

Edible Campus: A Model for Georgia Tech

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Research Problem

1. Sustainable Dining Solution
2. Food Insecurity Among College Students



Tech Dining

41.4%

plant-based foods

18.2%

produce

2.2%

sustainably or ethically produced

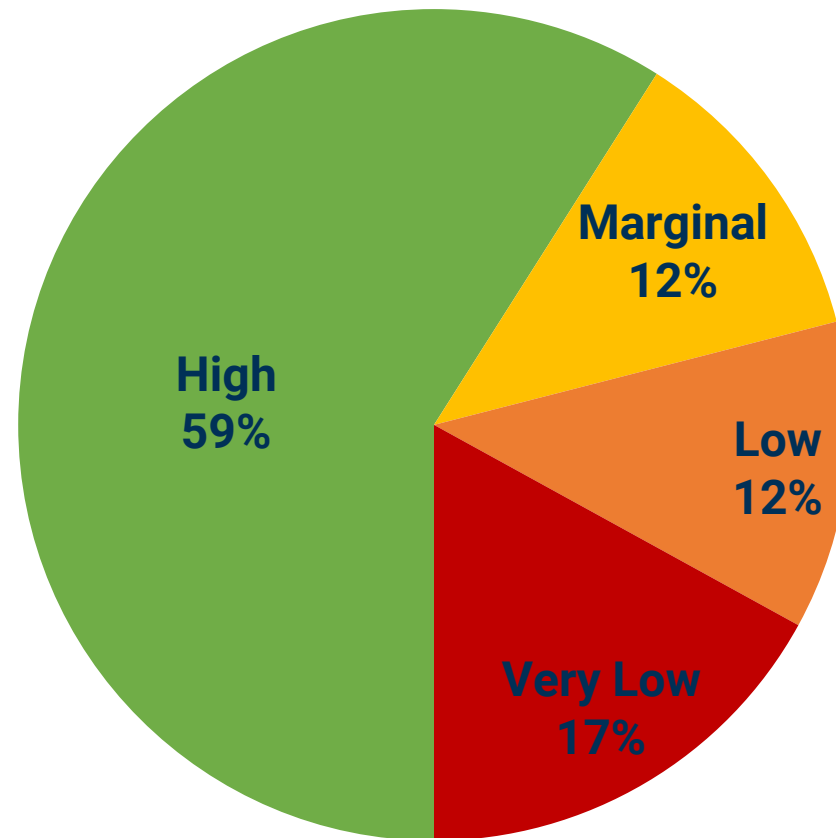
1.4%

locally sourced produce
(Common Market SE)

of total annual food and beverage expenditures (Oct 2019)

Food Insecurity At Four Year Colleges

LEVEL OF FOOD SECURITY (FOUR-YEAR COLLEGES)



Food Insecurity At Tech

10% of Tech students self-identify as needing food assistance

14% relied on or sought out events with free food on campus

16% prioritize working at their job over academics and extracurriculars

Grand Challenges: Addressing Food Insecurity (2017)

Approach

- Evaluation of current edible plantings on campus
- Survey of Atlanta's climate as relevant to agriculture
- Shortlist of suitable edible plants
- Map of selected planting location on campus

Current Plantings

5.7% (about 700 out of 12,000+)

plantings on campus considered 'edible' without skillful preparation

Including:

Serviceberry (multiple varieties)

Pawpaw

Cherry Plum

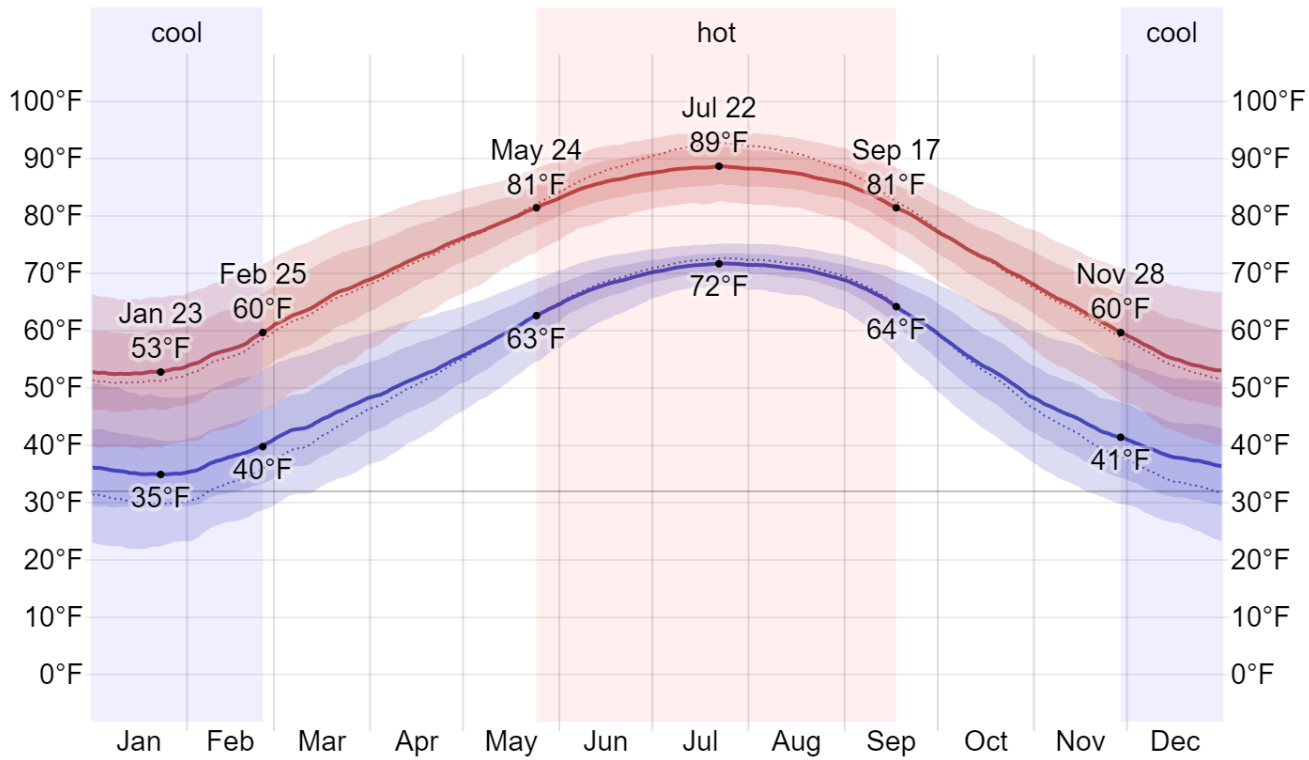
Common pear

Pecan

Peach

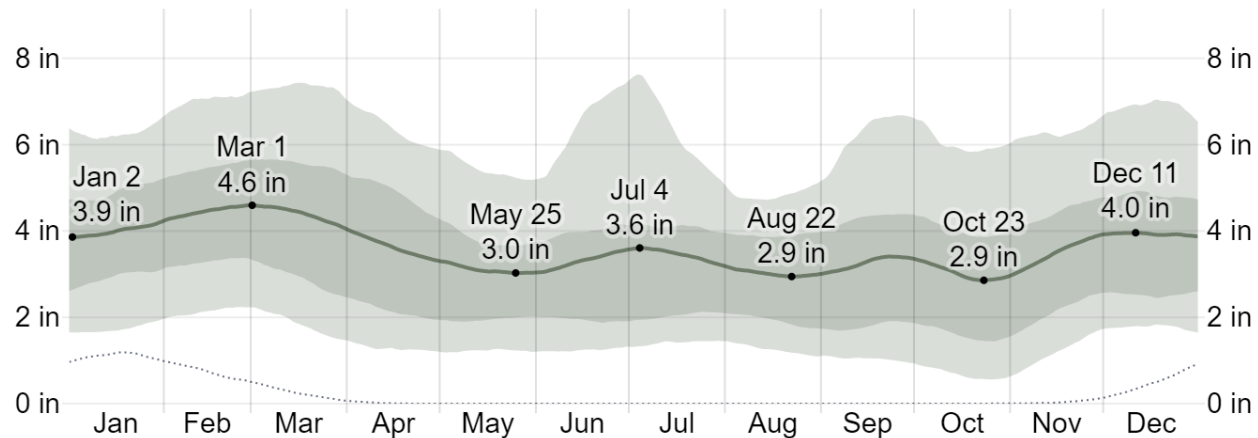
Southern Crabapple

Climate

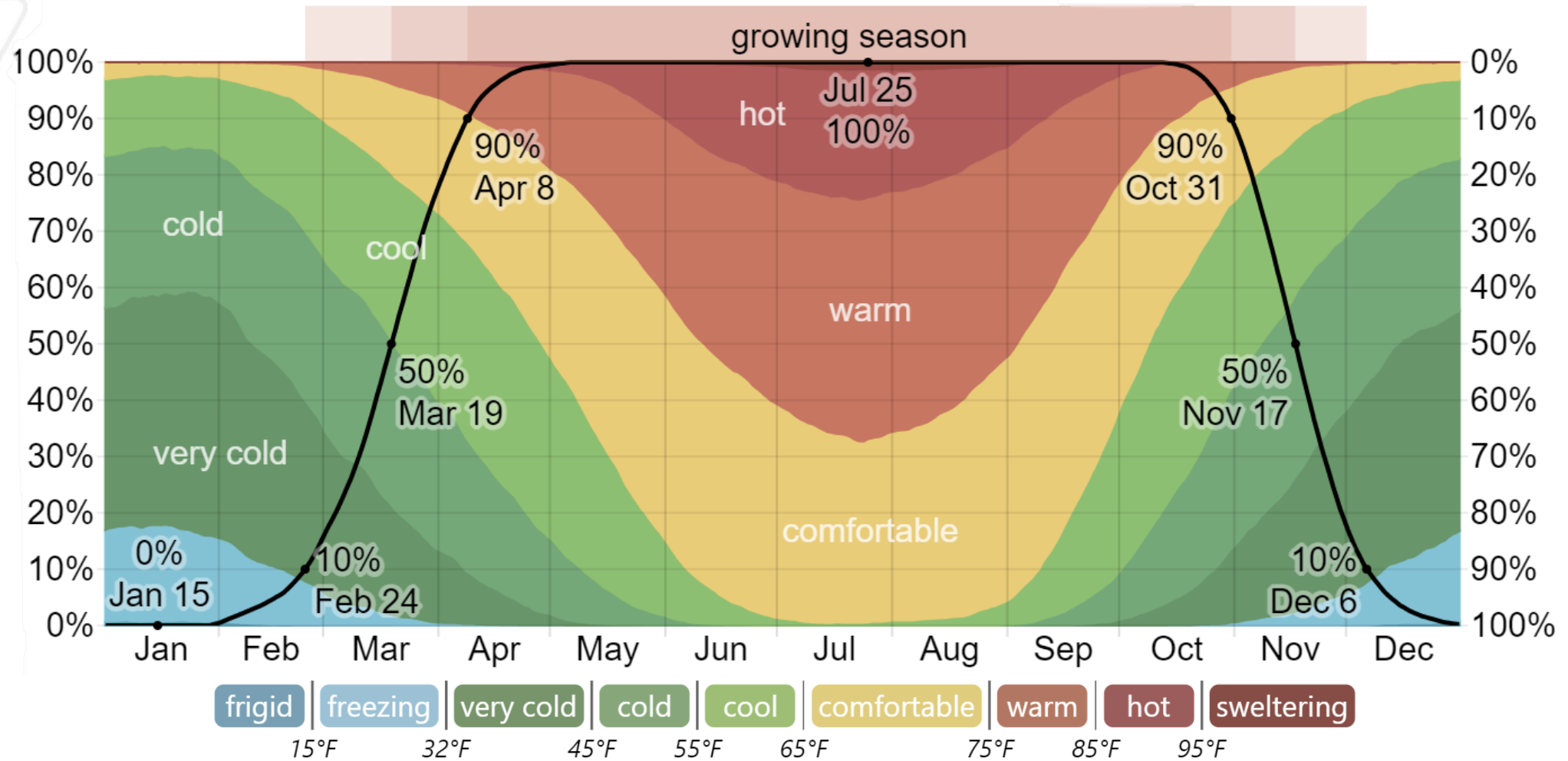


Classification: Temperate / Humid subtropical

Average Daily Temp: 62.0 °F
30 Y Average Rainfall is 49.71"



Growing Season



The percentage of time spent in various temperature bands. The black line is the percentage chance that a given day is within the growing season.

Short-List of Selected Plants

Desired qualities

1. Native to Georgia
2. Perennial life-cycle
3. Recognizable / Familiar
4. Low maintenance requirements



Suitable Plants

Trees

Malus angustifolia (Southern Crab Apple)

Plums

Prunus cerasifera (Cherry Plum)

Prunus americana (American plum)

Prunus angustifolia (Chickasaw plum)

Asimina triloba (American Pawpaw)

Castanea dentate (American Chestnut)

Carya illinoensis (Pecan)



Suitable Plants

Shrubs

Blueberry

Vaccinium virgatum (Rabbiteye blueberry)

Vaccinium tenellum (Southern blueberry)

Vaccinium corymbosum (Highbush blueberry)

Vaccinium elliotii (Elliott's blueberry)

Huckleberry

Gaylussacia baccata (black huckleberry)

Gaylussacia dumosa (dwarf huckleberry)

Gaylussacia frondosa (blue huckleberry)

Rubus allegheniensis (Allegheny blackberry)

Serviceberry

Amelanchier arborea (Downy Serviceberry)

Amelanchier arborea (Common serviceberry)



Suitable Plants

Herbs and Roots

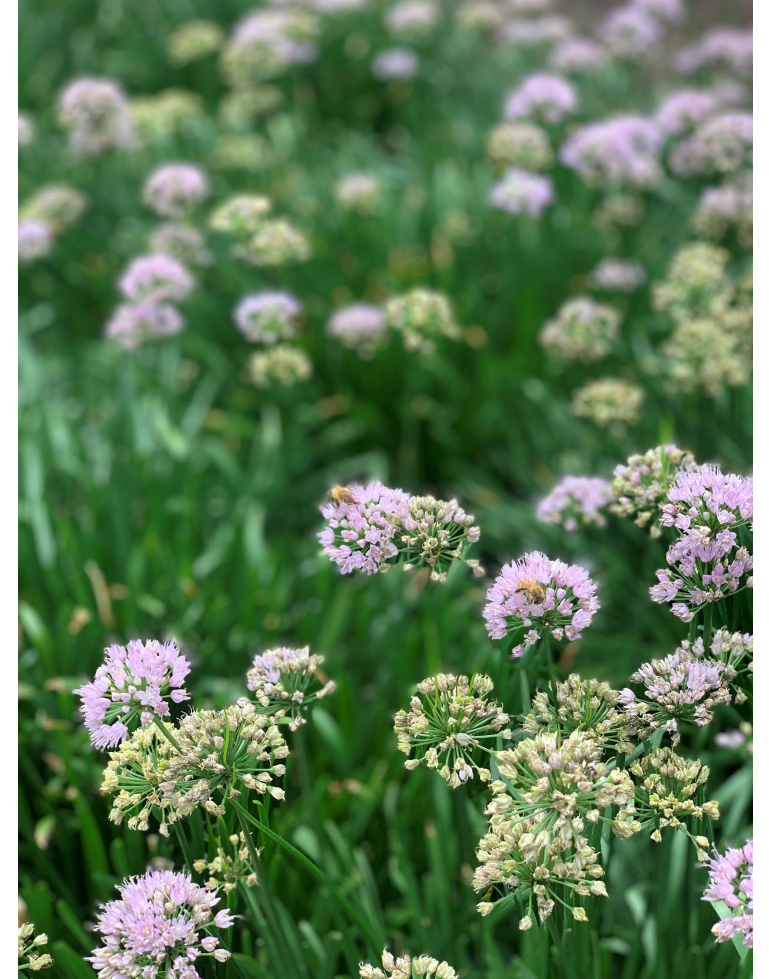
Allium canadense (Meadow Garlic)

Allium cernuum (Nodding Onion)

Pycnanthemum tenuifolium (Mountain Mint)

Ipomoea pandurata (Wild Sweet Potato)

Cucurbita pepo (Summer Squash)



Conclusion

- **Benefits**
 - Increased awareness of food systems
 - Increased sustainability
 - Increased food security
- **Challenges**
 - What does 'edible' mean?
 - Funding
 - Management
 - Waste
 - Exposure to liability

Future Research

- Production yield
- Survey of student body
- Trial plantings and record interactions
- Cooperation with campus groups

