

Watering and Soil Moisture Guidelines for Ginger

A Guide for Illinois Specialty Growers



According to several sources, optimal ginger rhizome crop development occurs in soil temperatures between 77 F and 86 F. Temperatures above this range can cause heat stress and reduced yield.

In Illinois, summer heat waves often push soil temperatures near or beyond this upper limit, both in open-field production where mulch is not used, and also in protected culture. Installing precision irrigation equipment before or at the time of planting ginger helps moderate soil temperature and maintain conditions for maximum rhizome growth, even in hot weather.

Irrigation Equipment and Frequency

For ginger production, industry-standard precision irrigation equipment should be used for growing in open field, in-ground, high tunnel, greenhouse, and container systems. For consistent results, and minimal labor hours, a drip irrigation setup for automatic, timed watering is required for optimal harvests.

The top two inches of soil or media should be allowed to dry out between ginger waterings, while the layer of soil/media below those two inches should always remain slightly damp. Ginger should be watered every 1 to 3 days, depending on the condition of the target soil/media and environmental conditions. One line of 5/8" drip tape with emitters every six inches should be used on either side of each ginger row.

Additionally, misting irrigation equipment can be installed and set to mist every two hours, for example at 11 a.m., 1 p.m., and 3 p.m., in high tunnel or greenhouse conditions. This can create a temperature microclimate, minimizing heat stress in ginger plants, and keeping rhizomes in their optimal growth temperature range of 77 to 86 F.



Ginger drip tape installed at planting. Photo by Nick Frillman, University of Illinois Extension

Using Shade to Reduce Heat Stress in Ginger Production

In tropical regions where ginger is grown at scale, the crop often thrives in the understory of coconut trees, coffee shrubs, and other overstory species. The natural shade helps prevent heat stress and takes advantage of ginger's shade-tolerant growth habit.

In Illinois, some growers have successfully used 30 to 40% shade cloth over high tunnels from July through mid-September to reduce heat stress, which has correlated with good yields.

Preliminary 2025 trials, however, indicate that high yields are possible — even in full-sun conditions — if fertility and irrigation are carefully managed. In fact, some of the strongest results to date have come from full-sun ginger production in both high tunnel and greenhouse conditions, with optimal soil moisture and nutrition.

The use of partial shade over protected culture remains an under-investigated area of ginger research. Side-by-side comparison results of full-sun and partial-shade ginger production in Illinois are needed to understand potential trade-offs in yield, quality, plant physiology, and cost to the grower. North Carolina A&T State University is currently studying how different shade levels and colors affect ginger growth, and additional Illinois data in 2026 will help clarify these relationships.

Source

Saravanakumar, D. (2021). A guide to good agricultural practices for commercial production of ginger under field conditions in Jamaica. Food and Agriculture Organization of the United Nations. doi.org/10.4060/cb3365en

Author

[Nick Frillman](#), Local Food Systems and Small Farms Educator, University of Illinois Extension



High tunnel with shade cloth only. Photo by Nick Frillman, University of Illinois Extension

Modified March 2026



Illinois Extension
UNIVERSITY OF ILLINOIS URBANA-CHAMPAIGN

extension.illinois.edu