

# Pre-Sprouting Ginger Rhizome for Illinois Specialty Growers



Pre-sprouting ginger rhizome is the first step in the ginger crop production journey — and it's one of the most complicated. Here are the items needed and the steps necessary to succeed.

## Materials

- 30+ gallon plastic storage tote, or similar, with no holes
- Equal numbers of
  - 10" x 20" plastic flats with no holes
  - 10" x 20" heavy-duty deep (~2.5") trays with holes
- 10 lb. block coconut coir or very well-draining soil-free potting mix for every 12 trays
- Ginger rhizome seed
- Sharp knife and cutting board
- Disinfectant at 70% or higher isopropyl rubbing alcohol or 10% bleach solution
- Kitchen scale
- Water sufficient to hydrate coir
- One extra-large (48" x 20") seedling heat mat per every four 10" x 20" ginger trays
- Heat mat probe and one temperature controller for every four ginger trays
- Automatic mister sprayer (recommended) or hand pump, 1 liter or larger
- Tiered utility rack
- Power strip - 1 port per temperature controller
- Optional: 7-inch tall clear plastic humidity domes/shelves 48" x 20" or larger

## Procedure

### 1. Prepare Rhizomes — Two Days Before Pre-Sprout Planting

- Cut rhizomes into 1.5 to 4 oz. seed pieces. Sanitize the knife between cuts if diseased tissue is observed. Use a scale to dial in the approximate size of the seed pieces.
- Cure in a well-ventilated room for 48 hours to allow cuts on rhizomes to scab over.
- If using multiple cultivars, keep them separated in clean, dry, labeled containers.

### 2. Prepare Growing Media — Day of Pre-Sprout Planting

- Outdoors: Place a 10 lb. block of coconut coir in a 30+ gal plastic tote or similar.
- Add 5 to 10 gallons of water sufficient to hydrate coir; mix until coir is evenly moist.

### 3. Tray Setup and Pre-Sprout Planting in Coir

- Fill all mesh trays 1/3 full of hydrated coconut coir; let drain 15 minutes outdoors.
- Place cut and cured rhizomes on top of coir layer, about 1-to-2 inches apart in mesh trays.
  - Fit unique rhizome shapes together like puzzle pieces but don't overcrowd.
- Add additional hydrated coir on top of rhizomes until barely covered until trays are 2/3 to 3/4 full.
- Create drainage space of 1 to 2 inches between trays and flats using river rock or similar material.
- Insert mesh trays into flats, with rocks between. Drain any tray water after 1 hour.



Fig. 1. A ginger diseased rhizome cross-section. Photo by: Nick Frillman, University of Illinois Extension.

#### 4. Dial In Pre-Sprout (Germination) Conditions

- Place heat mats on tiered utility rack shelves.
- Place flat/tray combos on heat mats. Four trays will fit on one 48" x 20" heat mat.
- Plug heat mats into temperature controllers set the temperature to 77 F +/- 2 F
  - Plug controllers into power strip
  - Insert the temperature controller probe into the coconut coir of one of the four trays.
- Optional: Add humidity domes for 10 x 20 trays if the room is usually cool and dry.
  - Once ginger rhizome shoots emerge, sunlight or supplemental lighting is needed.

#### 5. Watering

- Let the coir surface dry between waterings and after initial planting.
- Soak the top layer of coir with a manual or automatic mister sprayer every two to three days.
- Adjust watering timeline for the conditions and monitor for algal growth.
  - If any green growth or mold is observed on the coir surface, dial back watering.

Harden off and plant ginger transplants when ½ to ¾ of the rhizomes produce shoots 4 inches tall or more. It is common to observe uneven emergence. Soil temperatures should be above 55 F when planting in the ground.

#### Additional Considerations

Ginger seed pieces are typically in short supply, and high in demand, so availability varies year-to-year. For assistance and questions, contact author or reach out to a local county Extension office at [go.illinois.edu/ExtensionOffice](https://go.illinois.edu/ExtensionOffice).

#### Sources

Ginger, Galangal, and Turmeric Production in Florida Fisher, P., Freyre, R., Gómez, C., Pearson, B., Sanchez-Jones, T., Steed, S., ... Tello, N. (2023). Ginger, Galangal, and Turmeric Production in Florida: ENH1374/EP638, 8/2023. EDIS, 2023(4). [doi.org/10.32473/edis-ep638-2023](https://doi.org/10.32473/edis-ep638-2023)

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#### Author

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



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