



Foreign Agricultural Service

Global Market Analysis

International Production Assessment Division

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July 12, 2021

Commodity Intelligence Report

India Wheat Farmers Harvest Consecutive Record Crop

Despite unfavorable weather and limited farm workers due to COVID-19 restrictions across India, wheat production is expected to reach another record. USDA estimates 2021/22 wheat production at 108.0 million metric tons, up slightly from last year. Harvested area is estimated at a record 32.0 million hectares, up 2 percent from last year. This area expansion was attributed to the late withdrawal of the 2020 Southwest Monsoon and competitive Minimum Support Prices (MSP). Yields, however, are predicted to drop to 3.38 tons per hectare (t/ha), down almost 2 percent from the previous year because of warmer-than-average temperatures and dry conditions across the Indian wheat belt (see Figure 1).

Wheat is grown only in the *rabi* season (winter). It is planted from late November through the end of January and harvested in late April. Major wheat-producing states in India are Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, and Rajasthan (see Figure 2).

The 2021 wheat harvest was completed in early May. USDA estimates India's harvested area at 32.0 million hectares, up nearly 2 percent from 2020 because of favorable wheat prices and ideal planting conditions. Although the national wheat area increased, planted area was down 1 percent from last year in the North region (see Figure 3). However, in the Central region, planted area expanded by ten percent because farmers in Madhya Pradesh planted a half million more hectares than in 2020 due to better wheat pricing (see Figure 3).

Indian farmers consider wheat more price stable than other crops. MSPs for wheat were more competitive than for other crops. The MSP is regarded as a benchmark for prices. States expanded MSP procurement operations and they tend to buy wheat over other *rabi* crops. Trade sources reported wheat prices were trending slightly above the MSP at harvest.

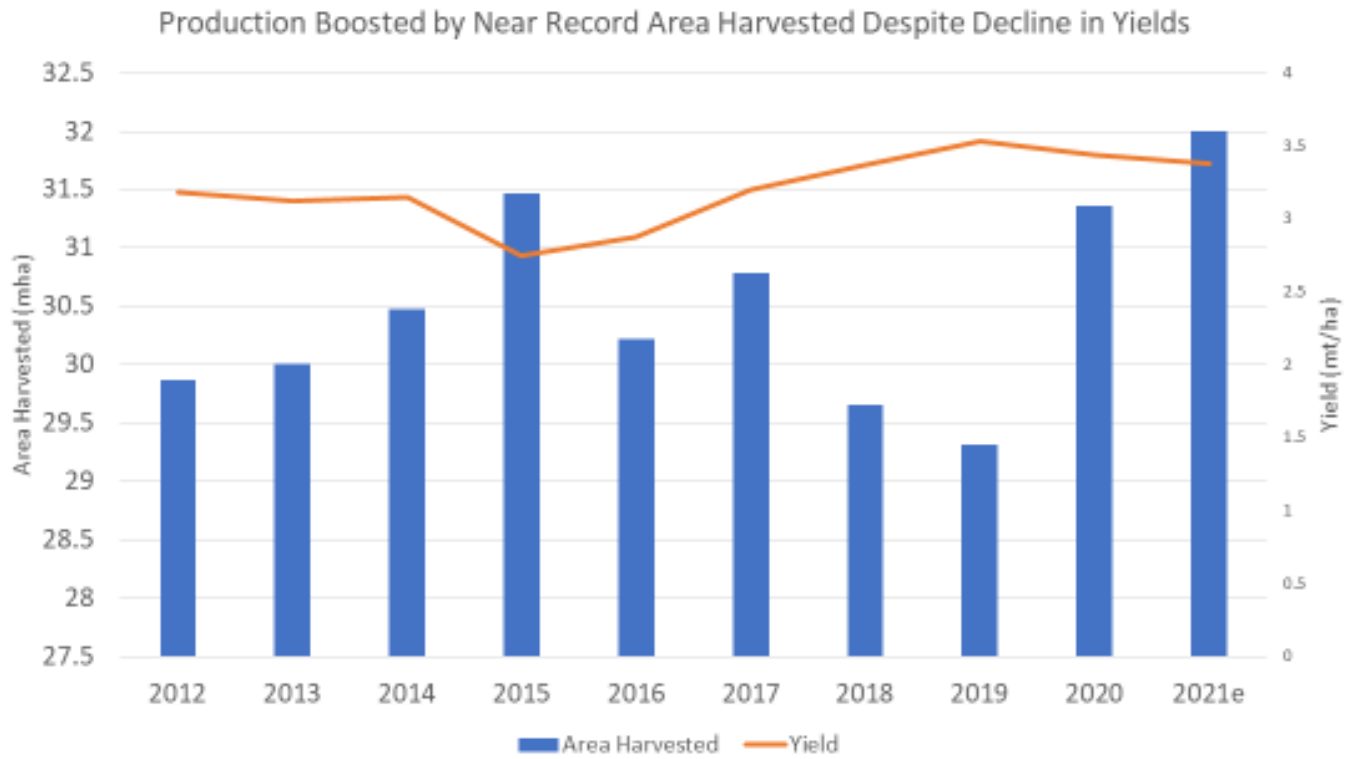
Ideal Growing Conditions until late January

In addition to favorable prices, beneficial weather contributed to greater planted area. Wheat is grown under fully irrigated conditions in the North region and partially irrigated in the Central region and eastern India. Above-average monsoonal and post-monsoonal rainfall for the second consecutive year has helped to replenish irrigation reservoirs. At the beginning of the *rabi* season, water reservoir storage was about 89 percent of total capacity. The post-monsoonal rainfall from October and November was rated above

average to excessive in Gujarat and Maharashtra by the India Meteorological Department. This increased rainfall boosted plantings for a second straight year in the Central region of India. Plantings in the North region, however, decreased slightly from last year because of deficient post-monsoonal rains.

The Emergence of Warmer and Drier Conditions

Trade reports are citing yield declines across the top wheat-producing states. USDA estimates yield at 3.38 t/ha, down almost 2 percent from last year. Some trade reports mention a 10- to 15-percent yield loss in the Central states of Gujarat, Maharashtra, Madhya Pradesh, east and central Uttar Pradesh, and Bihar. The yield loss is attributed to high temperatures during the first week of March, which hastened the maturity of the crops. For the *rabi* season, this was the first time since 2009 that temperatures were this high (about 8 degree Celsius above average). These high temperatures combined with sparse rainfall impacted the crop during the filling stage. Satellite-derived MODIS NDVI analysis shows lower than average crop vigor across the major wheat producing areas during grain fill (see Figure 4). In some areas, however, irrigated crops in northern India benefitted from the cooling effects of the adjacent Himalayan Mountain range, keeping night temperatures within the normal range. For example, in Sangrur district, the top producing district in the northern state of Punjab, MODIS NDVI signals that crop vigor was slightly above average throughout the growing season prior to grain fill, despite the higher-than-normal temperatures (see Figure 5). Trade sources are estimating that Punjab yields will likely be unchanged from last year.



Source: USDA PSD Online

Figure 1. India wheat production boosted by record harvested area despite a decline in yield from 2020

INDIA: Wheat Production (5-year Average)

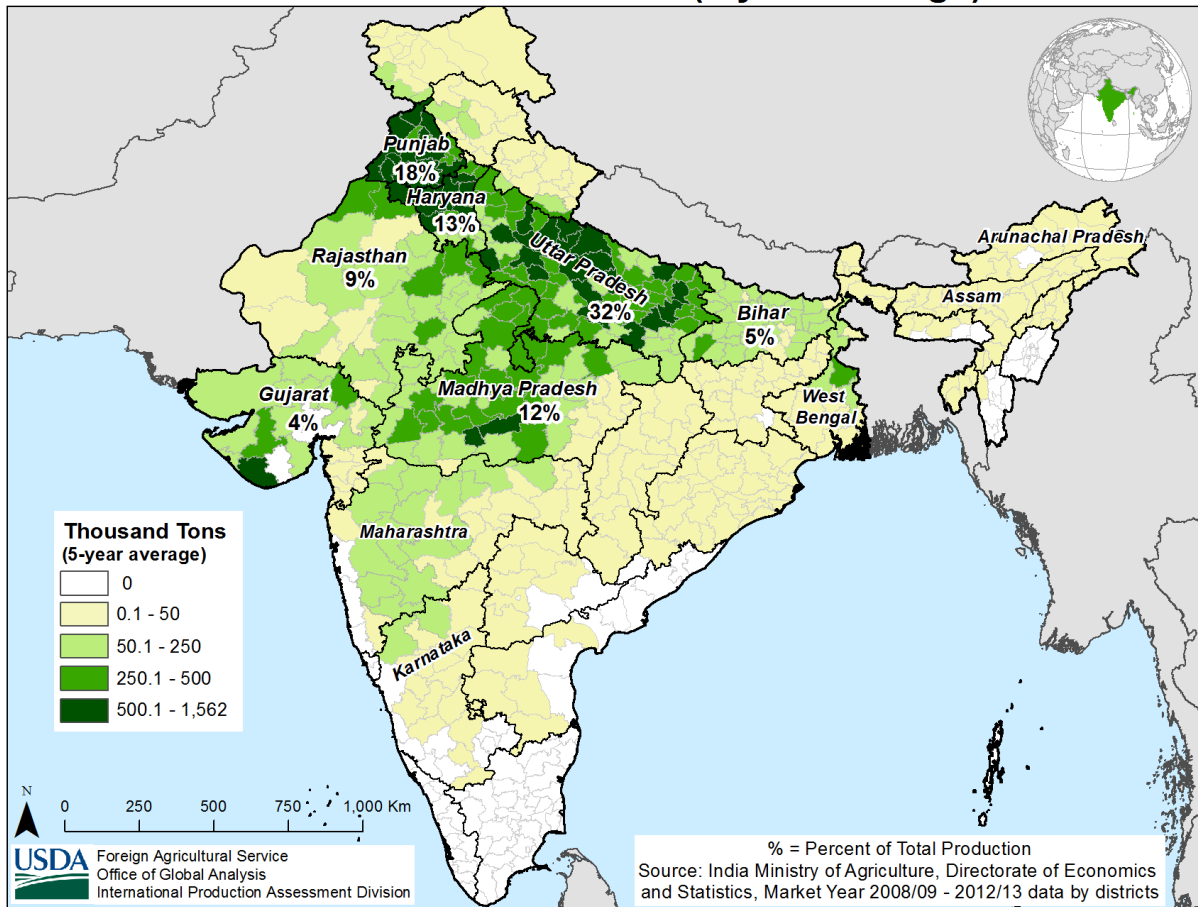


Figure 2. India Wheat Production (5-Year Average), 2008/09-2012/13.

Wheat Areas Planted				
Region	States	2021 Area Harvested (mha)	2020 Area Harvested (mha)	Year to Year Change
North	Assam, Bihar, Chhattisgarh, Haryana, Himachal, Pradesh, Jammu&Kashmir, Punjab, Rajasthan, Uttar Pradesh, West Bengal	21.38	21.68	-1%
Central	Madhya Pradesh, Gujarat Maharashtra	9.52	8.67	+10%
Others		1.1	1.05	+5%
Total		32.0	31.4	+2%

Figure 3. India wheat planted areas increased in non-traditional areas Central India.

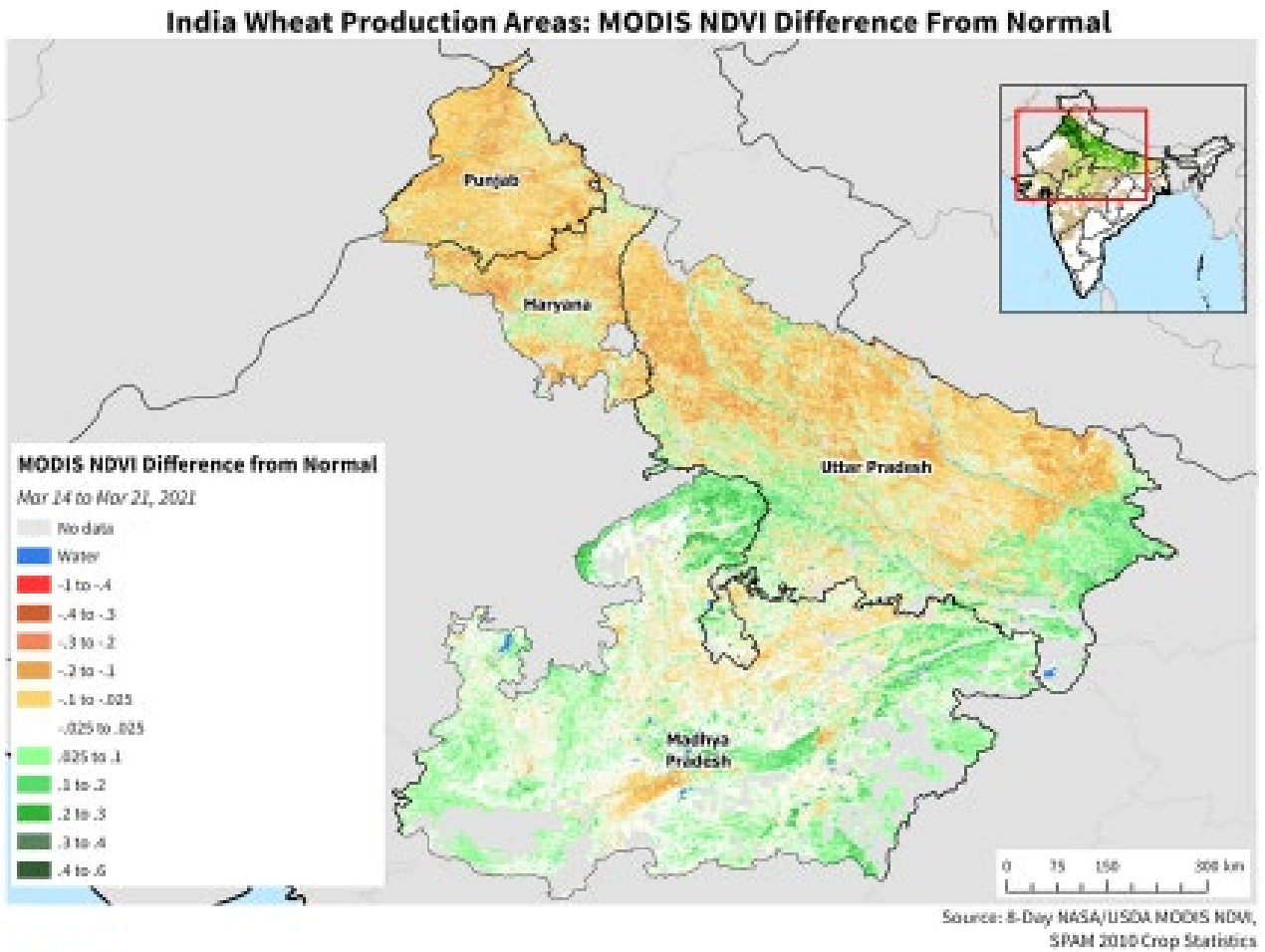


Figure 4. Satellite-derived MODIS NDVI departure from the long-term average indicate a decline from the long-term average across the wheat producing areas.

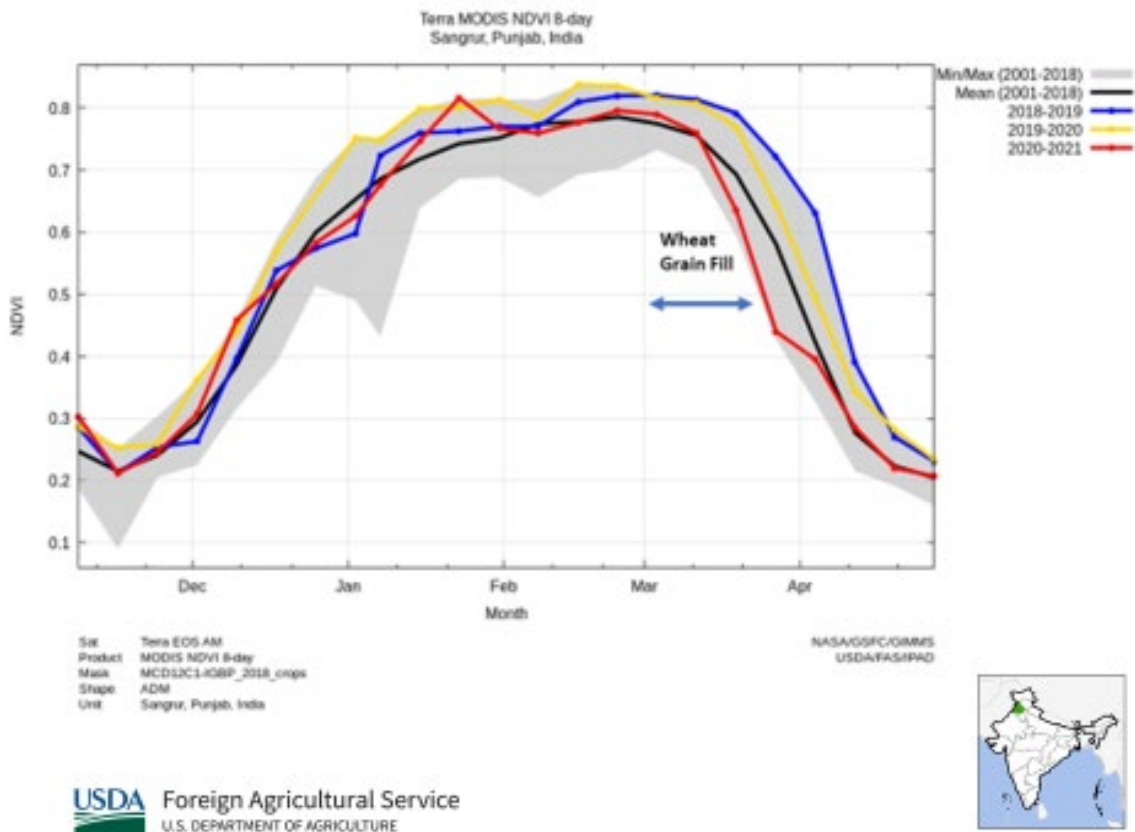


Figure 5. Satellite-derived MODIS NDVI 8-Day shows crop vigor was normal until the later stages of grain fill in the Sangrur district of Punjab.

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