![USDA logo]	**United States Department of Agriculture**	# Commodity Intelligence Report
	Foreign Agricultural Service	
	March 9, 2023	

Argentina: Third Year of La Niña Causes Dry and Hot Conditions for Early-Planted Crops

Analysts from the USDA Foreign Agricultural Service (FAS) in Washington and Buenos Aires conducted crop-assessment travel in Argentina from January 17–22, 2023 (see Figure 1). FAS met with agricultural producers in the major corn and soybean growing regions and with industry sources throughout Argentina. The team visited farms to discuss the recent harvest of winter crops and to assess the dry and hot crop conditions for summer crops (see Figures 2 and 3).

Crop conditions:

Harvest is complete for the winter crops in Argentina. The winter season had below-average rainfall during the critical yield developing months of September through November (see Figure 4). Winter wheat yields were about 25 percent below the 5-year average. Argentina farmers have recently begun planting a new variety of genetically engineered wheat called HB4, which has drought resistance technology. Widespread increases would have a notable impact on yield in future drought years. Industry contacts believe expansion is part of the next 10-year plan, but the GE wheat is currently not used extensively. In the current year, barley yield was similarly below average, down 16 percent from the 5-year average. Frosts near the end of the season, reduced harvested area for both crops.

Planting for the summer crops is complete. Soybean area is forecast at 15.5 million hectares (mha) and corn area is forecast at 6.7 mha. Soybeans are planted in Buenos Aires (31% of production), Cordoba (28%), Santa Fe (19%) and Santiago del Estero (6%) (see Figure 5). Corn is planted in Cordoba (32% of production), Buenos Aires (28%), Santa Fe (12%), Santiago del Estero (9%), and Entre Rios (5%) (see Figure 6). Farmers in Argentina plant both first and second soybeans and early- and late-planted corn. Even though soybean area is predominantly first soybean, there has been a shift to second soybeans over the last few years (see Figure 7). Additionally, the second soybean crop is a lower yielding crop (see Figure 8). For early corn, farmers can get better prices because the market pays a premium for early harvested corn. Harvest begins in February. The early corn, however, is riskier because the crop is tasseling during the warmest and driest month of January.

Dry weather from November through January reduced yield prospects for the early-planted summer crops (see Figure 9). Hot weather throughout December and January also hindered yield prospects (see Figure 10). Soybean yield is forecast at 2.13 tons per hectares (t/ha) or 25 percent below the 5-year average. Corn yield is forecast at 5.97 t/ha, down 20 percent from the 5-year average. January is usually a dry and hot month in Argentina, so farmers have been planting corn later and later throughout the last few years (see Figure 11 for corn planting), trying to make sure the crops tassel and flower during February. Frosts are common at the end of the season (in April), so the shift to later-planted crops is not without risk.

During crop travel, analysts were also able to visit sunflower and peanut fields (see Figure 12). Sunflower area has increased year-to-year (see Figure 13) because of good prices and a shortage of supply due to the ongoing conflict in Ukraine. Sunflowers are concentrated in Buenos Aires (53 percent of production), Chaco (17%), and Santa Fe (13%). Many contacts in the field stated that they would like to grow more sunflowers but there were

limits this year over seed access. With a third year of dry conditions due to La Niña, sunflowers, which are a drought tolerant crop, are a good option to add to crop rotations.

Rice is a minor crop in Argentina and is concentrated in two provinces: Corrientes (62 percent of production) and Entre Rios (23%). Rice is largely irrigated but water supply plays a role in yield. This year due to the drought, irrigation water is expected to decline, thus impacting yield (see Figure 14).

Peanut production in Argentina is concentrated mostly in Cordoba, which accounts for 85 percent of production. Based on conversations with industry, peanut area doesn't shift much year-to-year because special equipment required for production represents a barrier of entry to farmers. Generally, there is minimal abandonment for peanuts since once the investment is made, farmers need to harvest as much as they can. Planting generally occurs in mid-October to mid-November and harvest begins in April. Peanuts are a more drought tolerant crop and they need hot weather and no rain early in the season, which matches the weather pattern of the current year well. Many farmers do not want to lease their land to peanut farmers (which is a key detail because most farmers rent land) because peanuts deplete the soil of key nutrients, resulting in higher land rental prices for peanuts. Additionally, farmers commonly use no-till crop production, but peanuts must be dug up and flipped so it is impossible to use no-till with peanuts.

Farming Practices:

In Argentina, farmers use the best seeds available, either purchasing seed every season, which is more common for corn seeds, or saving seeds from prior crops, which is more common for soybeans. There are fewer GE soybean varieties available in Argentina than in other countries, because of issues with intellectual property rights. Prior to the crop season, farmers can either buy inputs in cash, which is generally cheaper but requires a large amount of capital or buy them via credit to be paid back once the farmers sell their crops, which is more expensive. Most land in Argentina is rented and the rental contracts vary in length. Traditionally, the contracts were short, around one year, but now it is becoming more common to rent for 3-5 years. No-till agriculture is widely used, and farmers will plant a cover crop in the winter, even if they won't harvest the crop just so there is a cover available for the summer crops. This practice holds in moisture and is especially useful in La Niña years, which trend drier than normal.

Figure 1: Crop travel route in January 2023

Argentina and Uruguay Travel Route
January 2023

Figure 2: Stressed First Corn in Santa Fe, Argentina

Totoras, Santa Fe, Argentina January 18, 2023

Dry and hot conditions have stressed the first corn crop. Many farmers have decided to cut some of their first corn for sileage.

Photo Courtesy of FAS Washington

Figure 3: Stressed Second Soybeans in Buenos Aires, Argentina

Pergamino, Buenos Aires, Argentina January 19, 2023
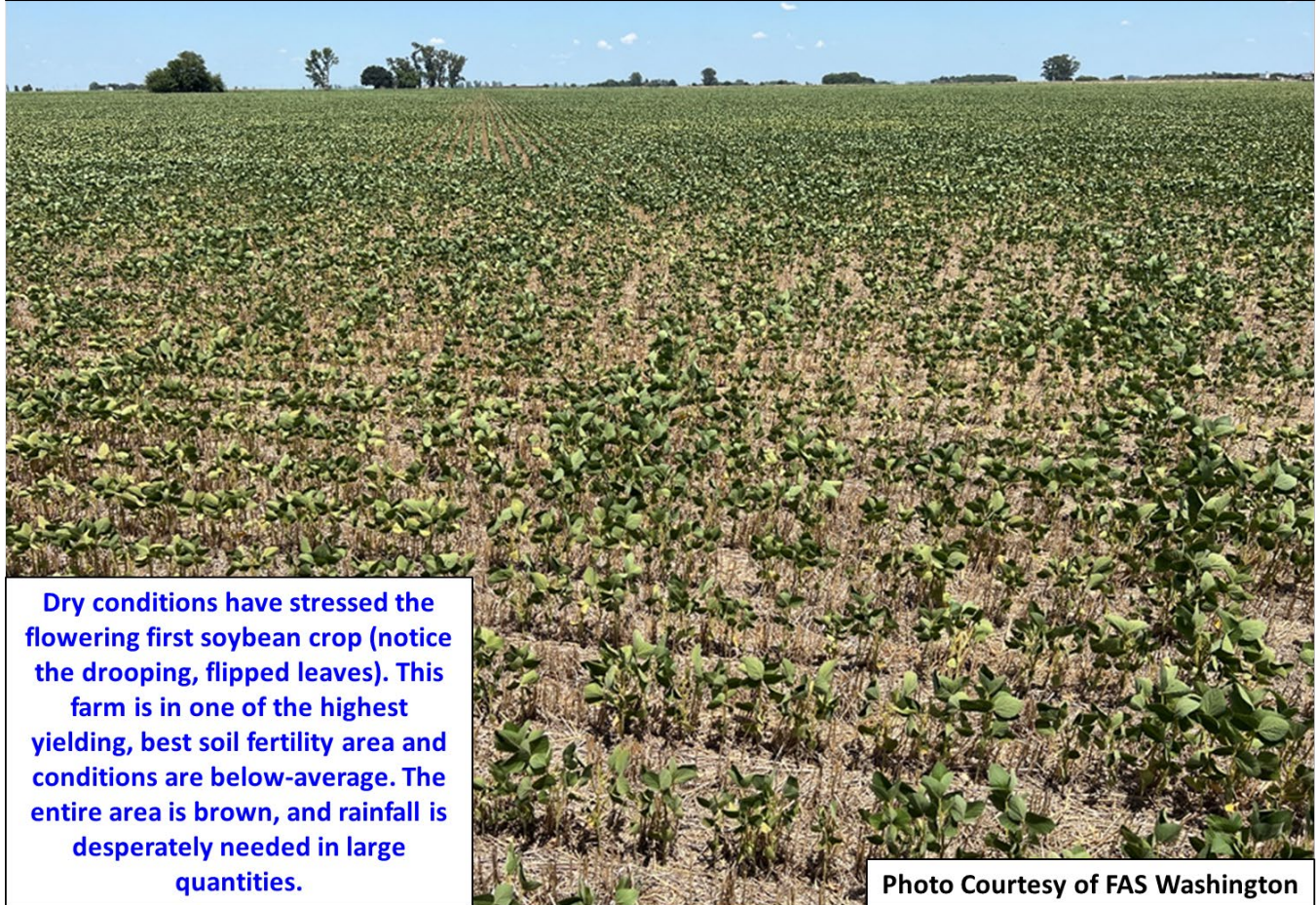
Dry conditions have stressed the flowering first soybean crop (notice the drooping, flipped leaves). This farm is in one of the highest yielding, best soil fertility area and conditions are below-average. The entire area is brown, and rainfall is desperately needed in large quantities.

Photo Courtesy of FAS Washington

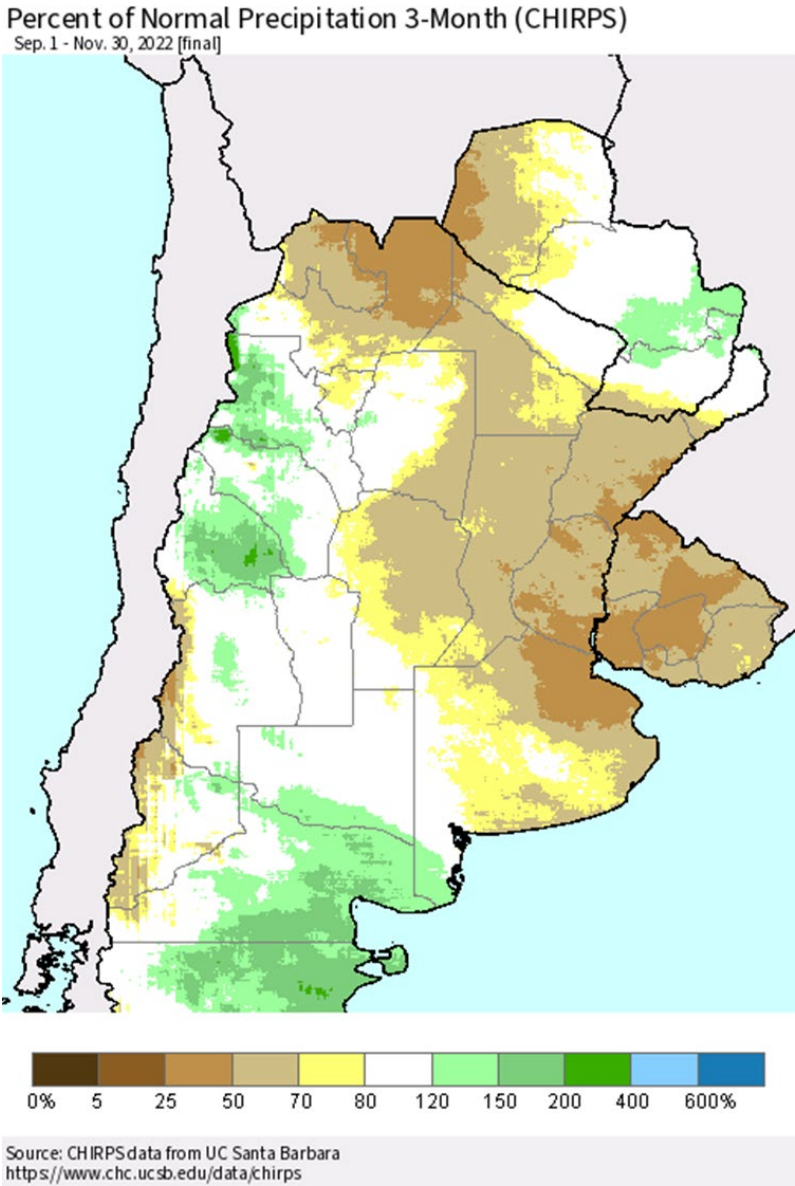**Figure 4: Percent of Normal Precipitation in Argentina, September-November**
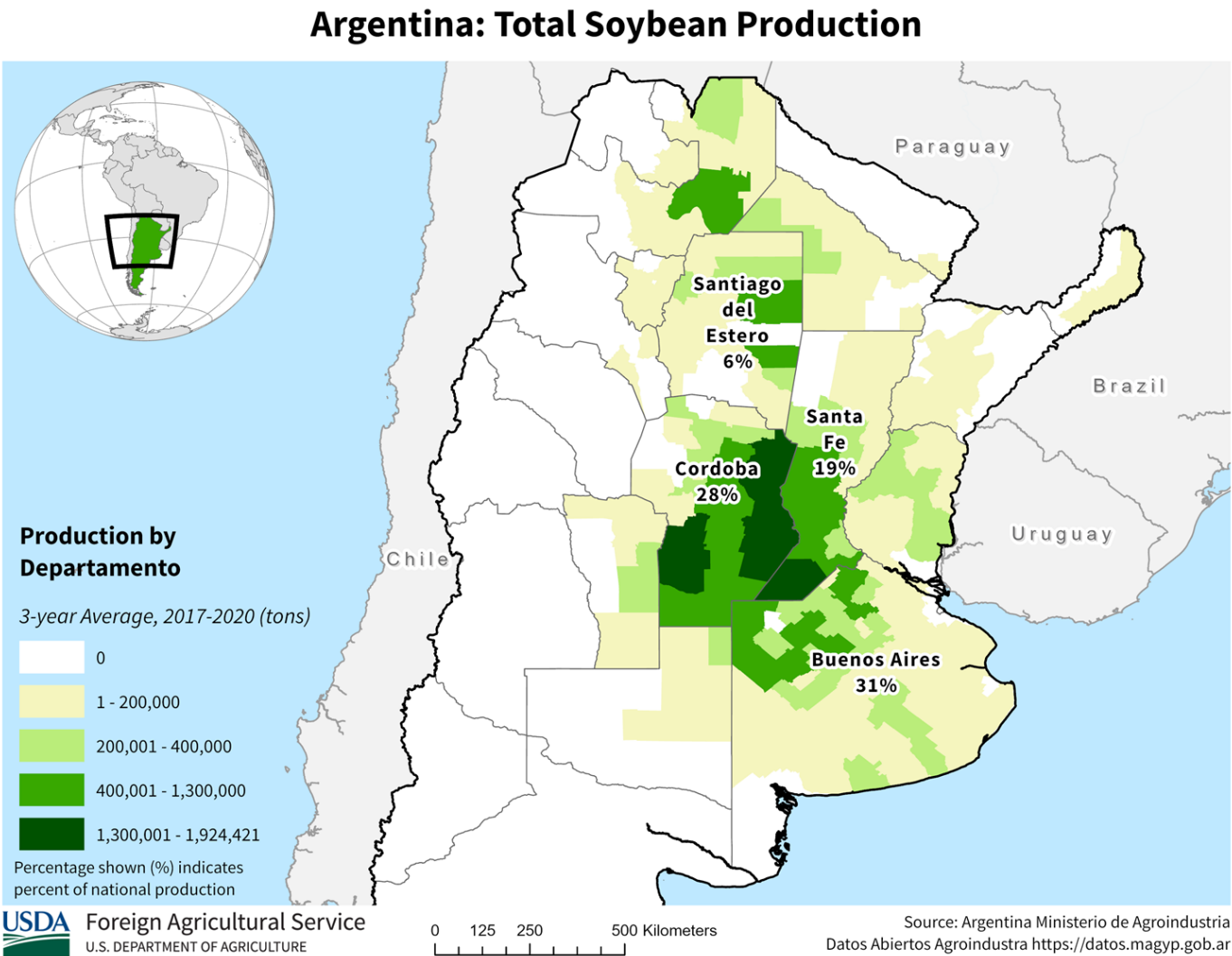

Percent of Normal Precipitation 3-Month (CHIRPS)
Sep. 1 - Nov. 30, 2022 [final]

Source: CHIRPS data from UC Santa Barbara
https://www.chc.ucsb.edu/data/chirps

Figure 5: Soybean Production Map

Argentina: Total Soybean Production

Production by Departamento

3-year Average, 2017-2020 (tons)

- 0
- 1 - 200,000
- 200,001 - 400,000
- 400,001 - 1,300,000
- 1,300,001 - 1,924,421

Percentage shown (%) indicates percent of national production

Santiago del Estero 6%

Santa Fe 19%

Cordoba 28%

Buenos Aires 31%

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Source: Argentina Ministerio de Agroindustria
Datos Abiertos Agroindustra https://datos.magyp.gob.ar

Figure 6: Corn Production Map

Argentina: Corn Production
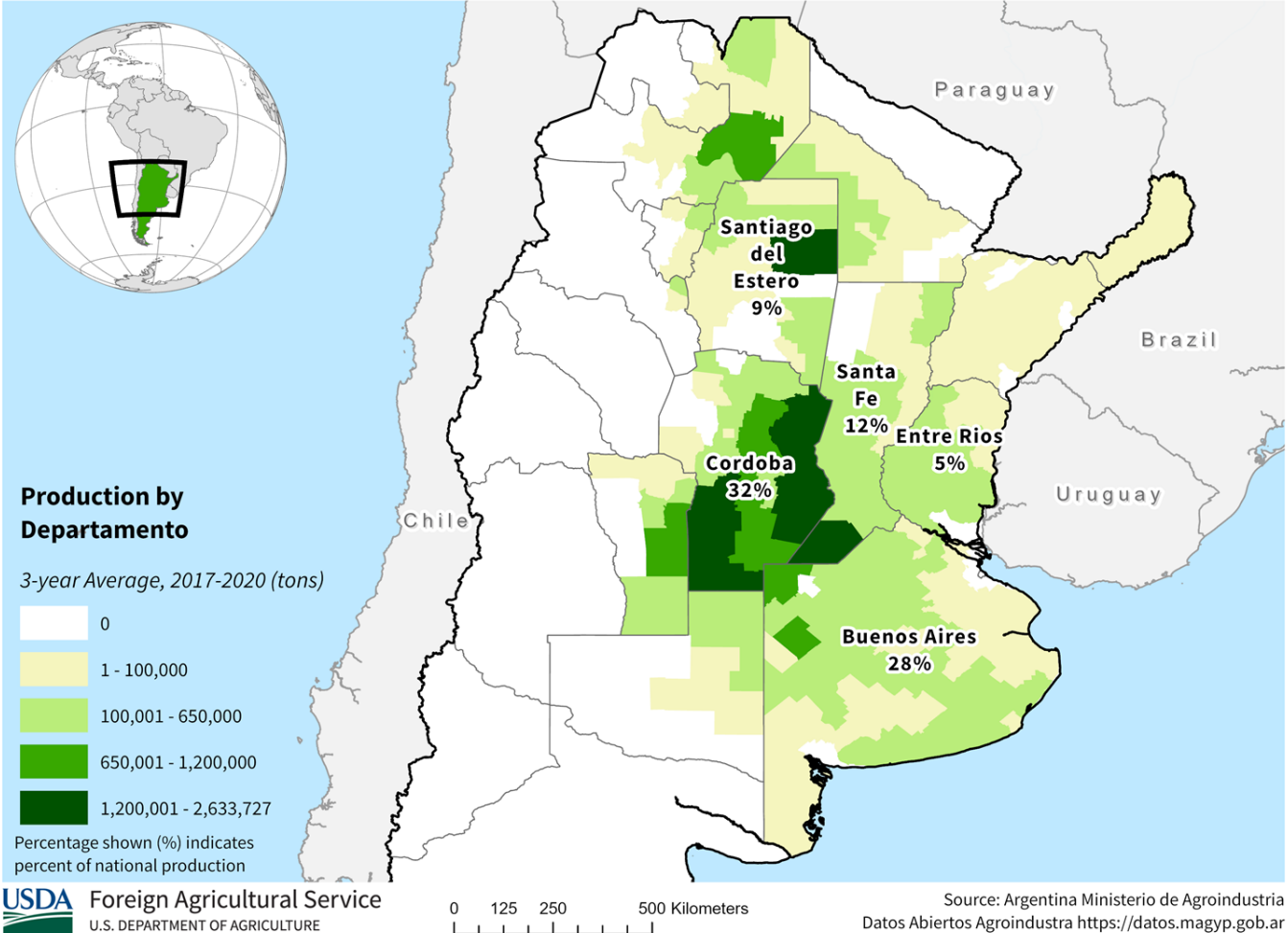
Figure 7: Argentina's First and Second Soybean Area
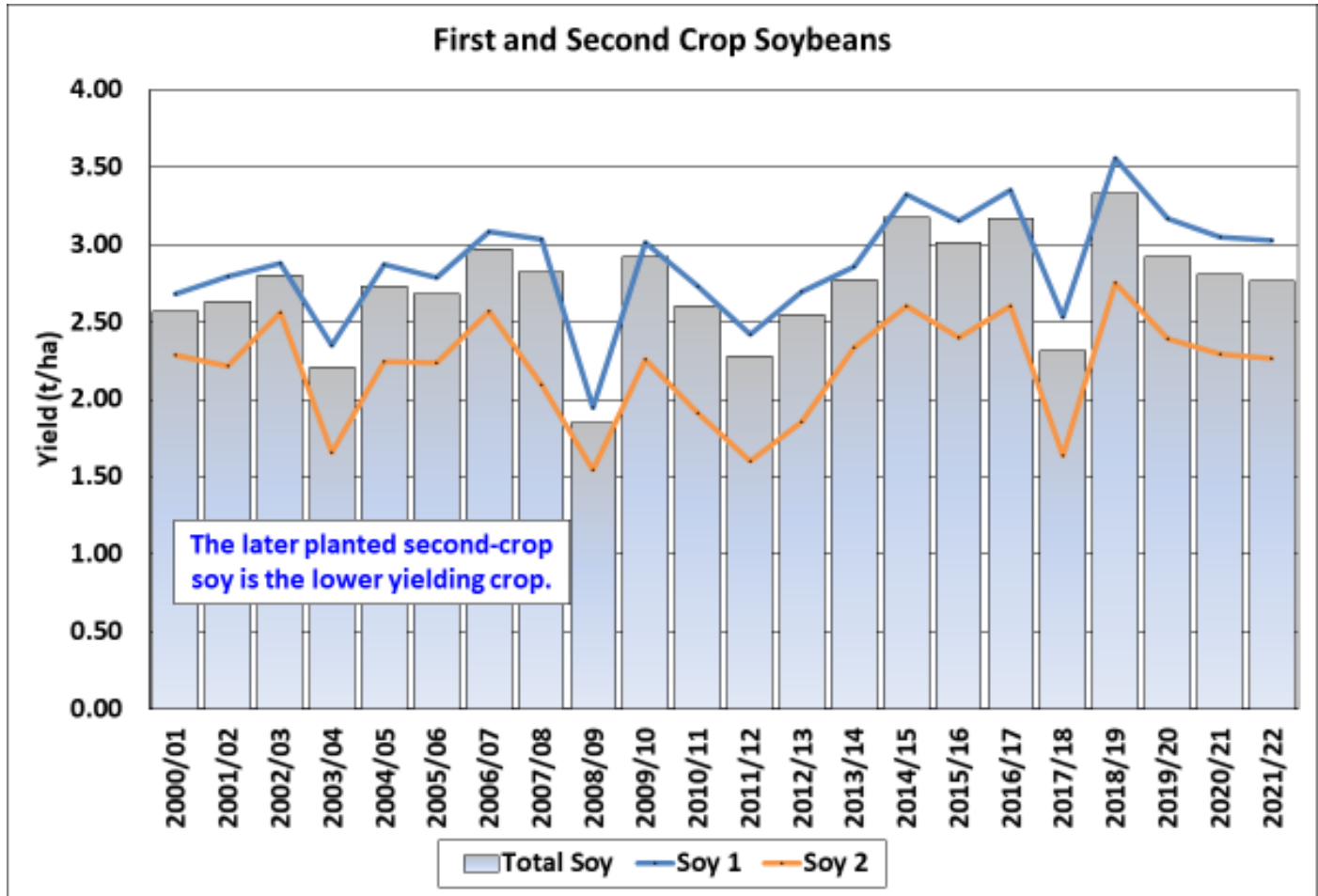

First and Second Crop Soybeans

Soybean area has been shifting to the later planted second-crop soy but is still predominantly early-planted.

Harvested Area (thousand hectares)

Legend:
- Harvested Area Total Soy
- Harvested Area First Crop
- Harvested Area Second Crop

Source: Argentina Ministry of Agriculture

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Figure 8: Argentina's First and Second Soybean Yield

First and Second Crop Soybeans

Source: Argentina Ministry of Agriculture

Figure 9: Percent of Normal Precipitation in Argentina, November 2022-January 2023

Percent of Normal Precipitation 3-Month (CPC)
Nov. 1 - Jan. 31, 2023

Source: NOAA/CPC
http://www.cpc.ncep.noaa.gov/
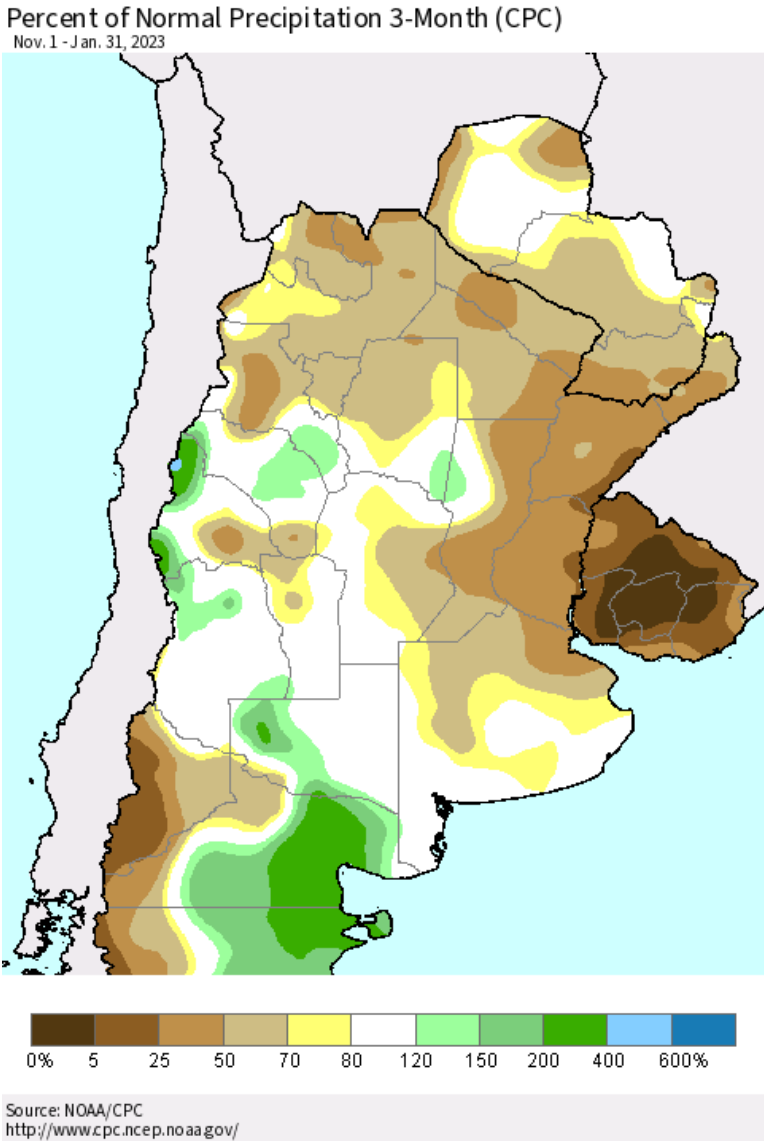
Figure 10: Example of the Heat Stress in Argentina, January 21-25, 2023

Argentina Maximum Daily Temperature (CPC)
Jan 21 to Jan 25, 2023

Source: NOAA/CPC
http://www.cpc.ncep.noaa.gov/
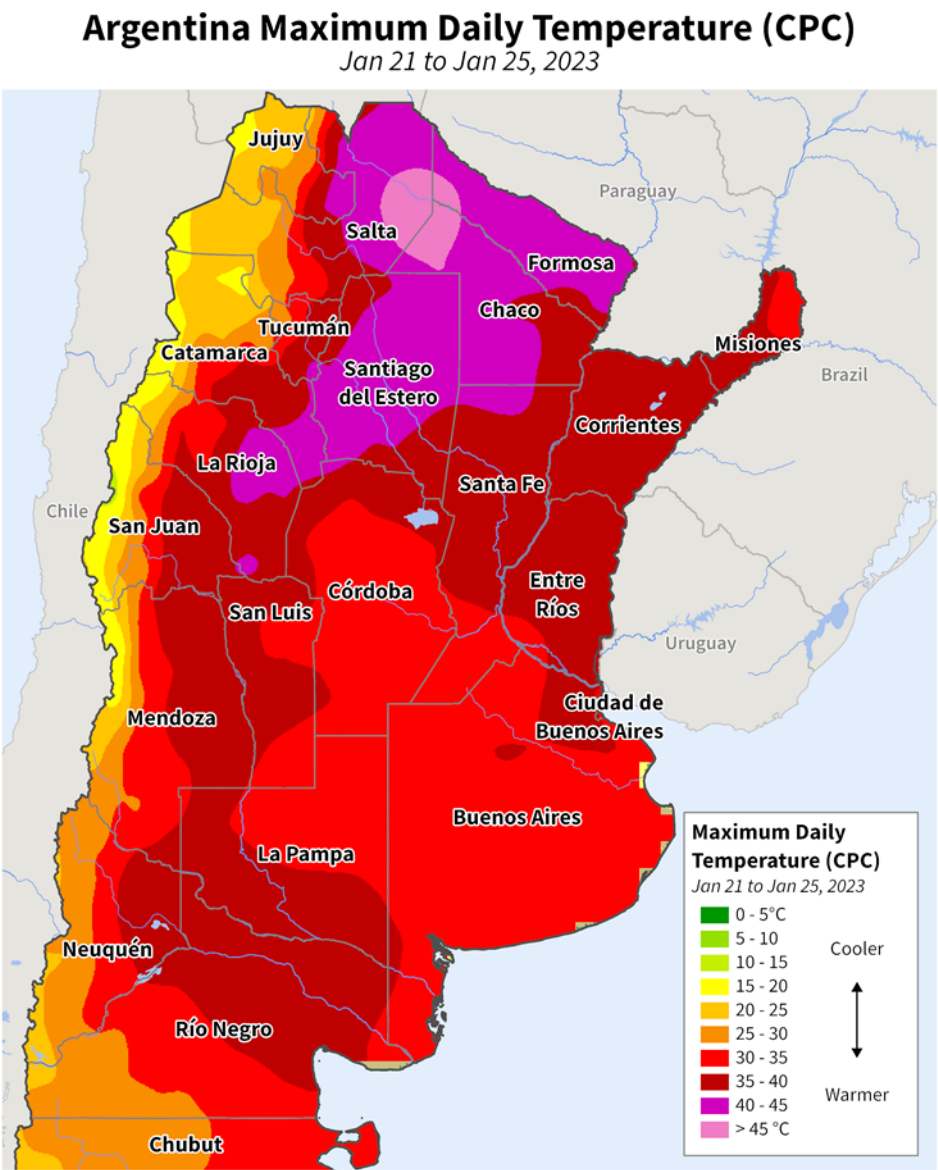
Figure 11: Percent of Corn Planted by December 1st

Argentina Corn: Percent Planted by Dec 1

Source: Argentina Bolsa de Cereales Buenos Aires

Figure 12: Peanut Field

Flowering Peanuts in Cordoba, Argentina

At this stage, the canopy should be closed, and nodules should be forming on the crop that will turn into peanuts, but it's been so dry, the crops are delayed.

Photo Courtesy of FAS Washington
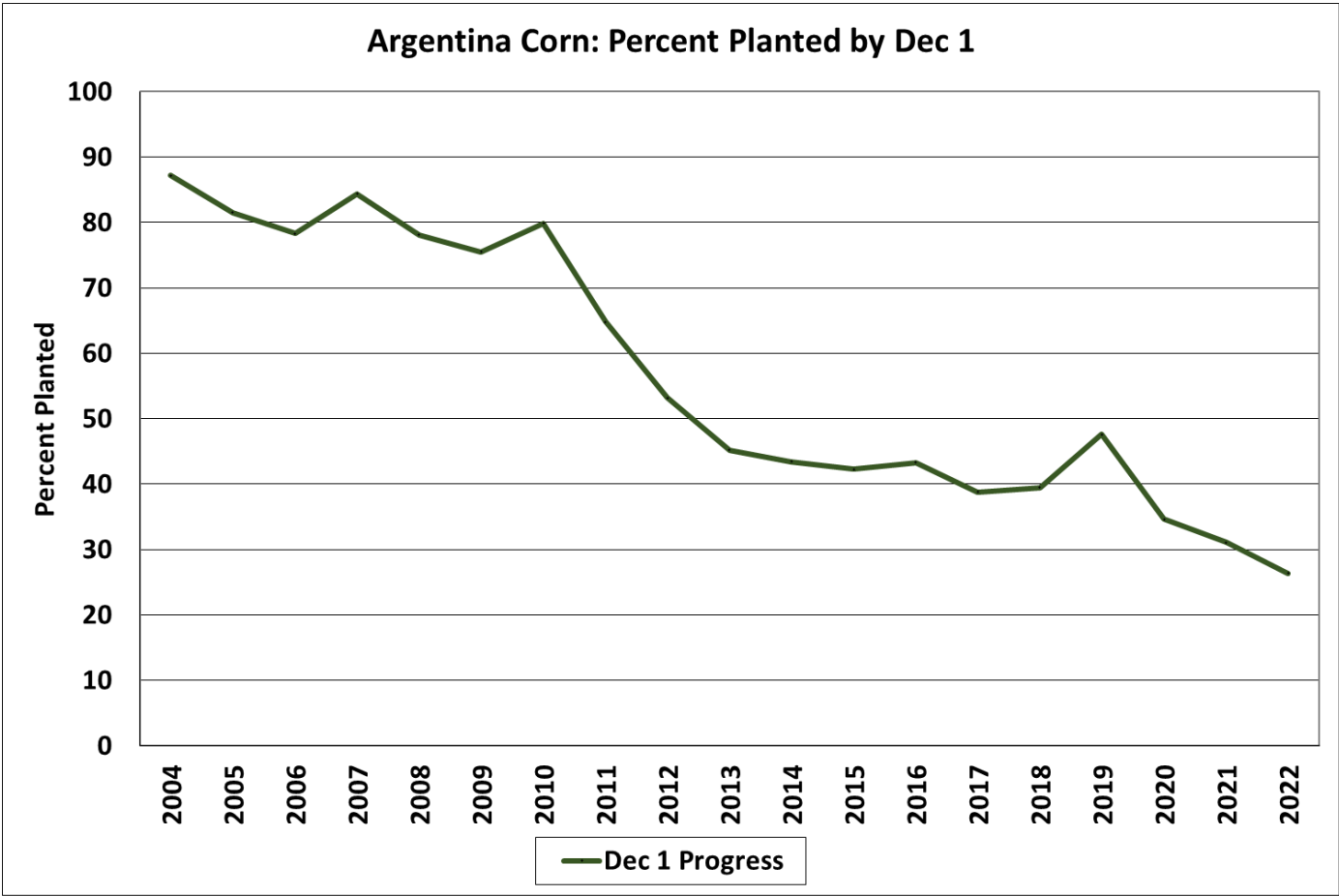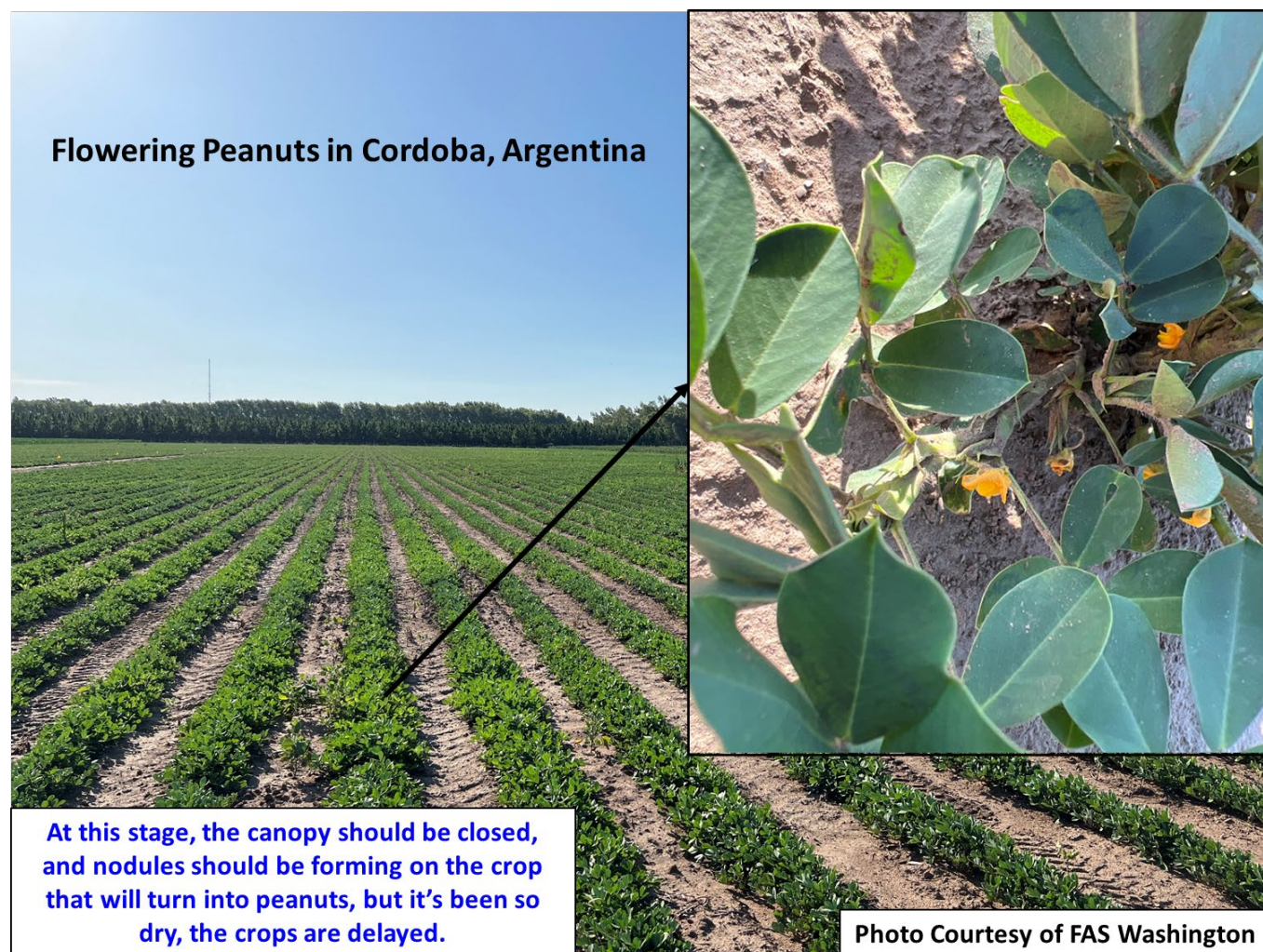
Figure 13: Sunflower Planting Progress

Argentina Sunflowers: Planting Progress

Source: Argentina Bolsa de Cereales Buenos Aires
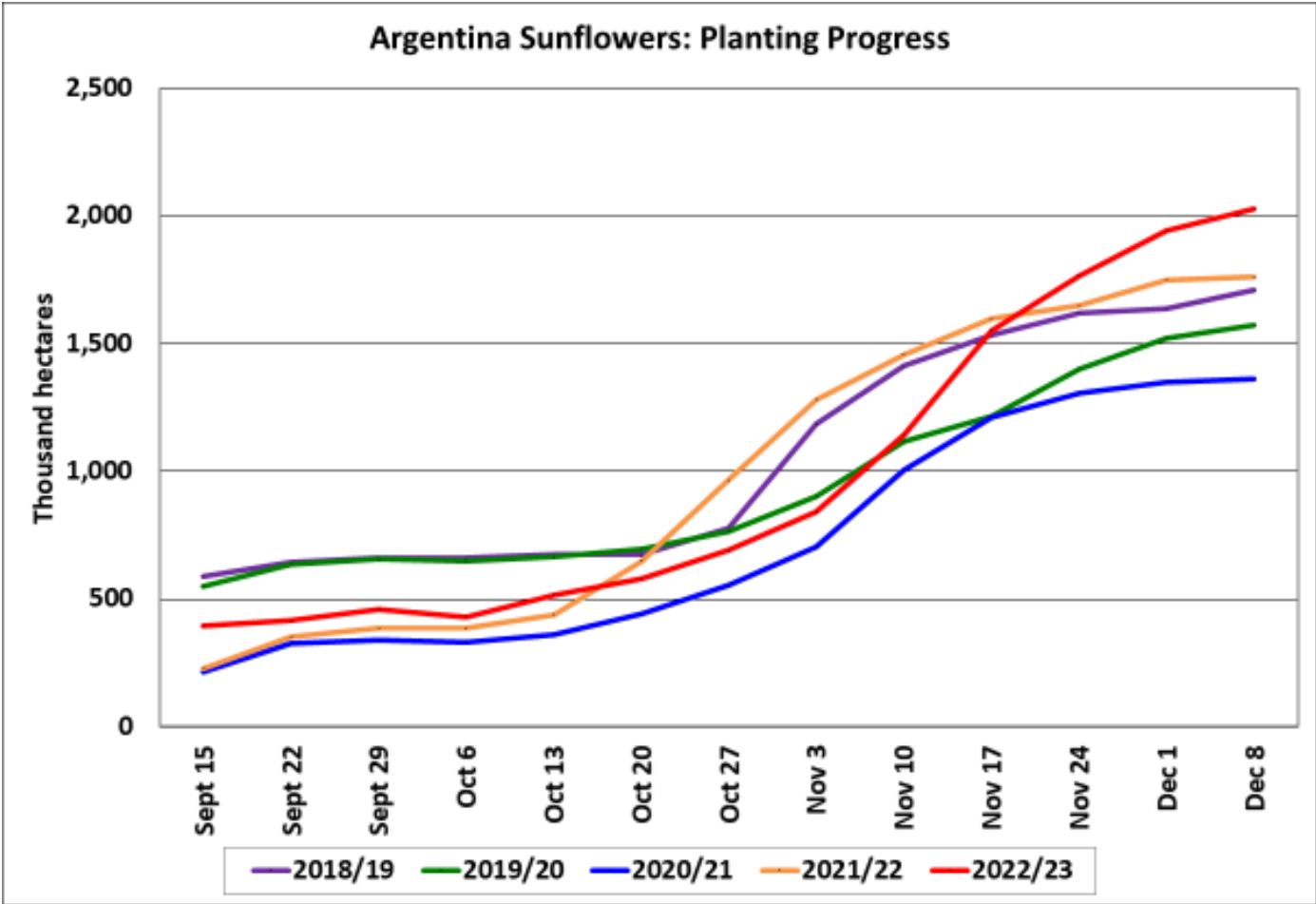
Figure 14: Irrigation Levels are Below Normal for Rice in Corrientes, Argentina

Rice is irrigated but water levels are below-normal due to the drought.
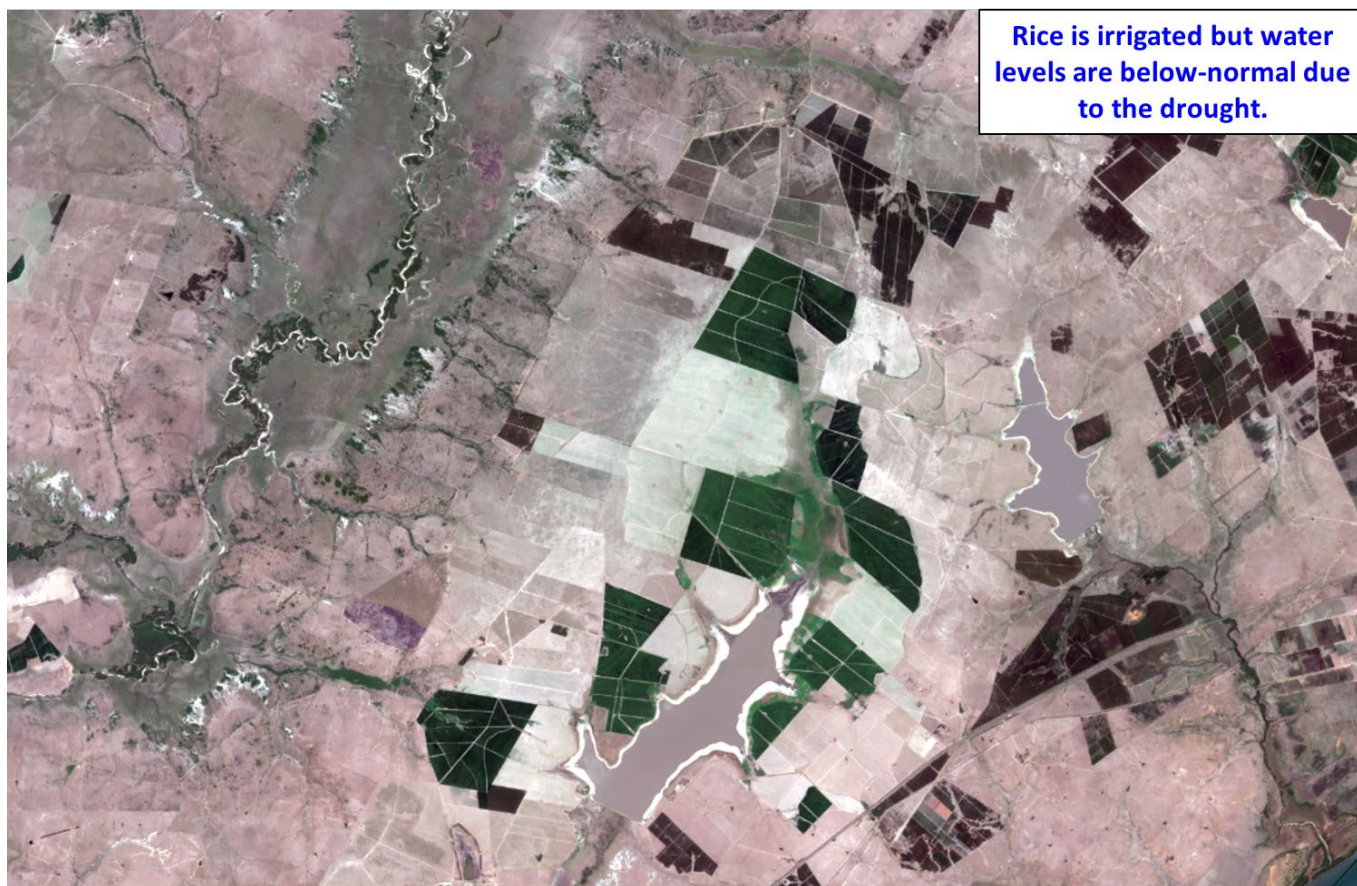
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Source: Sentinel 2, Corrientes Argentina, January 23, 2023

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Current area and production estimates for grains and other agricultural commodities are available on IPAD's Agricultural Production page:
Crop Explorer https://ipad.fas.usda.gov/cropexplorer/or

Production, Supply and Distribution Database (PSD Online):
http://apps.fas.usda.gov/psdonline/psdHome.aspx