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A New Stage in Food Safety

Forecasts of Possible 2026 El Niño Raise Concerns for
Global Staple Food Production

Content



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By: Nick Klaiber

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Global weather forecasters are increasingly warning that El Niño conditions could emerge during the second half of 2026, raising concerns about the potential impact on agricultural production and food prices worldwide. According to the U.S. Climate Prediction Center, there is now a greater than 60 percent probability that El Niño conditions will develop during mid-to-late 2026 and persist into the end of the year.

El Niño is the warm phase of the El Niño Southern Oscillation (ENSO), a climate pattern driven by warming sea surface temperatures in the Pacific Ocean that can significantly alter rainfall and temperature patterns across major agricultural regions. In many parts of Asia and Australia, El Niño is associated with hotter and drier conditions, while parts of North and South America may experience heavier rainfall and flooding. These shifts can disrupt planting schedules, reduce yields, and increase volatility in global commodity markets.

Reuters reported in April 2026 that forecasters are increasingly concerned about the possibility of a “strong El Niño” later this year, with hotter and drier weather across much of Asia potentially threatening agricultural production in several major exporting countries. Rice production has emerged as one of the most closely watched sectors. Rice remains the primary staple food for more than half of the world’s population, particularly across Asia. Reuters reported that rice supplies could tighten as fertilizer shortages, higher fuel costs, and anticipated El Niño-related dryness prompt farmers in several Asian countries to reduce planting acreage and input use.

Thailand has already reported reduced fertilizer use among growers because of rising costs, while officials in the Philippines and Indonesia have warned that dry conditions could significantly reduce rice output if El Niño intensifies. One analyst cited by Reuters warned the situation could become “pretty serious” if fertilizer supply disruptions continue alongside weather-related stress.

Wheat production is also being closely monitored. Australia, one of the world’s largest wheat exporters, has experienced abnormally dry conditions across key growing regions, while India faces concerns about weaker monsoon rainfall that could affect both rice and wheat cycles. Climate-related stress can also affect crop quality in ways that extend beyond overall production volume. Excessive heat and drought conditions associated with El Niño can reduce grain size, lower protein content, and affect moisture levels in staple crops such as wheat and rice. In some cases, prolonged humidity and flooding in other regions may increase the risk of fungal contamination and mycotoxin development during storage and transport. Quality degradation can create additional challenges for exporters, processors, and food manufacturers that rely on consistent crop standards for international trade and food production.

Supply chain risks are also becoming a growing concern alongside direct agricultural impacts. Extreme weather events linked to El Niño can disrupt transportation infrastructure including ports, rail systems, and inland waterways that are critical to moving agricultural commodities through global markets. Flooding in some producing regions and drought-related water shortages

in others may delay shipments, increase freight costs, and reduce storage stability for temperature-sensitive food products. These disruptions can compound existing pressures related to fuel prices, fertilizer availability, and geopolitical instability.

The potential effects on food quality and logistics are particularly significant because modern food supply chains operate through highly interconnected global networks. A weather-related disruption in one major exporting country can affect ingredient sourcing, commodity pricing, and food manufacturing operations across multiple regions. As governments and agricultural markets increasingly integrate climate forecasting into risk planning, attention is expanding beyond simple yield projections toward broader questions of food quality assurance, transportation resilience, and long-term supply chain stability.

Beyond individual crops, international organizations are increasingly framing extreme heat and climate variability as broader food system risks. In April 2026, the United Nations Food and Agriculture Organization (FAO) and the World Meteorological Organization (WMO) warned that extreme heat is becoming a growing threat to global agrifood systems. According to the report, staple crop yields including maize, rice, wheat, and soy are expected to decline as temperatures rise beyond critical thresholds.

The broader significance of the developing forecasts lies not only in the potential for short-term weather disruption, but also in the growing sensitivity of global food systems to climate variability. Beyond crop yields alone, El Niño-related weather patterns may affect food quality, storage conditions, transportation networks, and broader supply chain stability. As climate forecasting becomes more integrated into agricultural planning and commodity risk assessment, El Niño monitoring is likely to play an increasingly important role in food security policy, food quality management, and international agricultural trade discussions.

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