



United States
Department of
Agriculture

Foreign
Agricultural
Service

Circular Series
WAP 9-23
September 2023

World Agricultural Production

Canada Wheat: Lower Yield due to Insufficient July Rains

USDA estimates Canada wheat production for marketing year (MY) 2023/24 at 31.0 million metric tons (mmt), down 6 percent from last month and 10 percent from last year, and 1 percent below the 5-year average. Harvested area is estimated at 10.6 million hectares, unchanged from last month, but up 5 percent from last year and 9 percent above the 5-year average. Yield is estimated at 2.92 metric tons per hectare, down 6 percent from last month, 14 percent from last year, and 9 percent below the 5-year average.



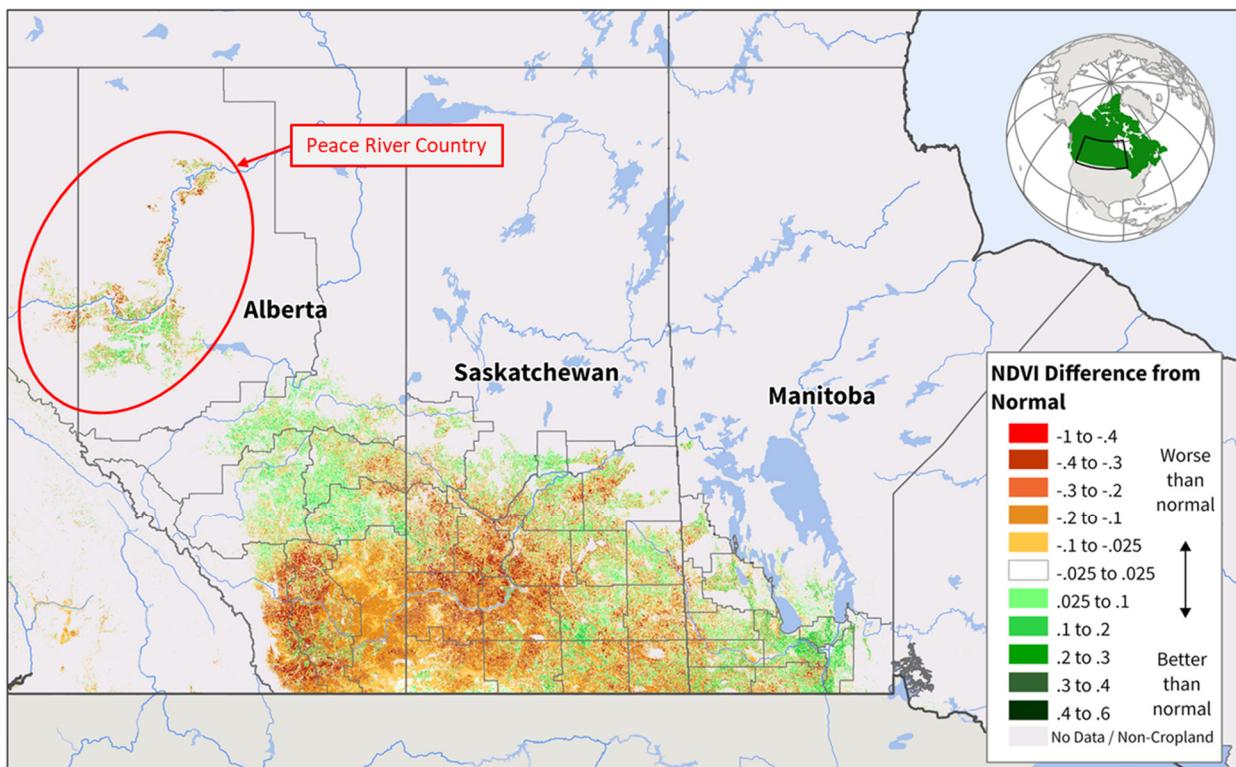
Dryness prevailed in the Canadian Prairies throughout the critical month of July, diminishing yield prospects for crops in the region. Satellite-derived Normalized Difference Vegetation Index

Approved by the World Agricultural Outlook Board

(NDVI) analysis at the end of July indicated below-average crop conditions throughout much of the Prairies, but particularly in southern Alberta and the key durum wheat growing areas of southwestern Saskatchewan. Statistics Canada recently published its first model-based production estimates for the 2023/24 crop year indicating year-to-year reductions of national spring and durum wheat yields of 20 and 25 percent, respectively.

Canada Prairies: NDVI Anomaly

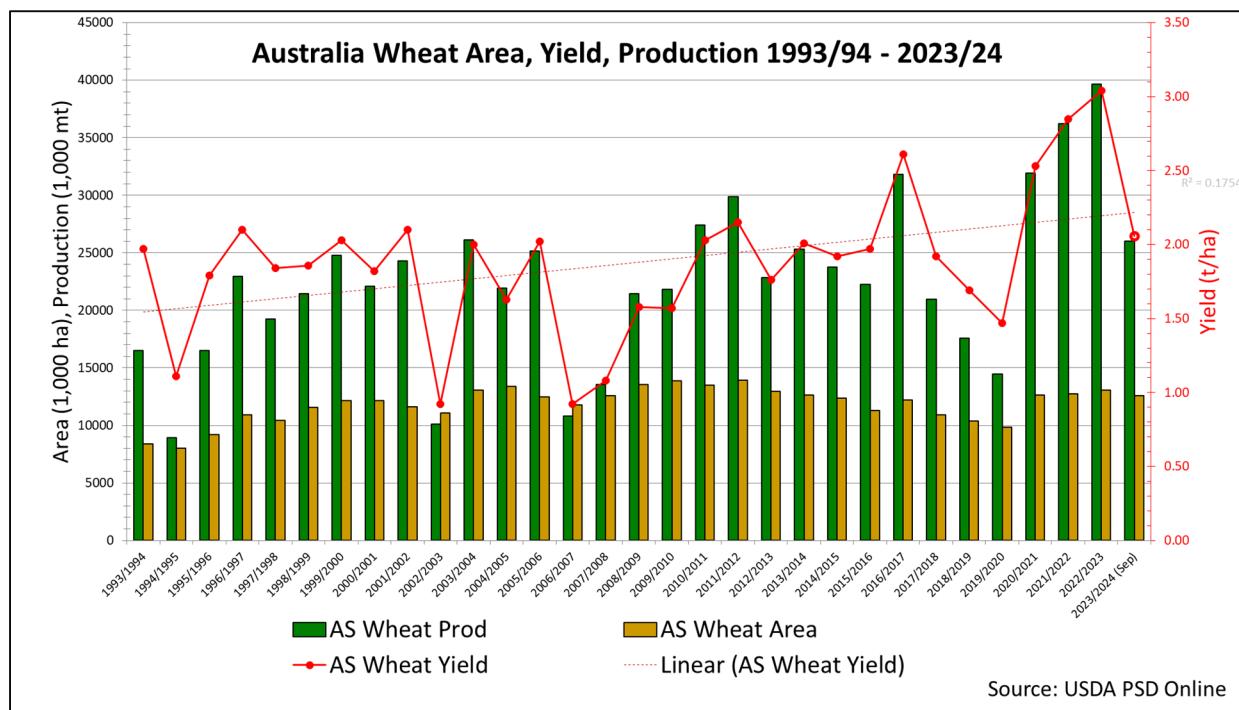
July 28 to August 4, 2023, 8-Day



Sources: NASA MODIS 8-Day NDVI Anomaly; Agriculture and Agri-Food Canada (AAFC), Annual Crop Inventory 2022 Crop Mask

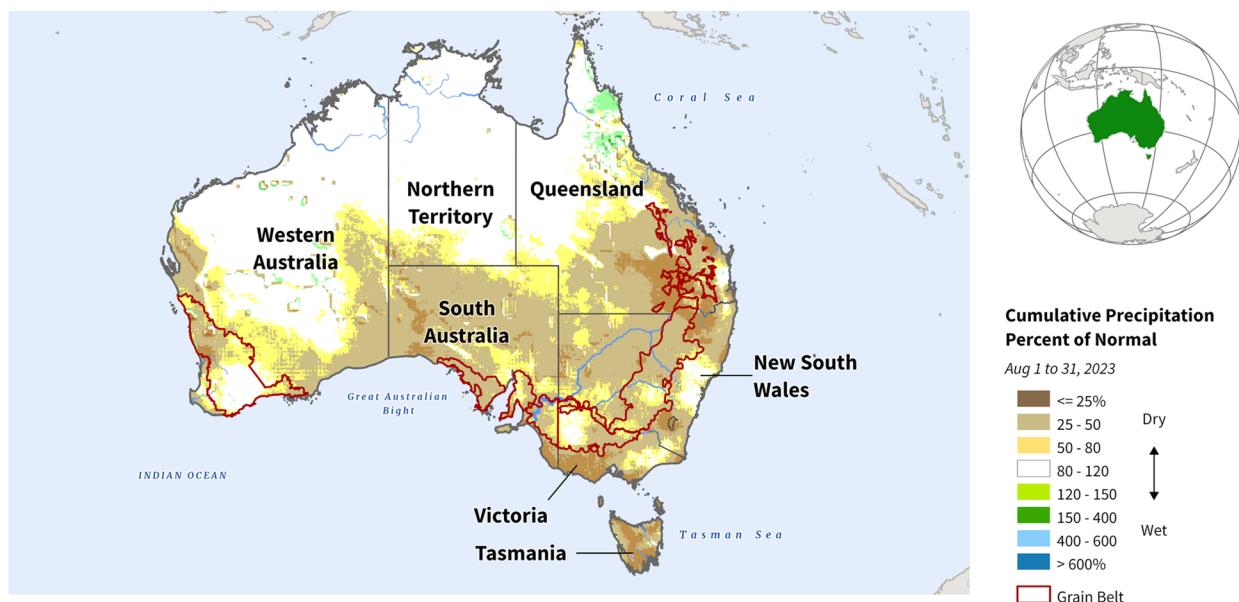
In mid-August, staff from the World Agricultural Outlook Board, FAS-Washington, and FAS-Ottawa visited the Peace River area, a region in northwestern Alberta which produces more grain than the entire province of Manitoba. Many areas of the Peace River area were dry; however, it did not suffer the intense drought experienced in the southern Prairies. Farmers from the region suggested yields would be below average this season. (*For more information, please contact Aaron.Mulhollen@usda.gov.*)

Australia Wheat: Production Forecast Lower After Extended Dryness



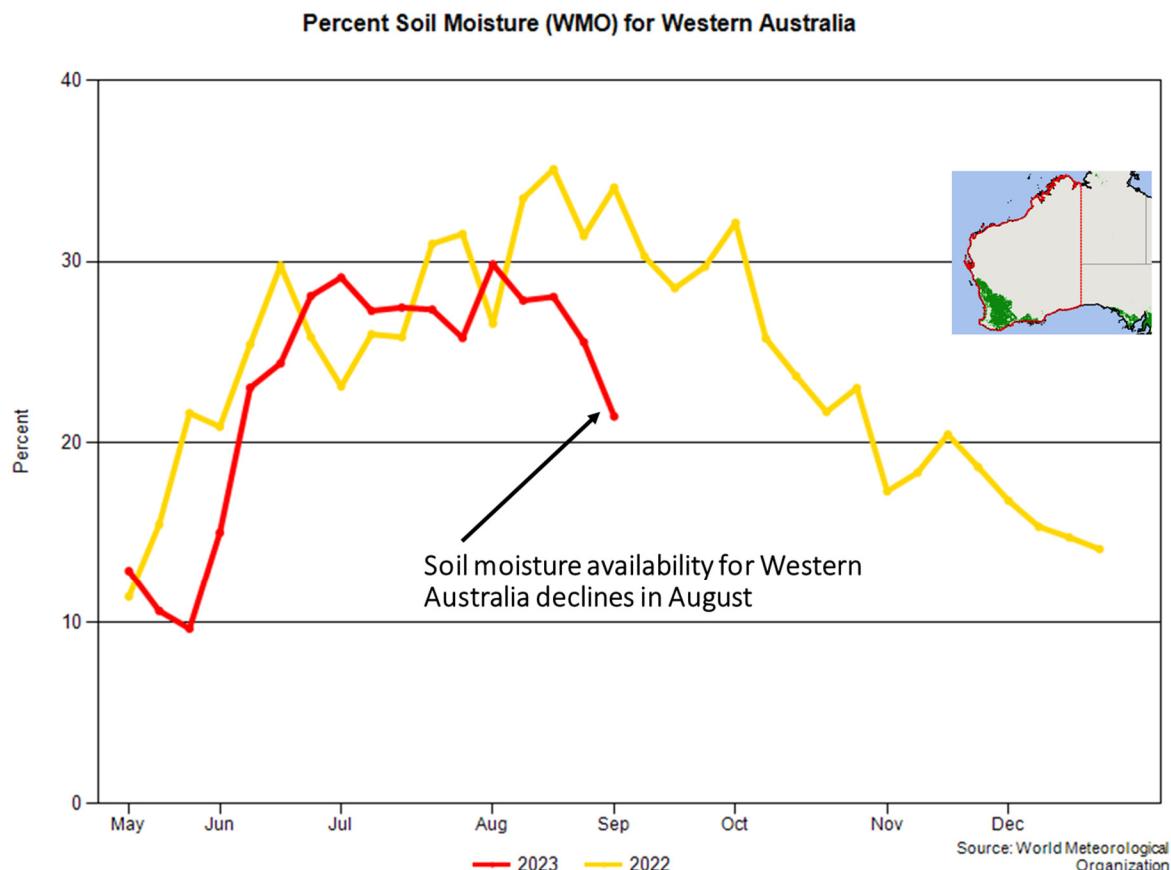
Australia wheat production for marketing year 2023/24 is forecast at 26.0 million metric tons (mmt), down 3.0 mmt or 10 percent from last month, and down 13.7 mmt or 34 percent from last year's record. Harvested area is estimated at 12.6 million hectares (mha), up 0.1 mha from last month, but down 0.4 mha or 3 percent from last year. Yield is forecast at 2.06 tons per hectare (t/ha), down 11 percent from last month, and down 32 percent from last year's record.

Australia: Percent of Normal Precipitation, August 2023



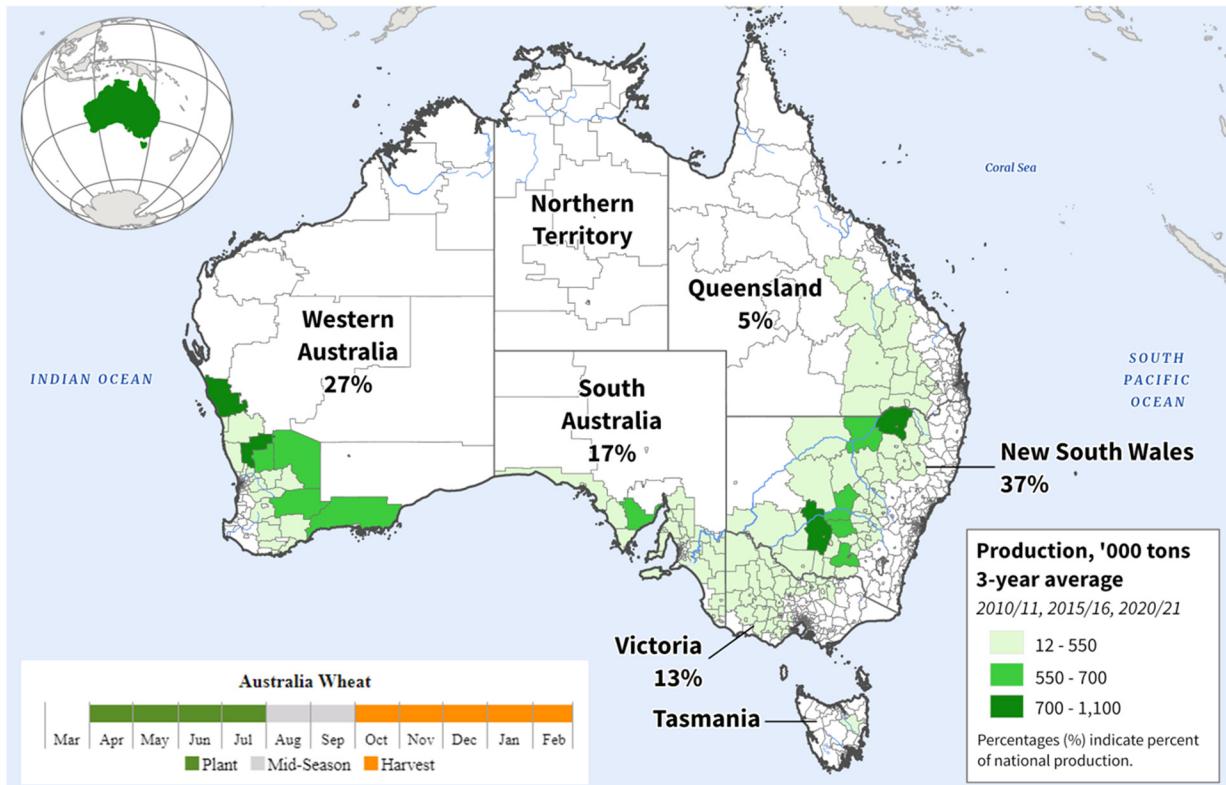
Source: USCB CHIRPS, Cumulative Precipitation Percent of Normal (August 1 to 31, 2023)

Harvested area is estimated higher in conjunction with the latest information from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) who estimate wheat area at 12.6 mha.



Australia's wheat prospects have slowly but steadily declined throughout the season after favorable rainfall in April was followed by very dry conditions in May. Favorable rains returned in June for most growing regions, however, July and August turned unusually dry. Winter crops, including wheat, entered flowering or reproduction in late August in the major producing states. The declining soil moisture began to stress the crop during this critical period. Rainfall is needed soon to sustain yield potential.

Australia: Wheat Production



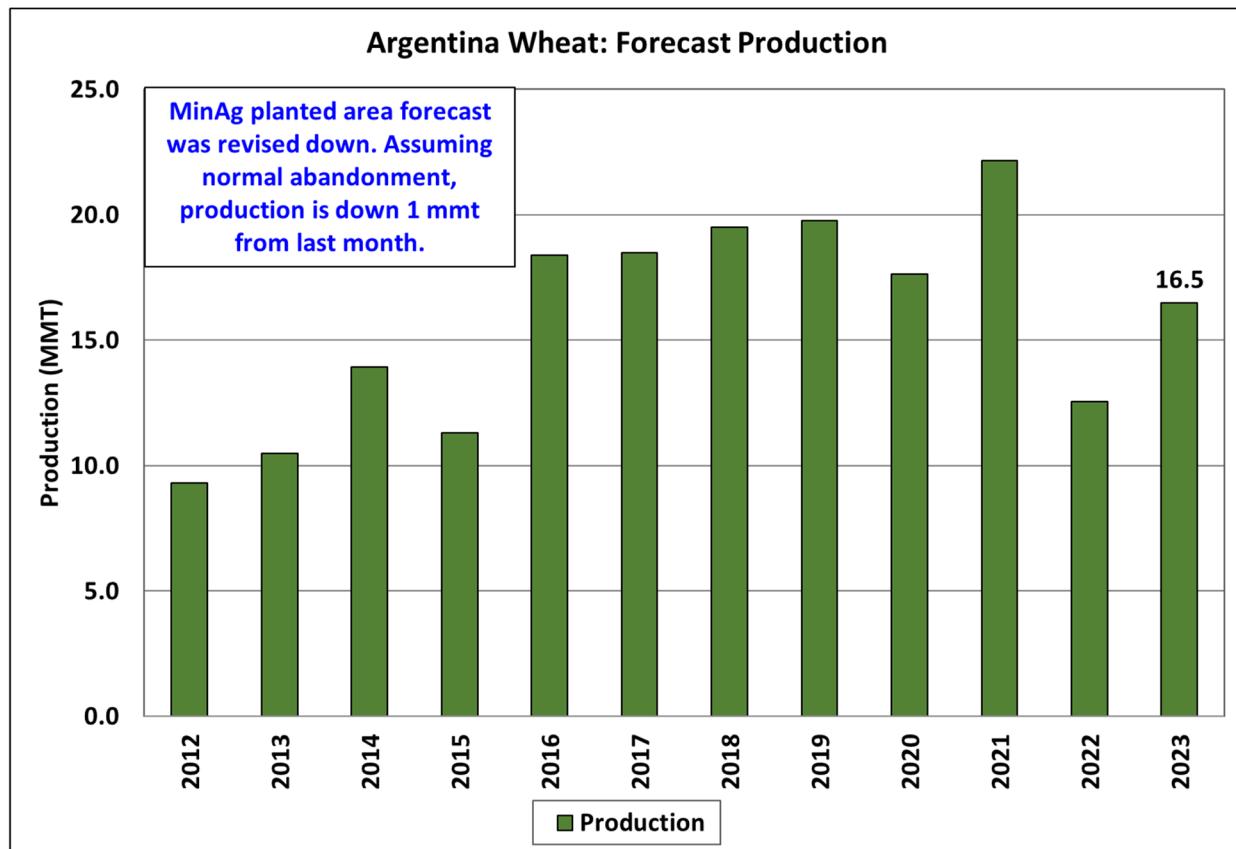
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Source: Australian Bureau of Statistics, Agricultural Censuses of 2010/11, 2015/16, and 2020/21 (2021 SA2 Boundaries)

In the east, harvesting starts in central Queensland during August and progresses down the east coast to Victoria and South Australia, finishing during January. On the west coast, the wheat harvest runs from October through January. (*For more information, please contact James.Crutchfield@usda.gov.*)

Argentina Wheat: Production Down Due to Lower Planted Area

Argentina wheat production for marketing year 2023/24 is forecast at 16.5 million metric tons, down 6 percent from last month, but up 31 percent from last year. Wheat yield is forecast at 3.00 tons per hectare, down slightly from last month, but up 31 percent from last year. Harvested area is estimated at 5.5 million hectares, down 5 percent from last month, and matching last year's area.

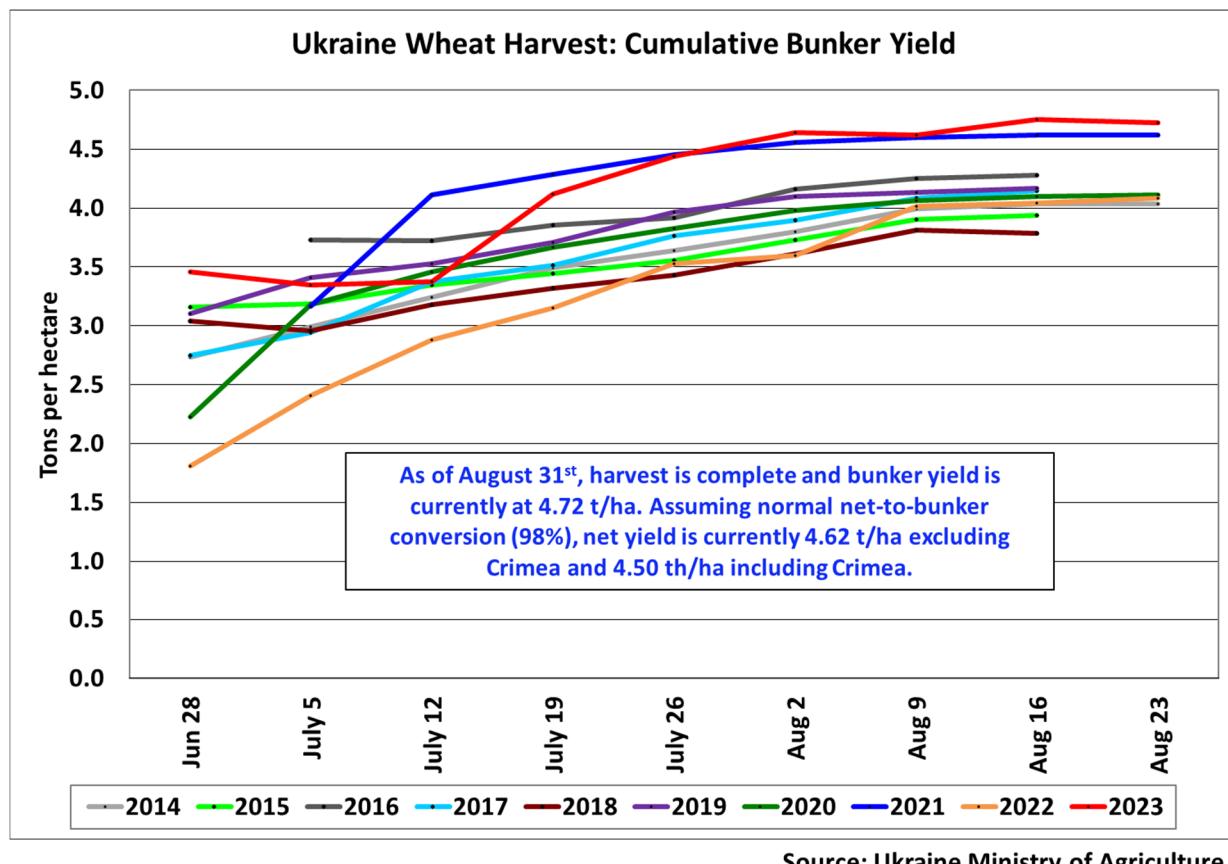


Source: USDA PSD Online

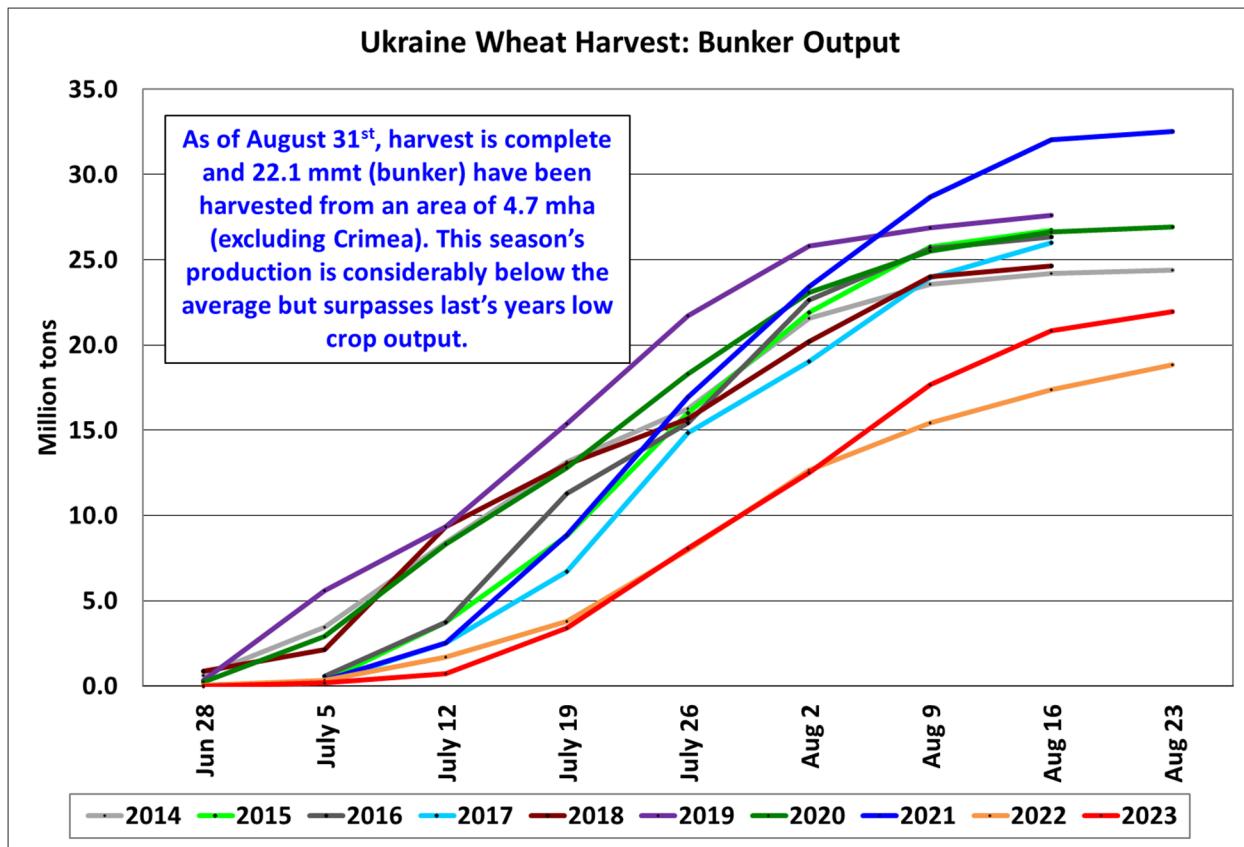
Wheat planting is complete, and area is down month-to-month because of an updated planted area forecast by the Argentina Ministry of Agriculture (MinAg). Excluding two recent years of outlier abandonment, abandonment for wheat is around 5 percent on average. Planting for wheat occurred under drier-than-average conditions, but recent rainfall boosted soil moisture. Rainfall over the next two months will be critical for crop yield development. (*For more information, please contact Katie.McGaughey@usda.gov.*)

Ukraine Wheat: Record Yield Based on Harvest Data

Ukraine wheat production for marketing year (MY) 2023/24 is estimated at 22.5 million metric tons (mmt), up 7 percent from last month and 5 percent from last year, but down 16 percent from the 5-year average. Yield is estimated at a record 4.50 tons per hectare, up 3 percent from last month and 17 percent from last year. Harvested area is estimated at 5.0 million hectares (mha), up 4 percent from last month, but down 11 percent from last year and 26 percent from the 5-year average.



This month's area and yield revisions are based on Ukraine's Ministry of Agriculture (MinAg) operational harvest data. This month MinAg increased its expected harvest area to 4.7 mha (excluding Crimea). As of August 31st, harvest is complete, and the bunker yield is at 4.72 t/ha. Harvest results indicate record yield this season. Assuming normal net-to-bunker conversion of 98 percent (based on the 5-year average, excluding 2022 because of the conflict), net yield is currently approximately 4.62 t/ha excluding Crimea and 4.50 t/ha including Crimea. USDA is excluding area under conflict in the Steppe Zone Region, where Ukraine traditionally has lower wheat yields (see below for more detail). Overall, at the end of this season's winter harvest, bunker output is higher than last year's crop, which was the lowest since 2013. This year, farmers harvested 22.1 mmt (in bunker weight and excluding Crimea), which is still substantially below average.



Winter wheat, which accounts for about 97 percent of the total wheat production in Ukraine, is typically planted between early September and mid-November. Harvest generally occurs from the end of June until mid-August.

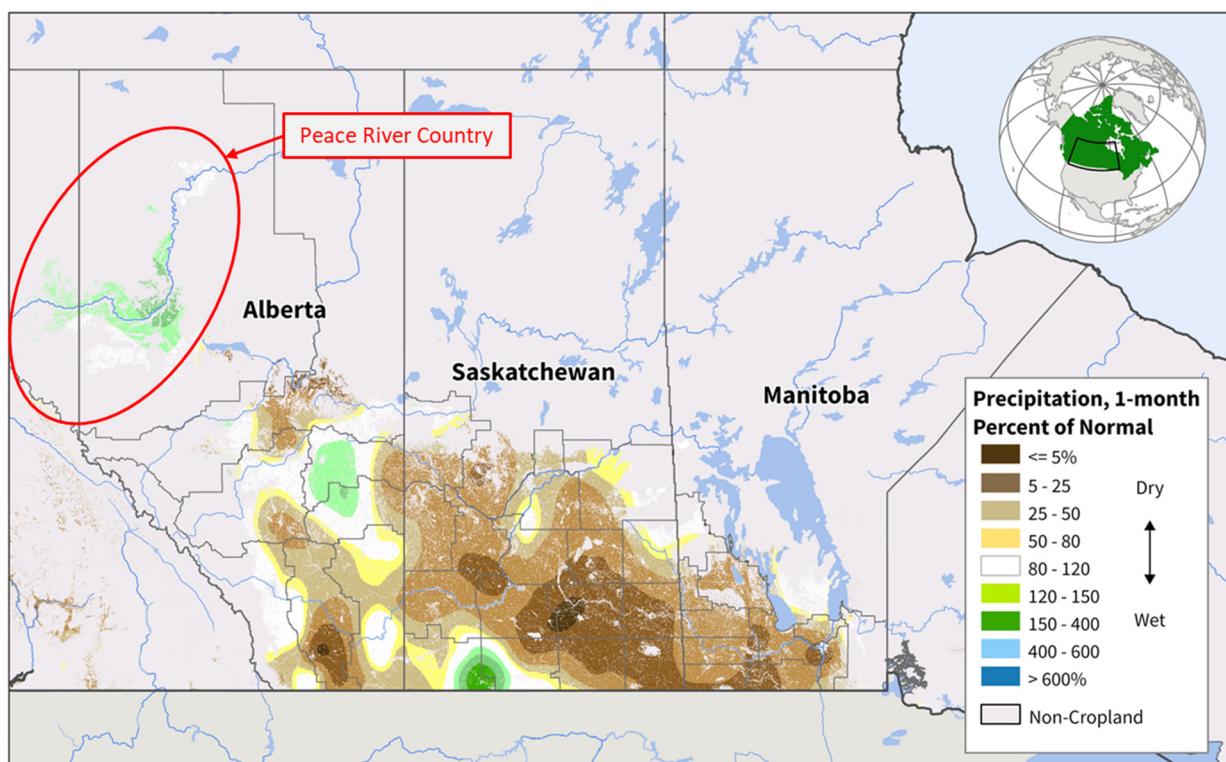
At present, Ukraine can be divided into two zones, areas in conflict and areas not in conflict. As elaborated by USDA's POST in Ukraine, due to the ongoing war, there is no official and reliable information about the status of Ukraine's agriculture in the conflict zone. As a result, area and production data currently provided by POST, Ukraine's Ministry of Agriculture (MinAg) and the State Statistical Service of Ukraine, which inform USDA's forecasts, do not reflect the whole country. For the MY 2023/24 season, the MinAg planted area information for both the MY 2023/24 winter and spring crops excludes the temporarily occupied territory of the Donetsk, Zaporizhzhia, Luhansk and Kherson regions. This is based on an official note included in the daily MinAg planting reports. MinAg also does not include Crimea. USDA crop production estimates for Ukraine include estimated output from Crimea. Crimean area and production numbers are extracted from the agricultural crop reports provided by the Russian Statistical Agency, Rosstat. (For more information, please contact Iliana.Mladenova@usda.gov.)

Canada Rapeseed: Dryness and Drought in the Prairies Reduces Crop

USDA estimates Canada rapeseed production for marketing year 2023/24 at 18.2 million metric tons (mmt), down 4 percent from last month, 3 percent from last year and 2 percent below the 5-year average. Harvested area is estimated at 8.8 million hectares, unchanged from last month, but up 2 percent from last year and 1 percent above the 5-year average. Yield is estimated at 2.07 metric tons per hectare, down 4 percent from last month, 5 percent from last year, and 4 percent below the 5-year average.

Canadian Prairies: Cumulative Precipitation Percent of Normal

July 6 to August 5, 2023

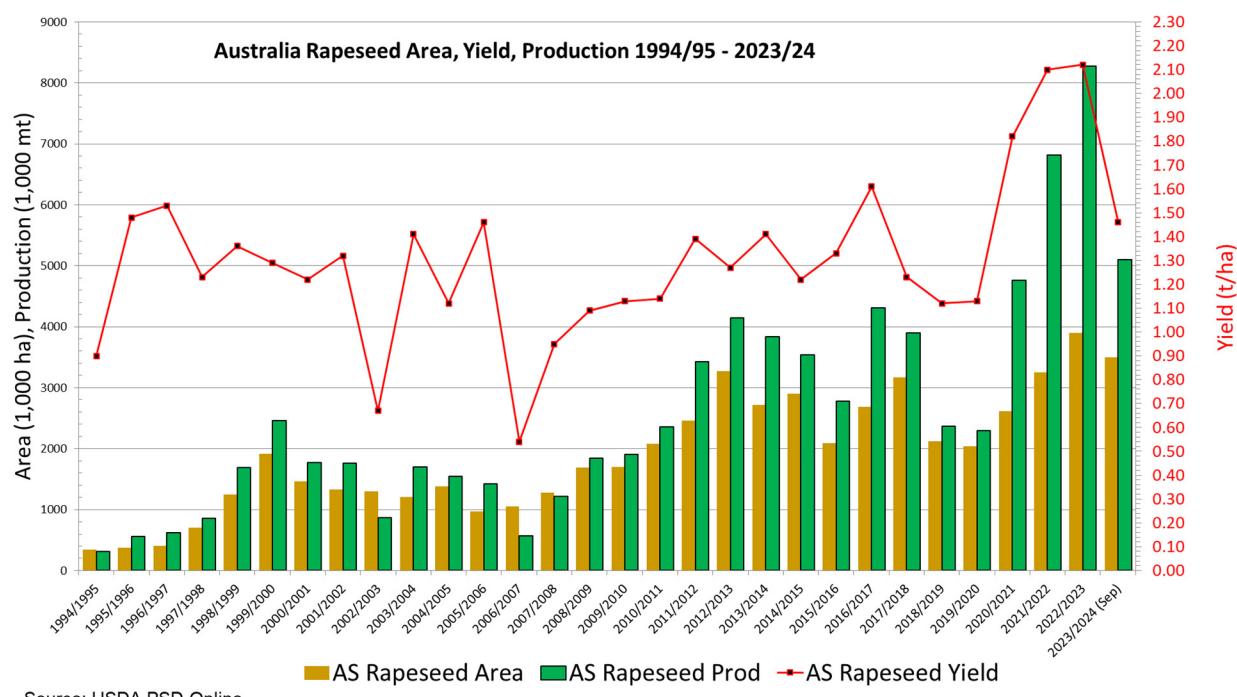


Sources: NOAA CPC 1-Month Cumulative Precipitation Percent of Normal Precipitation; Agriculture and Agri-Food Canada (AAFC), Annual Crop Inventory 2022 Crop Mask

USDA has revised downward its estimated rapeseed production for Canada as dry conditions prevailed in the Prairies during the critical month of July. Throughout the summer, provincial and industry sources noted deteriorating crop conditions as dryness intensified, and areas of drought expanded in July. More recently, Statistics Canada published its model-based estimates for July, highlighting a substantial year-to-year reduction in yield. Despite an increase in planted area this year, USDA expects production to be lower because yield will be the third lowest over the last decade. In mid-August, staff from FAS-Washington and FAS-Ottawa visited the Peace River area in Alberta, the northern-most growing area in Canada. (*For more information, please contact Aaron.Mulhollen@usda.gov.*)

Australia Rapeseed: Production Revised Up

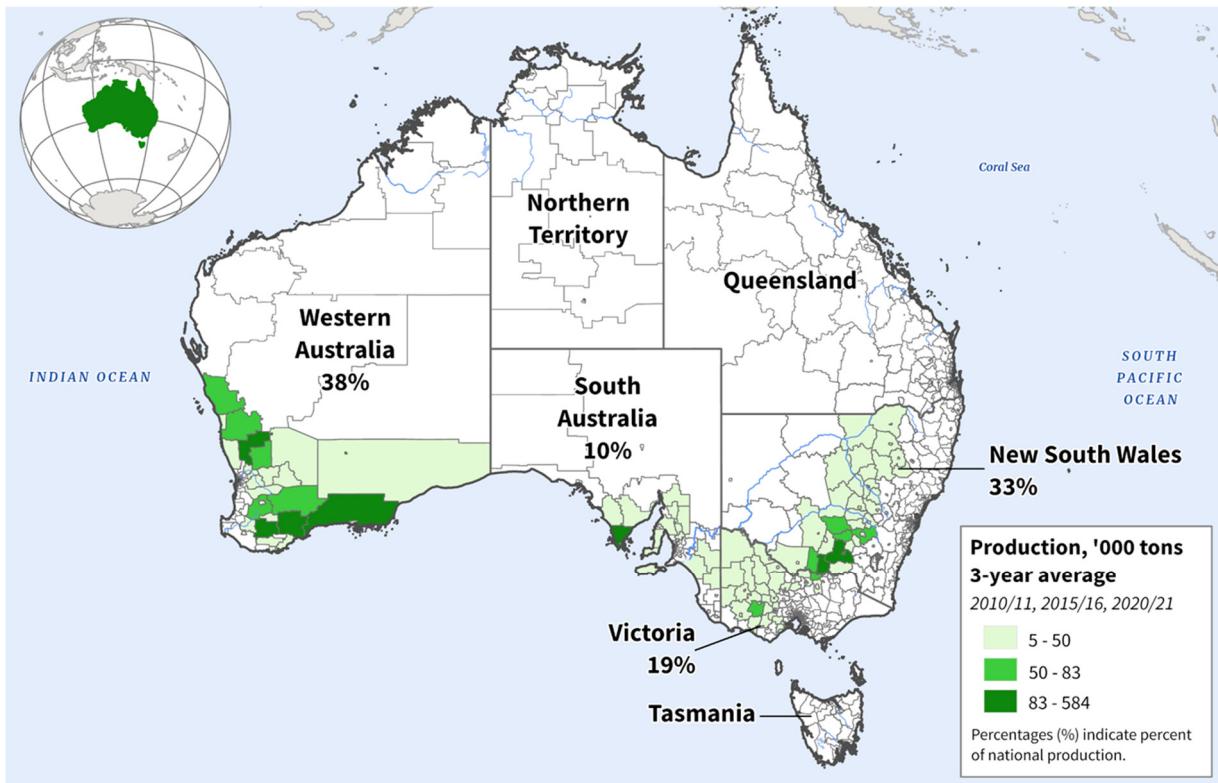
Australia rapeseed production for marketing year 2023/24 is forecast at 5.1 million metric tons (mmt), up 0.2 mmt or 4 percent from last month, and down 3.2 mmt or 38 percent from last year's record. Harvested area is estimated at 3.5 million hectares (mha), unchanged last month but down 0.4 mha or 10 percent from last year. Yield is forecast at 1.46 tons per hectare (t/ha), up 4 percent from last month, but down 31 percent from last year's record.



Source: USDA PSD Online

Production is revised higher in conjunction with the latest information from the Australian Bureau of Agricultural and Resource Economics and Sciences (ABARES) who estimate rapeseed production at 5.15 mmt. The production forecast is well above the 10-year average on account of planted area, estimated to be the second highest on record.

Australia: Rapeseed Production



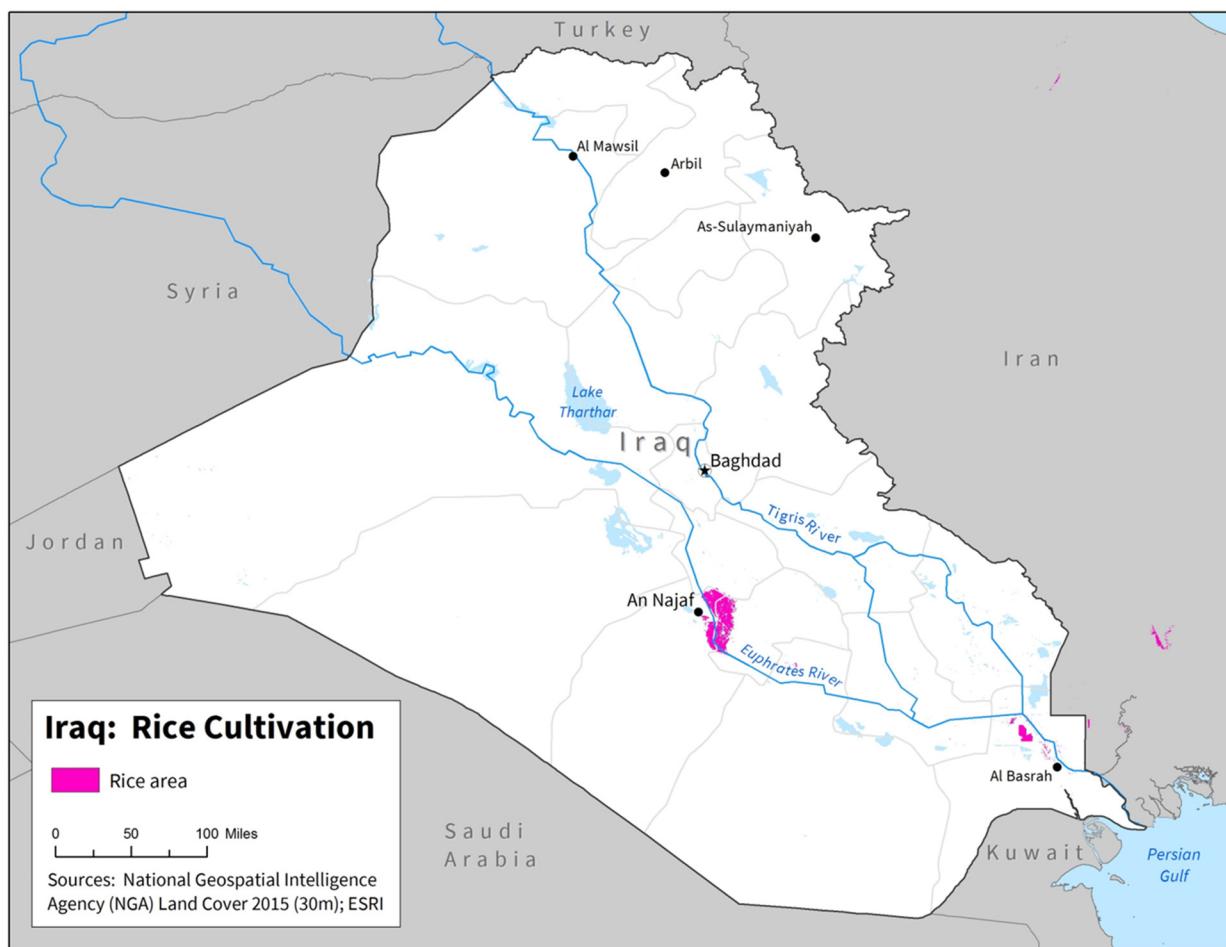
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Source: Australian Bureau of Statistics, Agricultural Censuses of 2010/11, 2015/16, and 2020/21 (2021 SA2 Boundaries)

Rapeseed producing states of Western Australia and South Australia had a favorable start to the crop season, with early rains and above-average levels of soil moisture across most cropping regions which encouraged producers to plant early. As a result, the early sown rapeseed crops are at a more advanced stage than cereals. This advanced stage reduces the likelihood of heat shock in spring and favors retaining yield potential.

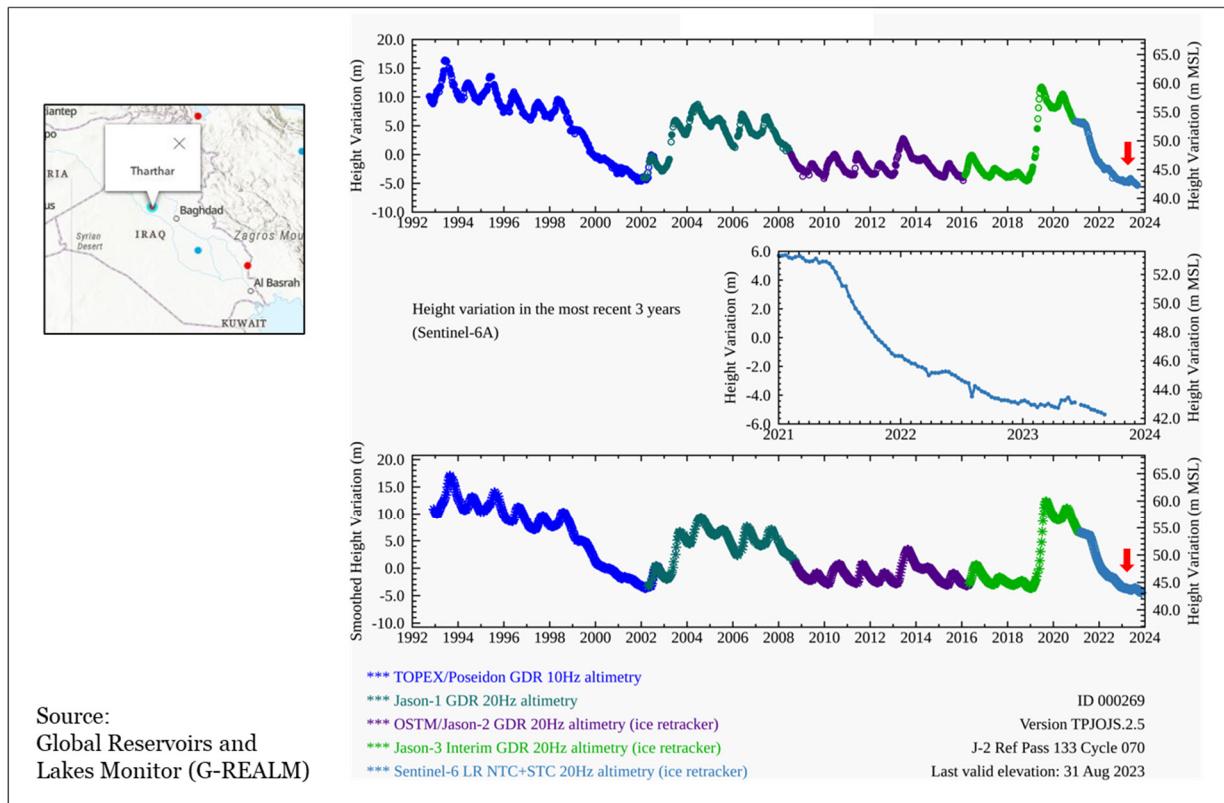
Rapeseed sowing commenced in April and continued into June. Rapeseed production is distributed across the four main agricultural producing states. Western Australia produces the largest portion of Australia's rapeseed with 38 percent (3-year average) and the remaining production is split among New South Wales (33 percent), Victoria (19 percent) and South Australia (10 percent). *(For more information, please contact James.Crutchfield@usda.gov.)*

Iraq Rice: Government Restrictions on Rice Production Continue Due to Water Shortages



USDA forecasts Iraq rice production (milled basis) for marketing year (MY) 2023/24 at 20,000 metric tons (mt), down 85 percent from last month, unchanged from last year, and 89 percent below the 5-year average. Harvested area is estimated at 8,000 hectares, down 84 percent from last month, unchanged from last year, and 87 percent below the 5-year average. Yield (rough basis) is forecast at 3.75 metric tons per hectare, down 10 percent from last month, unchanged from last year, and 10 percent below the 5-year average.

Lake Tharthar Water Levels



Rice is primarily grown in Iraq under irrigation from the Euphrates River, near the city of An Najaf. Media reports indicate that water levels in both the Tigris and Euphrates rivers are near record lows, as rainfall has been limited in recent years, and outflows from neighboring Turkey and Syria have been limited. Analysis using the Global Reservoirs and Lakes Monitor (G-REALM) indicates the water level in Lake Tharthar is among its lowest in the last 30 years. The reservoir in northern Iraq was built to manage water flows in the Tigris and Euphrates by collecting excess water during flood periods and releasing water into the rivers during dry seasons. The Iraqi government announced restrictions on rice cultivation in May 2022, due to water shortages, which resulted in an over 90 percent year-to-year reduction in rice production for the MY 2022/23 season. Despite early season rains in 2023, water shortages remain, and the government renewed its restriction for 2023. (*For more information, please contact Aaron.Mulhollen@usda.gov.*)

India Rice: Production Revised Lower Due to Below-Average Rainfall

USDA forecasts India rice production for marketing year 2023/24 at 132.0 million metric tons (mmt) (milled basis), down 1 percent from last month and nearly 3 percent from last year. Harvested area is forecast at 47.0 million hectares (mha), unchanged from last month and down 1 percent from last year. Yield (rough basis) is expected to reach 4.21 tons per hectare, down 1 percent from last month and last year.

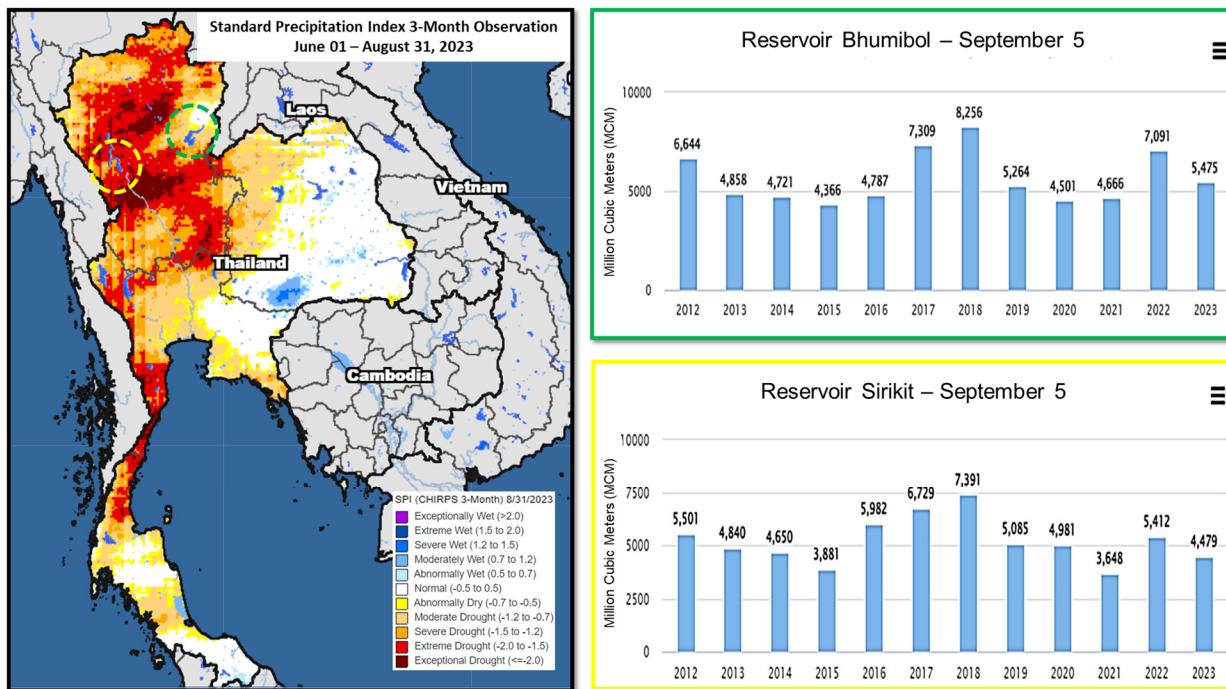


The 2023 southwest monsoon is poised to be the lowest in 8 years. For the entire country, the rainfall deficit was at least 8 percent below the long-term average, as of September 1. Although the southwest monsoon started on time, rainfall has been uneven for much of the season, with August being one of the driest on record. The two areas of concern include the Indo Gangetic Plain in the east, which consist of Uttar Pradesh, Bihar, Jharkhand, West Bengal, and Odisha, and the northwest states of Punjab and Haryana. The Indo Gangetic Plain, which comprises about 30 percent of the total *kharif* crop, experienced below-normal rainfall as the crop entered the vegetative stage in August. However, in the northwest (Punjab and Haryana), farmers experienced too much rainfall and had to replant in late July. In late-August, FAS-Washington and FAS-New Delhi staff travelled in northwest India visiting rice fields and discussing current crop conditions with farmers and industry sources. Currently, the crop is at vegetative stage and in good condition in northwest India. The southwest monsoon withdrawal typically will start around mid-September and farmers are hoping for improved rainfall.

Rice is grown in the both the *kharif* and *rabi* season. Early planted rice is being harvested. (*For more information, please contact Arnella.Trent@usda.gov.*)

Thailand Rice: Extended Dryness Lowers Production Estimates for Second Season Crop

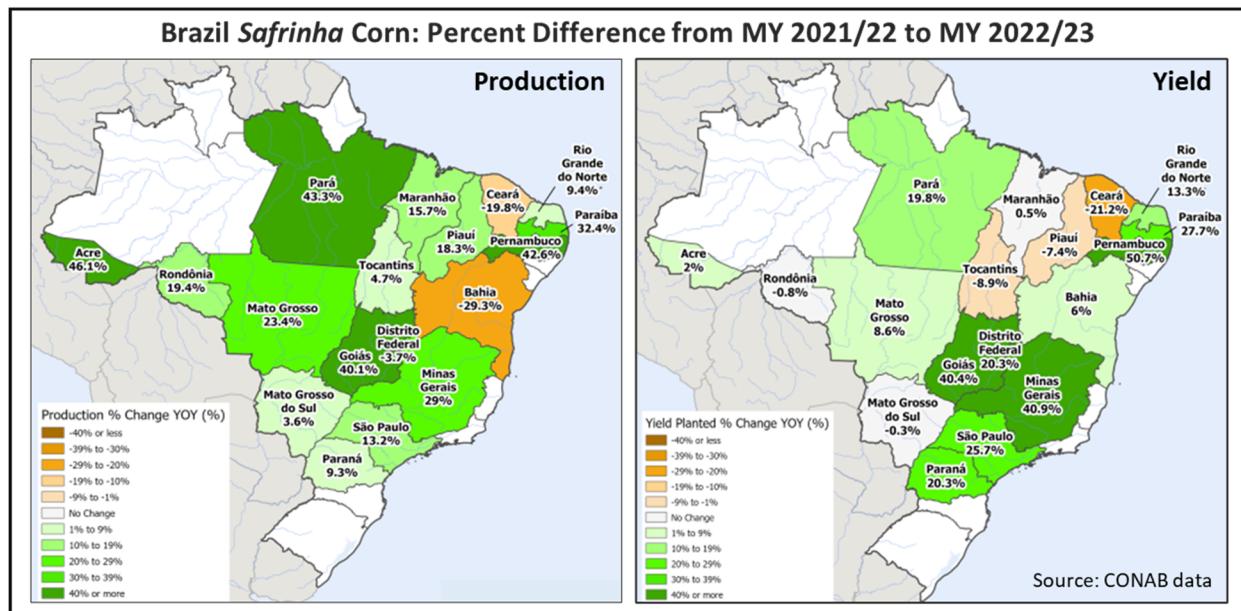
USDA estimates Thailand rice production for marketing year 2023/24 at 19.5 million metric tons (milled basis), down 1 percent from last month and down 7 percent from last year. Harvested area is estimated at 10.6 million hectares, unchanged from last month but down 4 percent last year. Yield (rough basis) is estimated at 2.79 tons per hectare, down 1 percent from last month and 3 percent from last year.



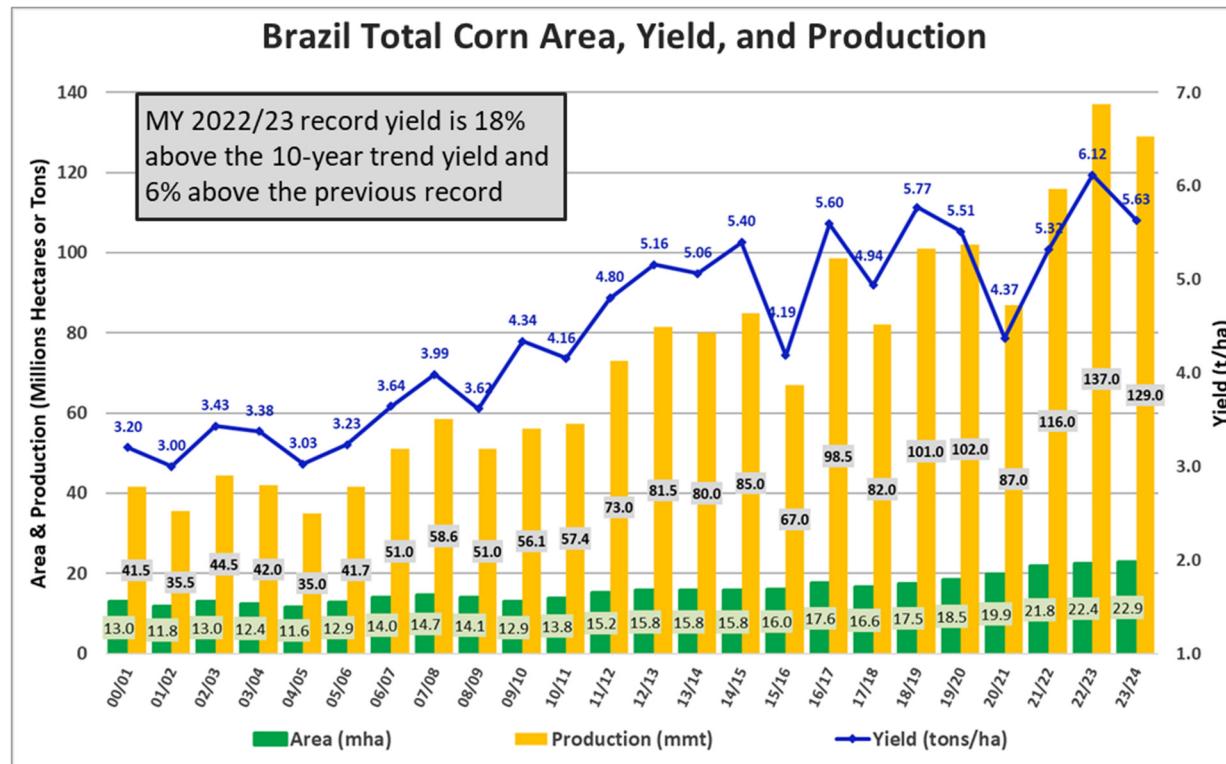
Sources: USCB CHIRPS; Thailand Royal Irrigation Department (RID)

Thailand rice is cultivated in two seasons. The first or main season rice begins in May and is harvested in November and the second season begins in December and is harvested in March. Main season rice development is contingent on seasonal rainfall and is predominantly cultivated in the Northeast region. After a stint of early dryness to begin the main rice season crop, which led to a decline in cultivated area, rice progressed under ideal conditions throughout the rest of the growing cycle. Second season rice is predominantly irrigated and draws its water supply resources from the main two reservoirs, Sirikit and Bhumibol located in Thailand's North region. Sirikit and Bhumibol reservoirs provide roughly 80 percent of the second rice season crop's water supply. Seasonal rainfall in the North region underperformed, which has depleted reservoir water levels. According to Thailand's Royal Irrigation Department as of September 5, 2023, both Sirikit and Bhumibol reservoirs are down 17 percent and 23 percent year-to-year, respectively. The Thailand government has advised farmers to limit rice cultivation to conserve water resources for other uses. (For more information, please contact Justin.Jenkins@usda.gov.)

Brazil Corn: Center-West Yields Push Record Production Higher for MY 2022/23



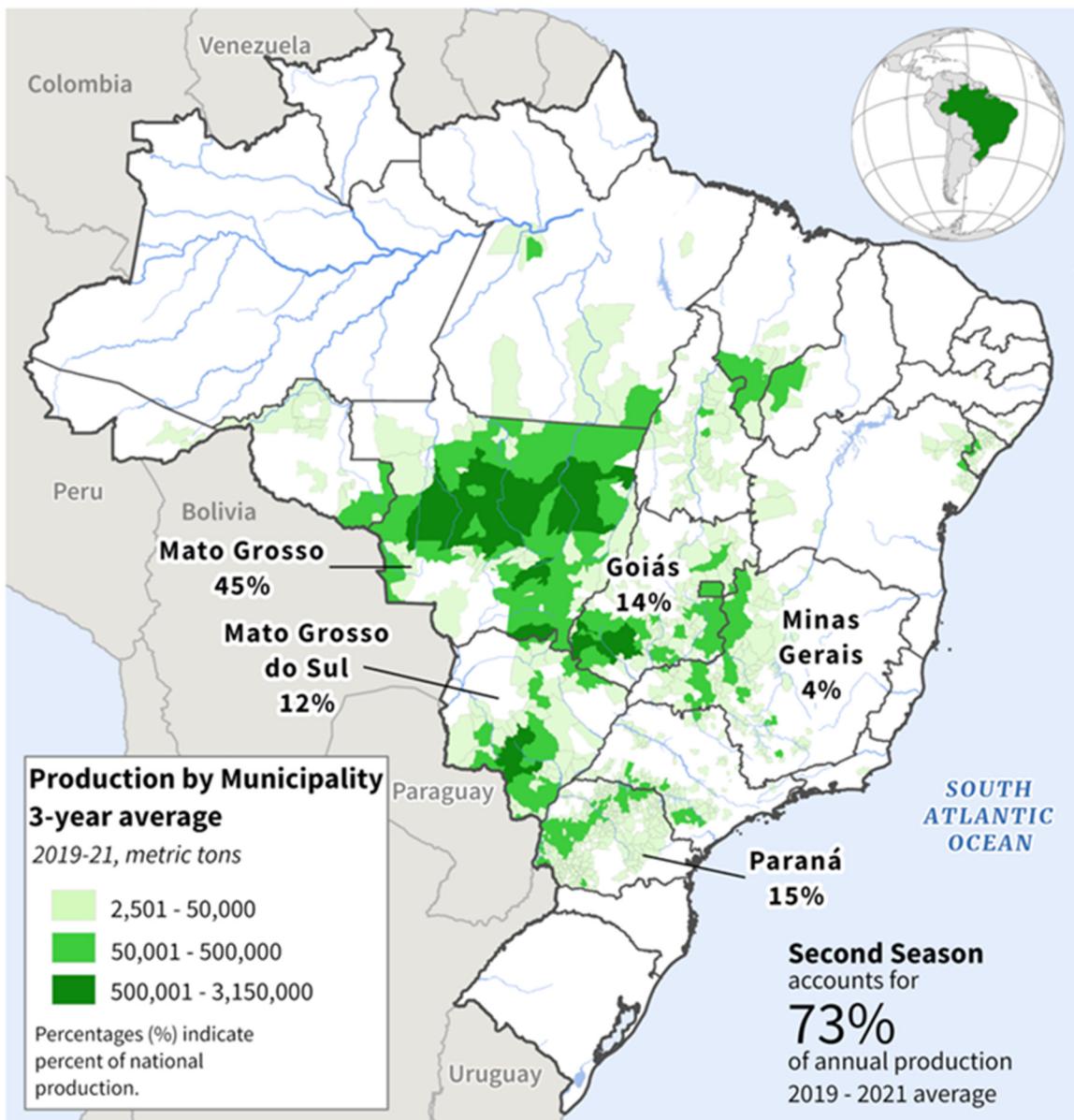
Brazil total corn production for marketing year (MY) 2022/23 is estimated at a record 137.0 million metric tons (mmt), up 2.0 mmt (1 percent) from last month, and larger than the MY 2021/22 crop by 21.0 mmt (18 percent). Total harvested area, for all three corn crops, was revised down to 22.4 million hectares (mha), lower by 0.1 mha (less than 1 percent) from last month, and higher by 0.6 mha (3 percent) from MY 2021/22. Yield increased to a record of 6.12 tons per hectare, 2 percent higher than last month, 15 percent above the previous year's crop, and 6 percent above the previous record yield set in MY 2018/19.



Source: USDA PSD Online

The first crop corn harvest was concluded, and the second crop harvest is at 89 percent as of early September. The key center-west states of Mato Grosso (half of *safrinha* crop production), Goiás, and Minas Gerais report excellent yields. Even the later planted crop resulted in better-than-expected yields, particularly in the state of Mato Grosso. The *Instituto Mato-Grossense de Economia Agropecuária* (IMEA) boosted area, yield, and production data for the state from the previous month. Mato Grosso *safrinha* production is now over 52.5 mmt (2.4 mmt larger than last month) and yield is at 7.01 t/ha based on a record area and ideal weather conditions throughout the season.

Brazil: Second Season Corn Production



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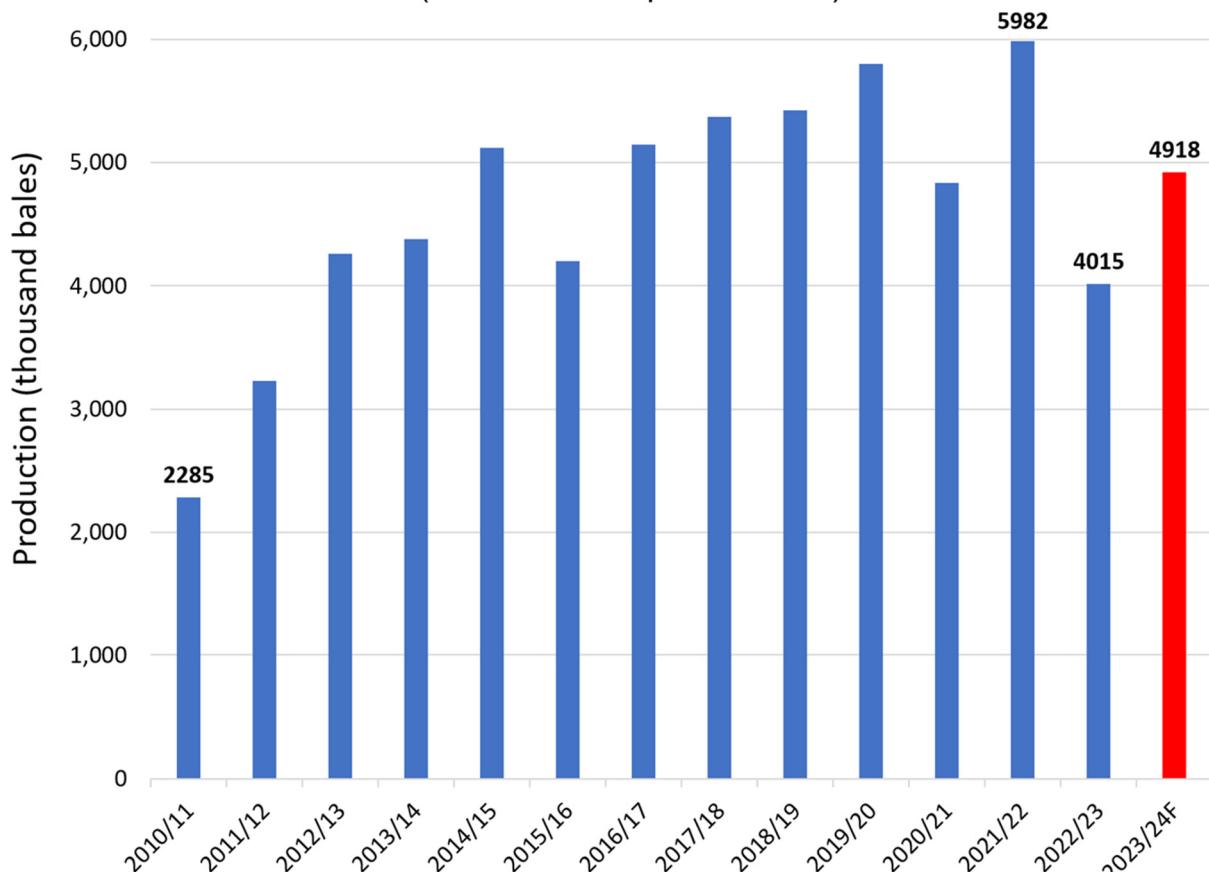
Source: IBGE - Produção Agrícola Municipal

Harvest in Paraná and Mato Grosso is delayed due to a late planted crop. Yield expectations remain positive in Paraná; however, severe storms with heavy rain and hail caused lodging and significant damage in several municipalities of southeastern Mato Grosso do Sul. The *Federação da Agricultura e Pecuária de Mato Grosso do Sul* (FAMASUL) reports that 15,000 hectares were impacted and that the damaged corn may need to be manually harvested. Nevertheless, with year over year yield gains in several states, production continues to rise. Conditions for the third crop are mostly favorable except for the shortfall of rain in eastern Bahia. (For more information, please contact Sunita.Yadav-Pauletti@usda.gov.)

African Franc Zone Cotton: Decline in Planted Area Reduces Production Prospects

USDA forecasts African Franc Zone cotton production for marketing year (MY) 2023/24 at 4.92 million 480-pound bales, down 0.4 million bales (8 percent) from last month, up 0.9 million bales (22 percent) from last year's *jassid* leafhopper-infested crop, and down 1.1 million bales (18 percent) from the MY 2021/22 record crop. Harvested area is forecast at 2.72 million hectares, down 226,000 hectares (8 percent) from last month, and down 57,000 hectares (2 percent) from last year. The forecast yield of 394 kilograms per hectare is nearly equal to the 5-year average yield.

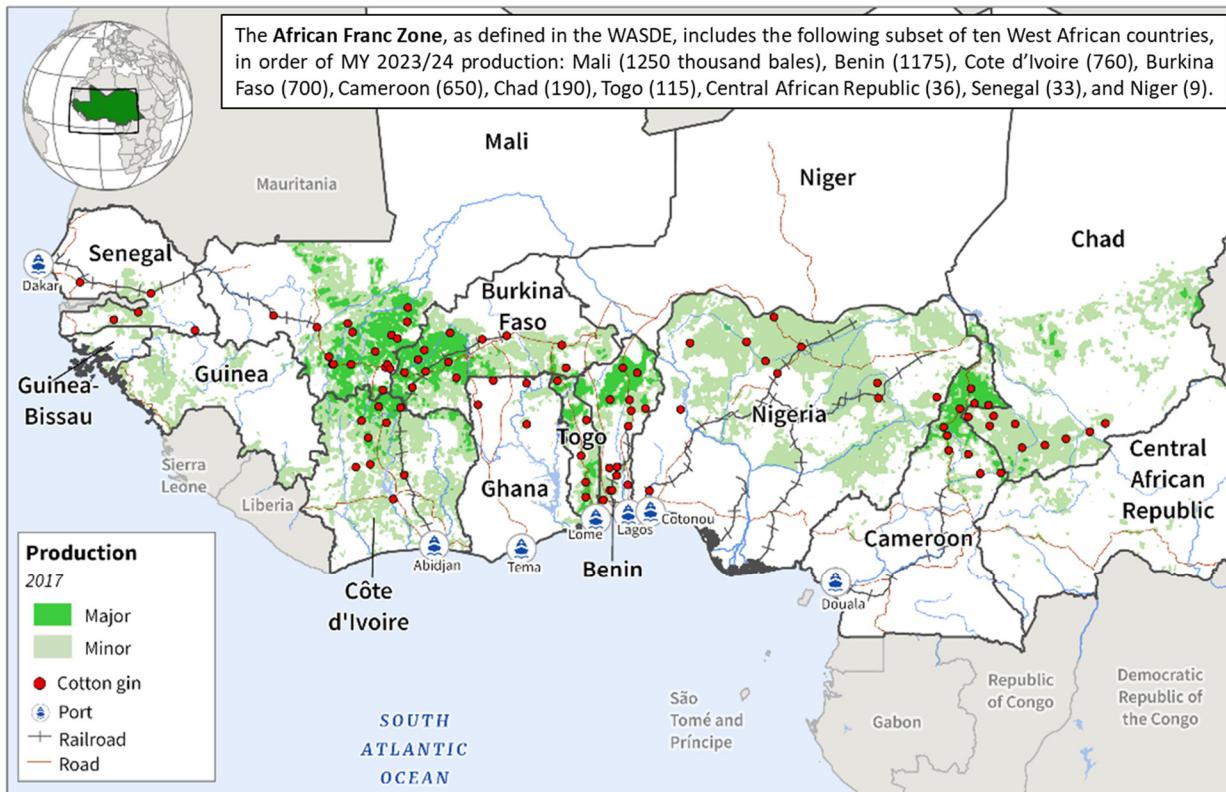
African Franc Zone Lint Cotton Production (thousand 480-pound bales)



Source: USDA PSD Online

USDA's African Franc Zone region comprises the following ten West African countries in order of 2023/24 production: Mali (1250 thousand bales), Benin (1175), Côte d'Ivoire (760), Burkina Faso (700), Cameroon (650), Chad (190), Togo (115), Central African Republic (36), Senegal (33), and Niger (9).

West Africa Cotton Production



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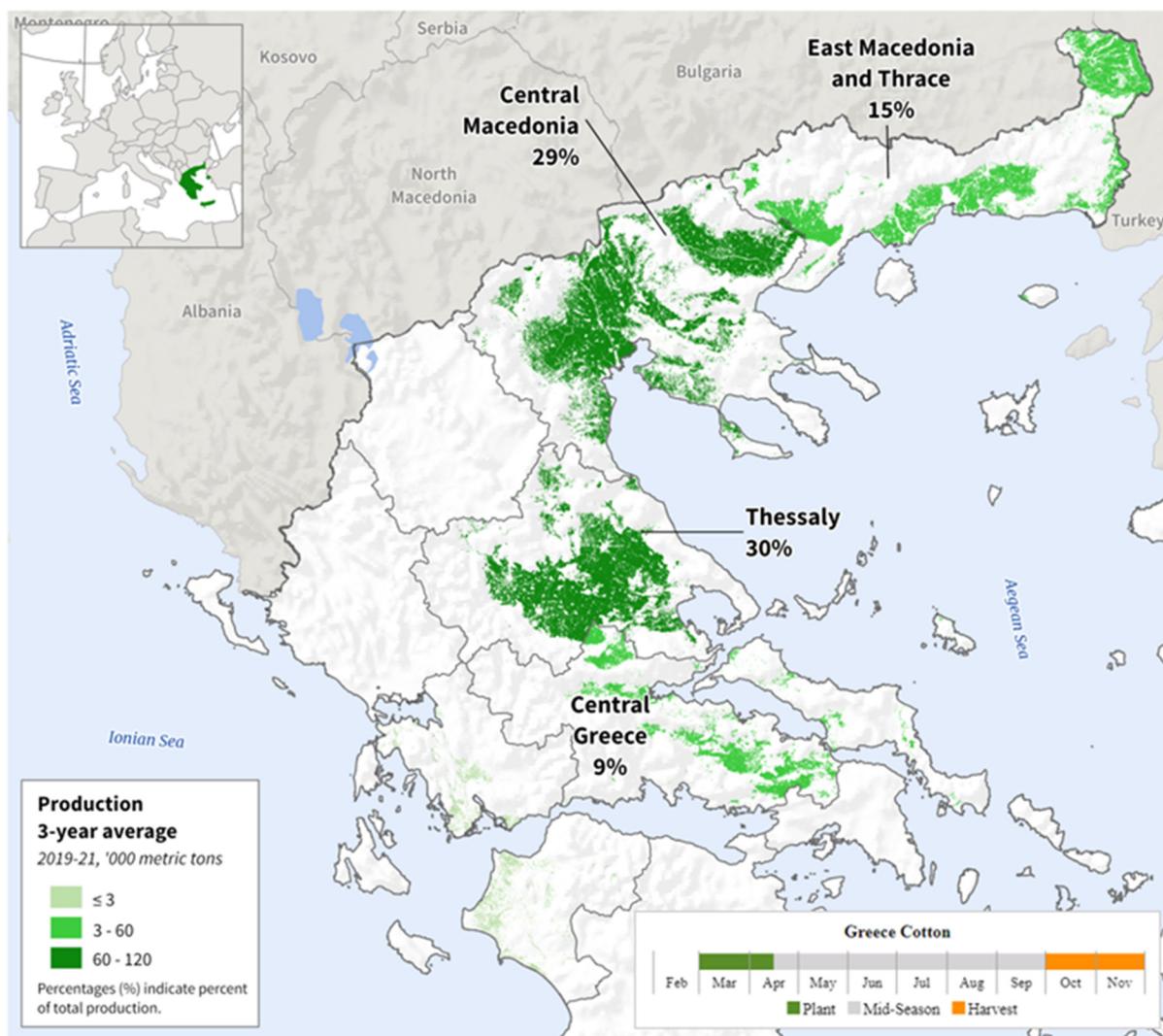
Source: International Food Policy Research Institute,
Spatial Production Allocation Model 2017.

Mali planted the largest area of 700,000 hectares (ha), followed by Benin (530,000 ha), Burkina Faso (490,000 ha), and Côte d'Ivoire (390,000 ha). Burkina Faso had the largest area reduction compared to last year (down 128,000 ha or 21 percent) due to insecurity in the eastern part of the country (Société Cotonnière du Gourma zone) which led to displacement of producers, limited access to farms, and prevented the distribution of inputs. Benin had the second largest area reduction compared to last year (down 43,000 ha or 8 percent) because some producers abandoned cotton in favor of planting soybeans or corn. Côte d'Ivoire's planted area was also less than last year (down 21,000 ha or 5 percent) due to some cotton producers switching to food crops because severe *jassid* leafhopper infestations reduced last year's cotton yields and harvested area.

Cotton is sown from May to July, while average planting progress is approximately 1 percent of the crop planted in May; 70 percent planted in June; and the remaining almost 30 percent planted in July. Seasonal rainfall from June through August was average to above average for most countries and well distributed. Crop conditions in late August were average to above average as indicated by satellite-derived Percent of Average Seasonal Greenness (PASG) and Normalized Difference Vegetation Index (NDVI) measurements. Cotton bolls will start to open in early September and the cotton harvest ranges from October through December. (*For more information, please contact Curt.Reynolds@usda.gov.*)

Greece Cotton: Historic Storm Inundates Cotton Crop

Greece: Cotton Production



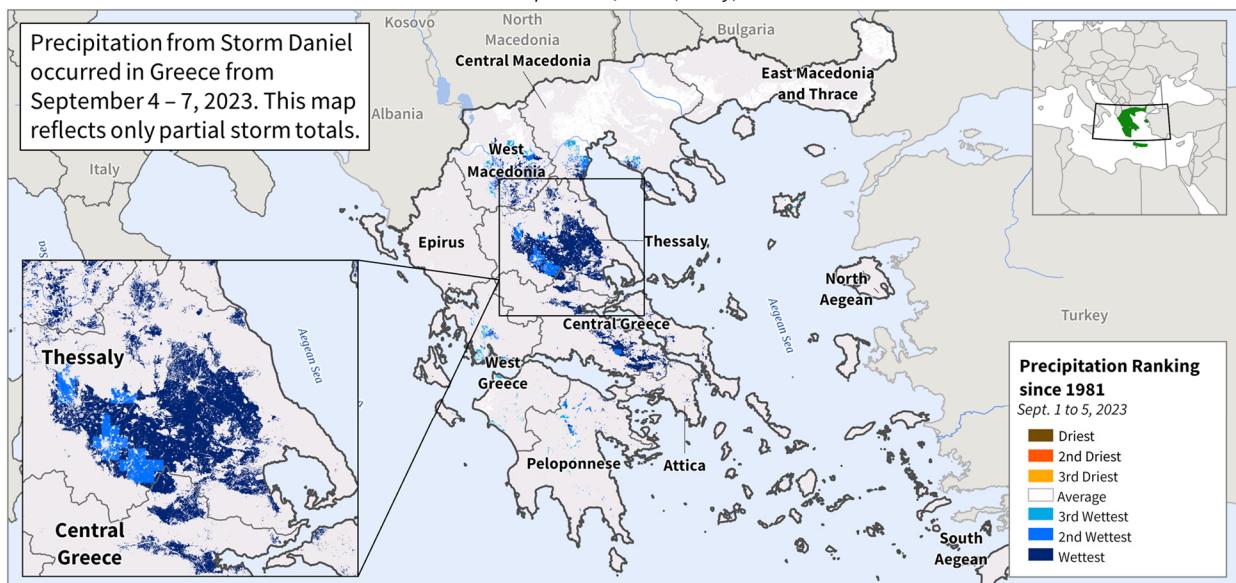
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Sources: Eurostat; ESA Worldcover 10m 2021 Crop Mask;
NACIS Shaded Relief 110m

USDA forecasts Greece cotton production for marketing year (MY) 2023/24 at 1.1 million 480-pound bales, down 18 percent from last month and down 26 percent from last year. The crop is also down 27 percent below the 5-year average. Yield is forecast at 1,109 kilograms per hectare, down 6 percent from last month, 10 percent from last year, and 8 percent from the 5-year average. Area is estimated at 210,000 hectares (ha), down 13 percent from last month, 18 percent from last year and 21 percent from the 5-year average. Greece produces 84 percent of the European Union's (EU) 5-year average production, with Spain contributing most of the balance.

Greece: Precipitation Ranking

Sept. 1 to 5, 2023 (5-Day)

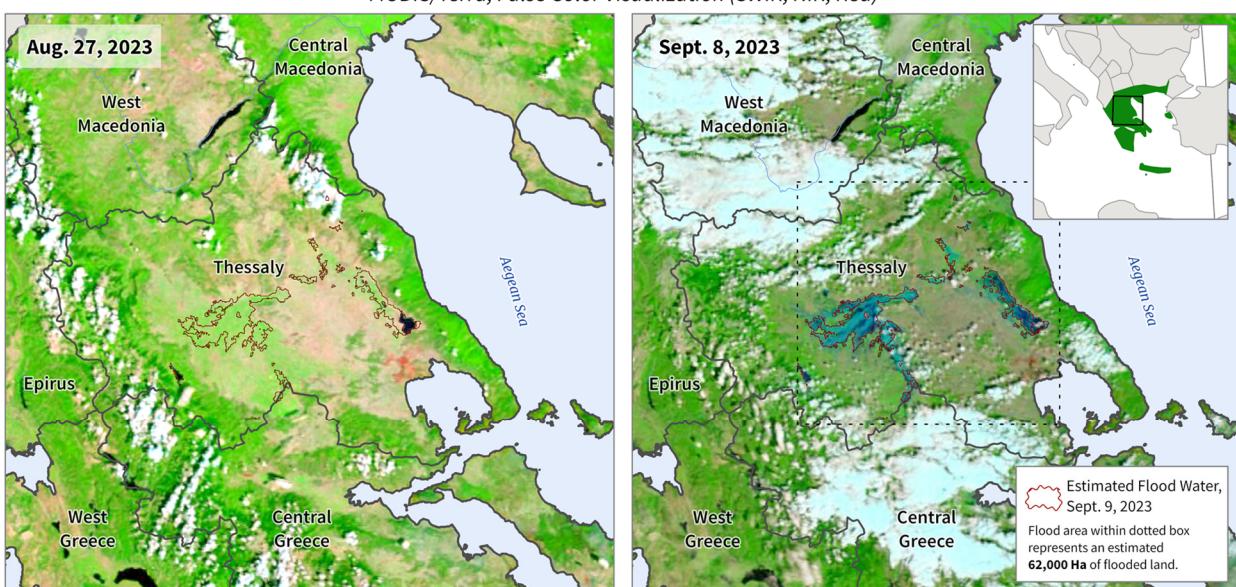


Sources: USCB Climate Hazards Group InfraRed Precipitation with Station Data (CHIRPS)
Precipitation Ranking Since 1981 (August 1-31, 2023); ESA Worldcover 10m 2021 Crop Mask

Torrential rainstorm Daniel remained stationary for several days southwest of the Peloponnese Peninsula, dumping record levels of rainfall over the Thessalian Plains, the primary cotton region in central Greece. The storm caused widespread flooding across the valley. Some of the hardest hit areas include the towns of Karditsa and Palamas, with flood water traveling downstream in the Pinios River to Larissa. The Pinios drains the vast majority of the very agriculturally dominated Thessalian Plain.

Greece: Pre and Post Flood Conditions

MODIS/Terra, False Color Visualization (SWIR, NIR, Red)



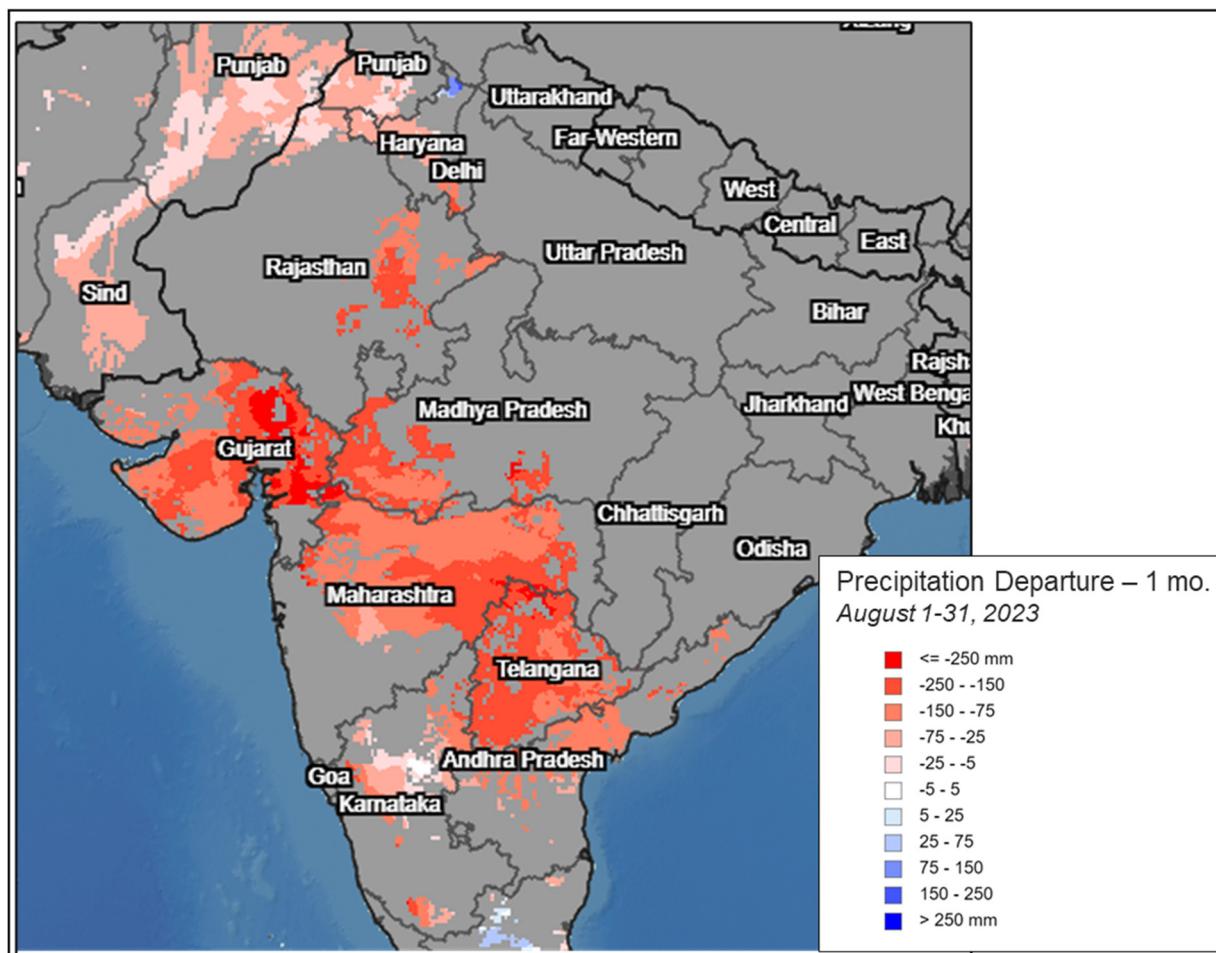
Sources: Terra Moderate Resolution Imaging Spectroradiometer (MODIS) False Color Imagery (Aug. 27 and Sept. 8, 2023); VIIRS Flood Product from S-NPP/NOAA20/GMU (Sept. 9, 2023)

Based on growth models, the cotton crop had begun the open boll phase, but not all bolls were open as of early September due to a delayed crop stage. Crop progress in 2023 was later than normal because of a cool and rainy start to the season. Typically, heavy rain in September causes quality issues for cotton, with color deterioration being one of the most problematic. This rain event, however, is extreme. It has produced much more rain than the September 2020 Mediterranean tropical storm (medicane) Ianos and is causing significant area and yield reductions. (For more information, please contact Bryan.Purcell@usda.gov.)

India Cotton: Production Revised Lower Due to Below-Average Rainfall

USDA forecasts marketing year (MY) 2023/24 cotton production for India at 25.0 million 480-pound bales, down nearly 2 percent from last month and down nearly 4 percent from MY 2022/23. Harvested area is forecast up nearly 2 percent from last month or 12.6 million hectares. Yields are expected to drop to 432 kilograms per hectare, down 4 percent from last month and down only marginally from last year. Yields are forecast 3 percent below the 5-year average.

India: Below Normal Rains Across the Cotton Belt



Source: USCB CHIRPS, IFPRI Non-Cotton Mask

The 2023 southwest monsoon is poised to be the lowest in 8 years. According to the India Meteorological Department, for the entire country, the rainfall deficit was at least 8 percent below the long-term average, as of September 1. Although the southwest monsoon started on time, rainfall has been uneven and unseasonably light for much of the season. Consequently, the planting window for other crops dissipated and farmers turned to more drought-tolerant cotton. As the crop entered the vegetative stage, August rainfall was still below the long-term average. The southwest monsoon withdrawal from the northwest is estimated to begin around September 17.

Cotton is grown mainly in the *kharif* season from May to October and harvesting can continue into February. (*For more information, please contact Arnella.Trent@usda.gov.*)



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This report uses information from the Foreign Agricultural Service's (FAS) global network of agricultural attachés and counselors, official statistics of foreign governments and other foreign source materials, and the analysis of economic data and satellite imagery. Estimates of foreign area, yield, and production are from the International Production Assessment Division, FAS, and are reviewed by USDA's Inter-Agency Commodity Estimates Committee. Estimates of U.S. area, yield, and production are from USDA's National Agricultural Statistics Service. Numbers within the report may not add to totals because of rounding. This report reflects official USDA estimates released in the World Agricultural Supply and Demand Estimates (WASDE-584), September 12, 2023.

The FAS International Production Assessment Division prepared this report. The next issue of World Agricultural Production will be released after 12:00 p.m. Eastern Time, October 12, 2023.

Conversion Table

Metric tons to bushels

Wheat, soybeans	=	MT * 36.7437
Corn, sorghum, rye	=	MT * 39.36825
Barley	=	MT * 45.929625
Oats	=	MT * 68.894438

Metric tons to 480-lb bales

Cotton	=	MT * 4.592917
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Metric tons to hundredweight

Rice	=	MT * 22.04622
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Area & weight

1 hectare	=	2.471044 acres
1 kilogram	=	2.204622 pounds



For further information, contact:
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The Foreign Agricultural Service (FAS) updates its production, supply and distribution (PSD) database for cotton, oilseeds, and grains at 12:00 p.m. on the day the *World Agricultural Supply and Demand Estimates* (WASDE) report is released. This circular is released by 12:15 p.m.

FAS Reports and Databases:

World Agricultural Production

Current: <https://www.fas.usda.gov/data/world-agricultural-production>

Archive: <https://usda.library.cornell.edu/concern/publications/5q47rn72z?locale=en>

USDA's Foreign Agricultural Service (FAS) publishes a monthly report on crop acreage, yield and production in major countries worldwide. Sources include reporting from FAS's worldwide offices, official statistics of foreign governments, and analysis of economic data and satellite imagery. The reports reflect official USDA estimates released in the monthly *World Agricultural Supply and Demand Estimates* (WASDE).

World Markets and Trade

Current: <https://www.fas.usda.gov/data>

Archive:

https://usda.library.cornell.edu/catalog?1%5Bmember_of_collections_ssim%5D%5B%5D=Foreign+Agricultural+Service&locale=en

USDA's Foreign Agricultural Service (FAS) publishes monthly and quarterly reports which include data on U.S. and global trade, production, consumption and stocks, as well as analysis of developments affecting world trade in oilseeds, grains, cotton, livestock and poultry. The reports reflect official USDA estimates released in the monthly *World Agricultural Supply and Demand Estimates* (WASDE).

Global Agricultural Information Network (GAIN)

<https://gain.fas.usda.gov/>

USDA's Foreign Agricultural Service (FAS) provides timely reports on foreign markets through the Global Agriculture Information Network (GAIN) database. An average of 2,000 reports are added each year, with reports going back to 1995. GAIN reports are compiled by FAS' global market intelligence network, which includes FAS foreign service officers and locally engaged staff in over 90 overseas offices world-wide. They provide on-the-ground intelligence, insight, and analysis on nearly 200 countries, delivering information on foreign agricultural markets, crop conditions, and agro-political dynamics of interest to U.S. agriculture. GAIN reports contain assessments of commodity and trade issues made by USDA staff and are not necessarily statements of official U.S. government policy.

Production, Supply and Distribution (PS&D) Online

<https://apps.fas.usda.gov/psdonline/app/index.html#/app/home>

PSD Online is the public repository for USDA's Official Production, Supply and Distribution forecast data and reports for key agricultural commodities. PSD Online data are reviewed and updated monthly by an interagency committee chaired by USDA's World Agricultural Outlook Board (WAOB). The committee consist of representatives from Foreign Agricultural Service (FAS), the Economic Research Service (ERS), the Farm Service Agency (FSA), and the Agricultural Marketing Service (AMS).

EU Countries and Russia Wheat: Area and Production Estimates

<https://apps.fas.usda.gov/psdonline/app/index.html#/app/downloads> (click on PSD Datasets)

USDA's Foreign Agricultural Service (FAS) provides country-level area and production estimates for the nations of the European Union. For Russia, country-level area and production estimates are provided for Winter and Spring wheat. These datasets are reviewed and updated monthly by an interagency committee chaired by USDA's World Agricultural Outlook Board (WAOB) and can be downloaded through PSD datasets on PSD Online.



FAS Reports and Databases:

International Production Assessment (IPAD)

<https://ipad.fas.usda.gov/>

USDA's Foreign Agricultural Service (FAS) maintains a dynamic global crop production portal with key information including *World Agricultural Production* (WAP) briefs, Commodity Intelligence Reports (CIR), geospatial applications, crop production maps at a subnational level and crop calendars for the top-20 producing countries. Additionally, Crop Explorer (<https://ipad.fas.usda.gov/cropexplorer/>) displays rainfall, temperature, evapotranspiration, soil moisture, snow cover, and vegetation conditions in charts and maps.

USDA and NASA Global Agricultural Monitoring (GLAM)

<https://glam1.gsfc.nasa.gov/>

The USDA and NASA Global Agricultural Monitoring (GLAM) system provides near real-time and science quality Moderate Resolution Imaging Spectroradiometer (MODIS) Normalized Difference Vegetation Index (NDVI) from the satellites Terra and Aqua. The public can view and retrieve MODIS 8-day composited, global NDVI satellite imagery and time series data. GLAM was developed by NASA's Global Inventory Modeling and Mapping Studies (GIMMS) group for USDA's Foreign Agricultural Service.

Global Agricultural and Disaster Assessment System (GADAS)

<https://geo.fas.usda.gov/GADAS/index.html>

USDA's Foreign Agricultural Service (FAS) provides the Global Agricultural and Disaster Assessment System (GADAS), a web-based Geographic Information System (GIS) tool which integrates a vast array of highly detailed earth observation data streams, particularly targeted towards agricultural and disaster assessment analysis. GADAS is an interactive website which provides analysts with a wide variety of routine geospatial products (maps, charts, tables) they require for comprehensive situational investigations and recurring assessments.

Export Sales Reporting

<https://apps.fas.usda.gov/esrquery/>

USDA's Export Sales Reporting Program monitors U.S. agricultural export sales on a daily and weekly basis. Export sales reporting provides a constant stream of up-to-date market information for 40 U.S. agricultural commodities sold abroad. The weekly U.S. Export Sales report is the most currently available source of U.S. exports sales data. The data is used to analyze overall levels of export demand, determine where markets exit, and assess the relative position of U.S. commodities in foreign markets.

Global Agricultural Trade System (GATS)

<https://apps.fas.usda.gov/gats/default.aspx>

The Global Agricultural Trade System (GATS) is a searchable database containing monthly U.S. Census Bureau trade data organized by agricultural commodity and agricultural related product groups. Trade data is searchable by partner countries and partner groups. Historical U.S. agricultural trade data is available back to 1967. In addition, U.N. trade statistics (UN Comtrade) may be queried through GATS. UN trade data is available for nearly 200 countries or areas, dating from the inception of the Harmonized System (HS) of trade codes in 1989 to present. The database is continuously updated. U.S. trade data is updated monthly according to the U.S. Census Bureau's reporting system. UN Comtrade data are updated in GATS after nationally submitted data to the UN are standardized by the UN Statistical Division and added to the UN Comtrade database.

Other USDA Reports:

World Agricultural Supply and Demand Estimates (WASDE):

<http://www.usda.gov/oce/commodity/wasde/>

Economic Research Service:

<http://www.ers.usda.gov/topics/crops>

National Agricultural Statistics Service:

<http://www.nass.usda.gov/Publications/>

Table 06 Oats Area, Yield, and Production

Country / Region	Area (Million hectares)				Yield (Metric tons per hectare)				Production (Million metric tons)				Change in Production			
	Prel. 2021/22	2022/23	2023/24 Proj. Aug	Sep	Prel. 2021/22	2022/23	2023/24 Proj. Aug	Sep	Prel. 2021/22	2022/23	2023/24 Proj. Aug	Sep	From last month MMT	Percent	From last year MMT	Percent
World	9.63	9.35	8.54	8.36	2.36	2.70	2.46	2.46	22.68	25.27	21.03	20.57	-0.47	-2.21	-4.71	-18.63
United States	0.26	0.36	0.33	0.33	2.20	2.33	2.21	2.21	0.58	0.84	0.72	0.72	0.00	0.00	-0.12	-14.22
Total Foreign	9.36	8.99	8.21	8.03	2.36	2.72	2.47	2.47	22.10	24.44	20.31	19.85	-0.47	-2.29	-4.59	-18.78
European Union	2.54	2.36	2.30	2.27	2.93	3.20	2.93	2.94	7.46	7.55	6.75	6.67	-0.08	-1.19	-0.88	-11.70
Former Soviet Union - 12																
Russia	2.17	2.13	1.80	1.80	1.72	2.11	1.94	1.94	3.73	4.50	3.50	3.50	0.00	0.00	-1.00	-22.22
Ukraine	0.18	0.15	0.15	0.15	2.61	2.47	2.33	2.33	0.48	0.38	0.35	0.35	0.00	0.00	-0.03	-7.89
Belarus	0.15	0.16	0.16	0.16	2.33	2.42	2.26	2.26	0.35	0.38	0.35	0.35	0.00	0.00	-0.03	-6.67
Kazakhstan	0.20	0.20	0.19	0.19	0.90	1.16	1.16	1.16	0.18	0.23	0.22	0.22	0.00	0.00	-0.01	-3.93
Canada	1.21	1.40	0.85	0.85	2.39	3.73	3.29	3.29	2.90	5.23	2.80	2.80	0.00	0.00	-2.43	-46.42
South America																
Argentina	0.35	0.26	0.29	0.29	2.07	1.67	2.14	2.14	0.73	0.43	0.61	0.61	0.00	0.00	0.18	42.19
Brazil	0.50	0.50	0.51	0.51	2.27	2.38	2.39	2.39	1.14	1.19	1.22	1.22	0.00	0.00	0.03	2.52
Chile	0.12	0.07	0.10	0.10	4.70	4.38	4.74	4.74	0.58	0.32	0.45	0.45	0.00	0.00	0.14	42.86
Uruguay	0.01	0.02	0.01	0.01	2.21	2.40	2.20	2.20	0.03	0.04	0.02	0.02	0.00	0.00	-0.01	-38.89
Oceania																
Australia	0.84	0.75	0.85	0.70	2.06	2.13	1.76	1.57	1.74	1.59	1.50	1.10	-0.40	-26.67	-0.49	-30.69
New Zealand	0.00	0.01	0.01	0.01	6.25	5.67	5.67	5.67	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00
China	0.41	0.41	0.41	0.41	1.48	1.48	1.48	1.48	0.60	0.60	0.60	0.60	0.00	0.00	0.00	0.00
Africa																
Algeria	0.08	0.08	0.08	0.08	1.31	1.31	1.31	1.31	0.11	0.11	0.11	0.11	0.00	0.00	0.00	0.00
Morocco	0.02	0.02	0.01	0.01	0.33	0.40	0.31	0.31	0.01	0.01	0.00	0.00	0.00	0.00	0.00	-33.33
South Africa	0.04	0.03	0.03	0.03	1.64	1.04	1.50	2.00	0.06	0.03	0.05	0.06	0.02	33.33	0.03	114.29
Other Europe																
United Kingdom	0.20	0.17	0.17	0.17	5.62	5.79	5.45	5.45	1.12	1.01	0.90	0.90	0.00	0.00	-0.11	-10.63
Norway	0.07	0.07	0.07	0.07	4.29	4.29	4.29	4.29	0.30	0.30	0.30	0.30	0.00	0.00	0.00	0.00
Serbia	0.02	0.02	0.02	0.02	3.11	2.80	3.00	3.00	0.06	0.04	0.06	0.06	0.00	0.00	0.02	42.86
Albania	0.02	0.02	0.02	0.02	2.20	2.20	2.27	2.27	0.03	0.03	0.03	0.03	0.00	0.00	0.00	3.03
Bosnia and Herzegovina	0.01	0.01	0.01	0.01	2.82	4.00	3.43	3.43	0.03	0.04	0.02	0.02	0.00	0.00	-0.02	-45.45
Turkey	0.11	0.11	0.11	0.11	2.38	2.38	2.38	2.38	0.25	0.25	0.25	0.25	0.00	0.00	0.00	0.00
Mexico	0.05	0.05	0.05	0.05	2.02	2.22	2.00	2.00	0.09	0.11	0.09	0.09	0.00	0.00	-0.02	-20.35
Others	0.06	0.03	0.06	0.06	1.66	1.63	1.68	1.68	0.10	0.05	0.09	0.09	0.00	0.00	0.04	80.77

World and Selected Countries and Regions

Table 07 Rye Area, Yield, and Production

Country / Region	Area (Million hectares)				Yield (Metric tons per hectare)				Production (Million metric tons)				Change in Production			
	Prel. 2021/22	2022/23	2023/24 Proj. Aug	Sep	Prel. 2021/22	2022/23	2023/24 Proj. Aug	Sep	Prel. 2021/22	2022/23	2023/24 Proj. Aug	Sep	From last month MMT	Percent	From last year MMT	Percent
World	4.03	3.69	3.59	3.60	3.10	3.32	3.24	3.23	12.51	12.23	11.63	11.62	-0.01	-0.09	-0.61	-4.98
United States	0.12	0.14	0.16	0.16	2.09	2.26	2.19	2.19	0.25	0.31	0.36	0.36	0.00	0.00	0.05	15.06
Total Foreign	3.92	3.55	3.43	3.43	3.13	3.36	3.29	3.28	12.27	11.92	11.27	11.26	-0.01	-0.09	-0.66	-5.51
European Union	1.93	1.76	1.80	1.81	4.15	4.29	4.11	4.09	8.01	7.57	7.40	7.39	-0.01	-0.14	-0.18	-2.38
Former Soviet Union - 12																
Russia	0.99	0.88	0.80	0.80	1.73	2.27	2.25	2.25	1.72	2.00	1.80	1.80	0.00	0.00	-0.20	-10.00
Belarus	0.33	0.30	0.31	0.31	2.46	2.50	2.52	2.52	0.80	0.75	0.78	0.78	0.00	0.00	0.03	4.00
Ukraine	0.18	0.10	0.08	0.08	3.43	3.15	2.88	2.88	0.60	0.32	0.23	0.23	0.00	0.00	-0.09	-26.98
Kazakhstan	0.04	0.03	0.02	0.02	0.91	1.76	1.36	1.36	0.04	0.06	0.03	0.03	0.00	0.00	-0.03	-50.00
Turkey	0.12	0.11	0.11	0.11	2.87	2.91	2.91	2.91	0.33	0.32	0.32	0.32	0.00	0.00	0.00	0.00
Canada	0.12	0.15	0.12	0.12	3.21	3.42	3.26	3.26	0.37	0.52	0.38	0.38	0.00	0.00	-0.15	-27.88
South America																
Chile	0.00	0.00	0.00	0.00	5.00	5.00	0.00	0.00	0.01	0.01	0.00	0.00	0.00	100.00	-0.01	-100.00
Argentina	0.12	0.11	0.09	0.09	1.88	1.66	1.83	1.83	0.23	0.18	0.17	0.17	0.00	0.00	-0.01	-7.82
Other Europe																
Bosnia and Herzegovina	0.00	0.00	0.00	0.00	3.00	3.00	3.00	3.00	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Switzerland	0.00	0.00	0.00	0.00	5.50	5.50	5.50	5.50	0.01	0.01	0.01	0.01	0.00	0.00	0.00	0.00
Serbia	0.01	0.01	0.01	0.01	3.80	3.00	3.33	3.33	0.02	0.02	0.02	0.02	0.00	0.00	0.00	11.11
Australia	0.05	0.05	0.05	0.05	0.71	0.71	0.71	0.71	0.03	0.03	0.03	0.03	0.00	0.00	0.00	0.00
Others	0.04	0.05	0.04	0.04	2.18	2.80	2.20	2.20	0.10	0.13	0.10	0.10	0.00	0.00	-0.03	-23.02

World and Selected Countries and Regions

TABLE 18

The table below presents a record of the September projection and the final Estimate. Using world wheat production as an example, the "root mean square error" means that chances are 2 out of 3 that the current forecast will not be above or below the final estimate by more than 1.9 percent. Chances are 9 out of 10 (90% confidence level) that the difference will not exceed 3.2 percent. The average difference between the September projection and the final estimate is 8.4 million tons, ranging from 0.9 million to 30.7 million tons. The September projection has been below the estimate 27 times and above 15 times.

RELIABILITY OF PRODUCTION PROJECTIONS 1/

COMMODITY AND REGION	Root mean square error	90 percent confidence interval	Difference between forecast and final estimate				Years	
			Average	Smallest	Largest	Years		
						Below final	Above final	
			Percent				---Million metric tons---	
WHEAT								
World	1.9	3.2	8.4	0.9	30.7	27	15	
U.S.	2.3	3.8	0.9	0.0	3.6	16	26	
Foreign	2.1	3.6	8.5	0.2	30.9	30	12	
COARSE GRAINS 2/								
World	2.1	3.6	17.6	0.2	50.6	31	11	
U.S.	4.1	6.9	7.8	0.2	26.0	26	16	
Foreign	2.5	4.2	15.6	1.0	59.9	30	12	
RICE (Milled)								
World	2.2	3.7	6.2	0.4	24.1	33	9	
U.S.	4.2	7.1	0.2	0.0	0.5	23	18	
Foreign	2.3	3.8	6.2	0.3	24.4	33	9	
SOYBEANS								
World	4.7	7.9	8.0	0.4	31.7	23	19	
U.S.	4.9	8.3	3.0	0.2	10.4	22	20	
Foreign	7.6	12.8	7.4	0.9	33.3	18	24	
COTTON			---Million 480-lb. bales---					
World	4.6	7.7	3.2	0.1	12.6	23	19	
U.S.	6.6	11.2	0.9	0.0	2.5	20	21	
Foreign	5.1	8.6	2.7	0.0	11.3	25	17	
UNITED STATES			-----Million bushels-----					
<i>CORN</i>	4.3	7.2	294	15	885	26	16	
<i>SORGHUM</i>	7.9	13.3	24	0	81	17	24	
<i>BARLEY</i>	5.2	8.7	11	1	36	17	25	
<i>OATS</i>	9.5	15.9	11	0	44	7	33	

1/ Marketing years 1981/82 through 2022/23 for grains, soybeans, and cotton. Final for grains, soybeans, and cotton is defined as the first November estimate following the marketing year for 1981/82 through 2021/22, and for 2022/23 the last month's estimate.

2/ Includes corn, sorghum, barley, oats, rye, millet, and mixed grain