Africa's 2025 crop season indicated above-average seasonal rainfall (SPI) and crop conditions (PASG) during an ENSO Neutral year.

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