

CREATING FRUITFUL COMMUNITIES: IDENTIFYING BARRIERS AND SOLUTIONS TO ESTABLISHING AN EQUITABLE FOOD SYSTEM THROUGH URBAN AGRICULTURE

Background

- Food insecurity, or a limitation to adequate food or nutrition, impacts 1 in 9 households in the United States.
 - Food insecurity is twice as likely to affect Black and Hispanic households.
 - Food insecurity can lead to mental health issues and chronic illnesses like diabetes, heart disease, and stroke.
- Climate change will magnify food insecurity due to warming temperatures and changing precipitation patterns.
- Community-based urban gardening and fruit tree cultivation could potentially increase the amount of fresh, healthy foods available in communities facing food insecurity. However, participation in urban agriculture in the U.S. is low.
- **Objective:** Identify the barriers and benefits of urban agriculture and determine if community-based urban agriculture (see Fig. 5) can lower instances of food insecurity.

Research Questions

What are the common barriers to the expansion of community-based urban agriculture, and what benefits can arise from it?

Can community-based urban agriculture aid in lowering rates of food insecurity?

Internship and Methods

- I interned with City Fruit over the summer in their Education and Outreach program (See Fig. 1)
- To answer my questions, I administered an online survey to individuals with experience in urban agriculture to understand its impact in Seattle, WA.
- I also conducted a literature review of community-based urban agriculture including successful efforts, benefits, barriers to participation within the U.S., and its relationship to food insecurity.



Figure 1: City Fruit staff and volunteers posing in front of a large transparent apple harvest at McAuliffe Park.

Results

BENEFITS AND BARRIERS

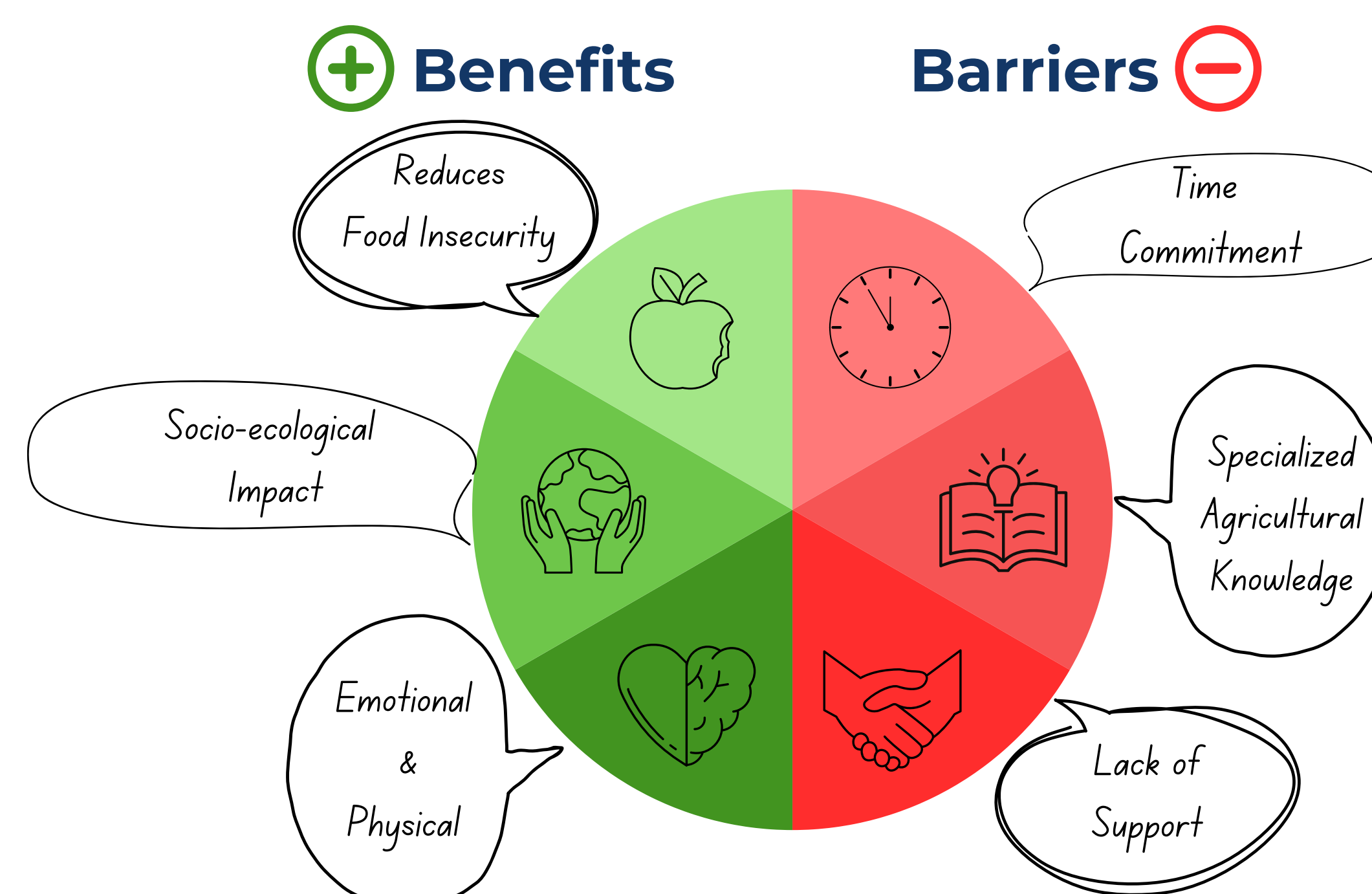


Figure 2: Prevalent benefits and barriers of community-based urban gardening drawn from the literature review.

What is the biggest benefit of community-based urban agriculture?

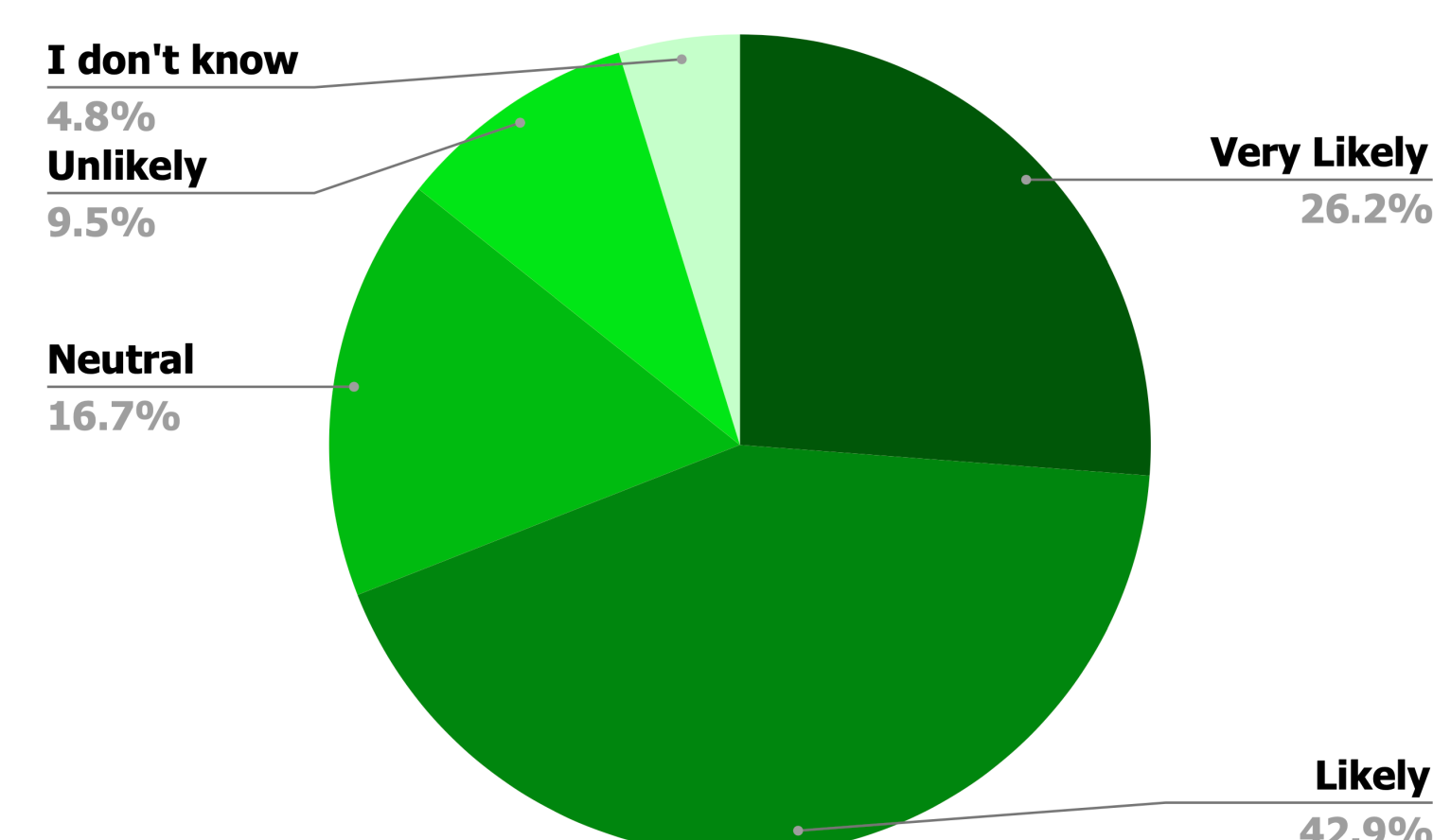
- “Mental and physical health”
- “Building community and connecting to nature”
- “Sinking carbon, conserving fossil fuels by producing locally, raising awareness around food systems”
- “Getting food to those who need it”

Figure 3: In these short-answer survey responses, respondents indicate the benefits of urban agriculture, such as improving environmental health and building community. Survey results were based on 42 responses.

FOOD INSECURITY

Figure 4: The majority of respondents think that community-based urban agriculture can lower rates of food insecurity. 42.9% of the 42 respondents answered with “Likely”, and 26.2% of respondents answered with “Very Likely”.

How likely do you think community-based urban agriculture (fruit trees, urban gardening, etc.) is to contribute to lower rates of food insecurity/hunger?



Takeaways

- Many barriers exist that limit city residents' ability to engage with urban agriculture in the U.S. (see Fig. 2).
- Despite barriers that limit its expansion, urban agriculture provides a multitude of benefits to both participants and communities (see Fig. 2 and Fig. 3).
- Community-based urban agriculture has the potential to reduce food insecurity in cities like Seattle.
 - The literature review found a study in Burlington, Vermont that observed that the caloric deficit faced by Burlington's food-insecure population could be met by planting food-bearing trees on **37%** of available land in the community affected.
 - Most Seattle residents with a background in urban agriculture believe that it can help reduce rates of food insecurity (see Fig. 4).

Significance

- Many urban communities, especially neighborhoods labeled as “food deserts”, would greatly benefit from urban agricultural opportunities to help meet their nutritional needs.
- Cities are especially vulnerable to extreme weather events. Urban agricultural efforts can build up resilience towards threats to food availability.
- Local governments and agricultural institutions should prioritize and support the expansion of community-based urban agriculture through increased funding and land allotments.
- To overcome some of the barriers discussed and increase participation, cities can create community kitchens, establish gardens on public lands, supply transportation to urban agriculture activities, and provide childcare to participants.

Acknowledgements

I would like to thank my site supervisor Tiare Gill, faculty advisor Eli Wheat, friends, and family for all of their support.



Figure 5: An example of urban agriculture in Seattle at MLK FAME Community Center. Retrieved from: Crosscut