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HOW EL NIÑO THREATENS JAMAICA'S VEGETABLE, MELON, AND TUBER YIELDS IN LATE 2026

Navigating the Dry Phase

A Comprehensive Briefing on Climate Impact and
Sector Resilience for August & September 2026



As Jamaica navigates the mid-year shift of 2026, the country's agricultural landscape is bracing for a significant meteorological disruption. The Rural Agricultural Development Authority (RADA) and the Meteorological Service of Jamaica have issued high-alert warnings regarding a transitioning climate phase. The island is moving rapidly out of a cooler, wetter La Niña period straight into a strengthening El Niño phenomenon.

For an agricultural sector dedicated entirely to domestic food security and local markets, the timing of this climate shift is particularly challenging. The intensifying atmospheric changes are projected to heavily disrupt typical rainfall distribution patterns right as the critical August and September planting and production windows approach.



The Core Meteorological Shift: Erratically Altered Rainfall

Jamaica's agricultural cycle is fundamentally tied to a bimodal rainfall pattern—characterized by a primary spring rainy period (May/June), a brief mid-summer dry spell, and a dominant secondary rainfall peak in August, September, and October.

The emerging 2026 El Niño completely alters this dynamic. As sea surface temperatures warm in the tropical Pacific, it triggers an atmospheric ripple effect across the Caribbean. Stronger westerly winds in the upper atmosphere generate high vertical wind shear. This acts as an atmospheric 'blanket,' suppressing the upward convection required to form rain clouds over the island.

The Meteorological Service of Jamaica projects a 40% to 50% probability of below-normal rainfall across key agricultural parishes, including the southern farming belts of St. Elizabeth, Manchester, and Clarendon. Compounding this severe reduction in rain is a sharp increase in ambient temperatures. Any localized rainfall that does manage to break through in August and September will be rapidly offset by accelerated evapotranspiration—where extreme heat pulls moisture out of the topsoil and plant leaves at an unsustainable rate, compounding agricultural dryness.

Crop-Specific Vulnerabilities: Ground Provisions, Melons, and Staples

The compounding dryness and shifting rain schedules will impact several distinct crop categories across Jamaica:

1. Ground Provisions and Tuber Crops (Yam, Cassava, Irish Potato, and Sweet Potato)

Ground provisions form the caloric backbone of local food security, but their underground growth makes them highly sensitive to soil moisture dynamics.

- **Yams:** August and September are critical periods for vine maturity and tuber bulking. Without the anticipated secondary rains, the heavy clay or loamy soils dry out and harden, physically restricting tuber expansion and leading to stunted, fibrous yields.
- **Cassava:** While traditionally praised as a highly drought-tolerant crop, severe and sudden transitions to absolute dryness during its early root-initiation phase limit starch accumulation, severely lowering the eventual tonnage per acre.
- **Irish Potatoes and Sweet Potatoes:** Irish potatoes possess a shallow root system that demands consistent moisture; hot, parched soils stall their growth completely and trigger skin defects. Sweet potatoes will manage better, but prolonged lack of rain leads to elongated, thin, unmarketable tubers rather than round, robust roots.

2. Kitchen Staples and Leafy Greens (Scotch Bonnet, Tomato, Cabbage, and Lettuce)

- **Scotch Bonnet Peppers:** These peppers respond poorly to moisture stress. Dry soil and oppressive heat during late summer cause widespread blossom-drop (where the plant drops flowers instead of setting fruit), resulting in minor, misshapen yields.
- **Tomatoes:** Erratic moisture followed by intense dryness causes a calcium transport failure within the plant, triggering extensive blossom-end rot (where the bottom of the fruit turns black and decays).
- **Cabbages and Lettuce:** Cabbages fail to form tight, dense heads in low-water conditions, remaining loose and light. Additionally, the lack of rain triggers rapid outbreaks of the Diamondback Moth (DBM), a pest that thrives in dry heat. Lettuce, highly sensitive to temperature spikes, will bolt (prematurely send up a seed stalk), rendering the leaves tough and intensely bitter.



3. Melons and Vine Crops (Cantaloupe and Watermelon)

Melons require abundant water during their initial vegetative growth, but they also require dry, hot weather during the final ripening phase to concentrate sugars. The danger of the late-2026 El Niño is that the dryness is arriving too early in the crop cycle. If cantaloupes and watermelons suffer from restricted rainfall in August during fruit-set, the vines produce fewer melons. The remaining fruits run the risk of sunscald due to diminished leaf cover, or internal splitting if erratic, sudden downpours happen to hit the parched soil later in the season.

4. The Seasonal Specialty (Sorrel)

Sorrel (*Hibiscus sabdariffa*) is highly dependent on seasonal rainfall variations. It is traditionally planted in the summer and relies on the August–September rains to put on extensive vegetative growth before shorter daylight hours in October trigger flowering. Below-average rainfall during these months will severely stunt the height and bushiness of the sorrel plants. Consequently, when the plants begin to bud, the number of deep-red calyces available for harvesting ahead of the Christmas season will be substantially lower, driving up seasonal market prices.



The Production Cost Spiral

As natural rainfall declines, smallholders are forced to rely heavily on trucked water to keep short-term crops alive. This significantly elevates production overheads, creating a direct economic ripple effect that consumers will feel at local coronation and parish markets by late autumn.

Climate-Smart Strategies for the 2026 Dry Spell

To combat the harsh El Niño conditions forecast for late summer, RADA is actively encouraging farmers to implement localized, adaptive techniques:

- **Grass and Plastic Mulching:** Covering rows to physically prevent the intense August sun from evaporating topsoil moisture.
- **Targeted Drip Irrigation:** Avoiding overhead watering (which loses significant volume to the hot air) in favor of localized root zone watering.
- **Small-Scale Water Catchments:** Using plastic-lined earth ponds and 'black tanks' to store water from erratic rainfall events so it can be metered out evenly over dry spells.

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