



## WHAT ARE PLANTING ZONES?

Planting zones are geographic areas defined by climate conditions, especially average minimum winter temperatures, that determine which plants are most likely to thrive there. In the U.S., planting zones are typically based on the U.S. Department of Agriculture Plant Hardiness Zone Map, which divides the country into numbered zones (e.g., Zone 7a, Zone 9b). These zones help gardeners, farmers, and land managers choose suitable plants for their local conditions.

## WHAT IS THE IMPACT ON PRODUCTION IN FLORIDA?

Florida's citrus production has decreased by more than 90% since 2004, in large part due to citrus greening disease, which has been spread by insects as temperatures increase. In addition, hurricanes threaten crops, and estimated agricultural losses from Milton in 2024 exceeded

# \$190 MILLION.



SOURCES

# ABOUT US

The CLEO Institute is a women-led nonprofit, nonpartisan organization exclusively dedicated to climate education, advocacy, and engagement. The devastating hurricanes, increased flooding, and rising temperatures underscore the importance of CLEO's work.

Building community resilience and adaptive capacity requires an informed, engaged, and prepared public. With a top-down, bottom-up approach, we work with government, business, academic, and community leaders to advocate for long-term resilient solutions for climate action.

# CONTACT US



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# THE FUTURE OF FOOD



## WHAT IMPACTS

### DOES CLIMATE CHANGE HAVE ON FOOD?

**Climate change** is disrupting the U.S. food system by threatening agricultural productivity, food security, and economic stability. The evidence indicates multiple critical impacts:

- Heat waves that lower crop yields and cause stress in livestock
- Hurricanes and flooding that damage crops, equipment, and infrastructure
- Droughts and unpredictable rainfall that disrupt irrigation and planting cycles
- Saltwater intrusion that affects freshwater supplies needed for crops
- Rising pest and disease pressure as warmer temperatures help them spread and survive

### WHAT ARE THE CROPS MOST AT RISK?

Several studies project that food yield will decline and crop prices will increase. Worldwide, people could have about 120 fewer calories available per day, roughly 4% less food than they eat now. The crops that provide the highest calories and are threatened by climate change include:



With no actions taken to reduce greenhouse gases, **by 2050**, crop yields are expected to decrease by

**8%**  
globally

**24%**  
by 2100

## WHAT ARE THE HEALTH CONCERNS?

- Farmworkers face increased risk of heat-related illnesses
- The nutrition levels in staple crops can decline
- Warmer conditions increase the risk of foodborne illnesses

## WHAT CAN YOU DO TO REDUCE YOUR RISK?

- Support farming practices and policies that help adapt to and mitigate climatological challenges
- Learn where your food comes from and choose local, sustainable farms
- Reduce food waste at home, which lowers emissions and eases pressure on the food system
- Support protections for farmworkers, including heat safety and health care access



## WHAT ARE THE SOLUTIONS

### FOR ADDRESSING THE IMPACTS OF CLIMATE CHANGE ON FOOD?

#### FLORIDA FARMERS, RESEARCHERS, AND COMMUNITIES ARE ALREADY WORKING ON SOLUTIONS:

- Using cover crops and no-till farming to protect soil and store carbon
- Practicing precision agriculture to reduce water and fertilizer waste
- Growing more diverse crops and planting trees on farms (agroforestry) to increase resilience
- Restoring wetlands and soils to help manage flooding and drought naturally

#### CHANGES IN CLIMATE ZONES ARE ALSO SHIFTING WHAT CAN GROW WHERE:

- As winter temperatures warm, USDA plant hardiness zones are shifting north
- Areas like Orlando have already moved from Zone 9b to 10a
- Warmer zones allow new crops to grow but also allow more pests and invasive species to survive
- Farmers and gardeners need to update planting schedules and pest management to stay ahead

Building a climate-smart food system means adjusting how we grow food, protecting farmworkers, and preparing for a hotter, less predictable future.

