India 2020/21 Wheat Production at Record Levels

Despite unfavorable weather, and the limited availability of farm workers due to COVID-19 restrictions across India, 30.5 million hectares (mha) of wheat was harvested by the end of April 2020. Harvested area was up 4 percent with favorable market prices and with support pricing 5 percent higher than the previous year. Yield averaged 3.51 tons per hectare (t/ha), down slightly from the 2019/20 record, but up about 12 percent above the 5-year average. Production is estimated at a record 107.2 million metric tons (mmt), up 3 percent from 2019/20’s record production.

The Government of India (GOI) imposed a strict three-week lockdown on March 25, 2020 due to the COVID-19 pandemic. Although farming was declared an essential service, migrant workers had to return to their homes, which resulted in labor shortages. The GOI allowed farmers to hire local labor, which helped minimize disruptions in farm activities, although it didn’t eliminate them. Farmers also increased their use of combines to harvest in Haryana, Punjab, and Uttar Pradesh, making up for some lost manual labor.

Wheat is grown only in the *rabi* season (winter). It is planted in late November through the end of January and harvested in April. Major wheat-producing states in India are Uttar Pradesh, Punjab, Haryana, Madhya Pradesh, and Rajasthan. (See Figure 1).

Farmers in India consider wheat more price stable than other crops. This season, the minimum support prices (MSP) were almost 5 percent higher than last year. States also expanded MSP procurement operations, which tend to prioritize buying wheat over other crops. For example, in Madhya Pradesh, one of India’s largest wheat producing states, there was a shift from chickpeas to wheat because of these favorable prices.

In addition to favorable prices, beneficial weather also attributed to higher plantings. The 2019 southwest monsoon ended on September 30, 2019 with above-normal rainfall, which was the highest in 10 years. Water reservoir storage, at the beginning of the *rabi* season, was around 89 percent of full capacity, compared to 70 percent capacity for the same time period the previous season. The post-monsoonal rainfall from October to November was 16 percent above normal, which provided adequate soil moisture for planting. Farmers in Gujarat and Maharashtra, which are not part of India’s primary wheat region, expanded their wheat planting during the *rabi* season in 2019. Farmers were encouraged by higher reservoir levels for the irrigation of crops. Usually, western and central states don’t have residual soil moisture and full reservoir levels to plant wheat, as they do in the heavily irrigated north. Because of the above-average precipitation from the 2019 southwest monsoon, farmers were able to take advantage of four reservoirs instead of the usual two that are available during most years. Consequently, in 2020, plantings were up about 42 percent in nontraditional areas, such as western and central India. Meanwhile, planted area increased only 3 percent from 2019 in the traditional northern wheat areas. (See Figure 2).
Near-Ideal Growing Conditions until late February

India’s 2020/21 wheat crop experienced near-ideal growing conditions until late February, but overall, conditions were below the record yield achieved in 2019/20. For the 2020/21 crop, cooler weather coupled with widespread rains during December and January increased vegetation growth and tillering. India experienced its wettest year in 15 years. Rainfall was 67 percent above normal in January with the north, east, and northeast regions receiving almost 80 percent above-average precipitation. (See Figure 3). Satellite-derived Normalized Difference Vegetation Index (NDVI) indicated strong crop vigor in January and February, with substantially higher NDVI than in 2019 for that period. (see Figure 4).

The near-ideal conditions did not last, however. Heavy rains in late February were accompanied by hailstorms and strong winds, which flattened or lodged flowering wheat in Punjab, Haryana, Uttar Pradesh, and Rajasthan. Punjab had around 20 percent crop damage, and Haryana and Rajasthan had 10 to 15 percent each, respectively, according to trade reports. Also, a few weeks before harvest in early April, northern India recorded heavy rains, up to 702 percent above the long-term average.

In summary, the near-ideal conditions early in the season were followed by detrimental conditions closer to harvest. The near-record harvested area and near-record yields combined for record production. (See Figure 5).
Figure 1: India Wheat Production (5-Year Average)
### Wheat Area Planted

<table>
<thead>
<tr>
<th>Region</th>
<th>States</th>
<th>2020 Area Planted (mha)</th>
<th>2019 Area Planted (mha)</th>
<th>Year to Year Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>North</td>
<td>Assam, Bihar, Chhattisgarh, Haryana, Himachal Pradesh, Jammu &amp; Kashmir, Punjab, Rajasthan, Uttar Pradesh, West Bengal</td>
<td>22.7</td>
<td>22.0</td>
<td>3%</td>
</tr>
<tr>
<td>West/Central</td>
<td>Madhya Pradesh, Gujarat, Maharashtra</td>
<td>10.4</td>
<td>7.3</td>
<td>42%</td>
</tr>
<tr>
<td>South</td>
<td>Karnataka</td>
<td>.19</td>
<td>.15</td>
<td>26%</td>
</tr>
</tbody>
</table>

Source: India Ministry of Agriculture

**Figure 2:** India wheat planted area increased in non-traditional areas.
Figure 3: Uttar Pradesh experienced wetter-than-normal conditions in January through April. Source: WMO (World Metrological Organization)
Figure 4: NDVI indicated stronger crop vigor from January to April.
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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):

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