

## Appendix A: Research Questions & Hypothesis

Table 1. Detailed research questions.

I.	What key food security-related benefits do local food systems provide to urban residents?
	<ul style="list-style-type: none"> <li>a. Do they increase the physical availability of food within an urban area?</li> <li>b. Do they increase people's economic and physical access to food?</li> <li>c. Do they enhance urban residents' nutritional practices/increase access to healthy food?</li> <li>d. Do they increase urban residents' access to safe food?</li> </ul>
II.	Resilience: How can local food systems ensure urban residents' food security during covariate and idiosyncratic shocks?
	<ul style="list-style-type: none"> <li>a. Natural – e.g. natural disasters, floods, drought, pest attacks livestock disease epidemics?</li> <li>b. Economic – e.g. price increases, unemployment, recession, changing terms of trade, etc.?</li> <li>c. Sociopolitical – e.g. war, drastic political changes, social disturbances, internal displacement?</li> </ul>
III.	How can local food systems become and remain a sustainable fixture in communities for fostering food security?
	<ul style="list-style-type: none"> <li>a. What political/economic/social context/involvement is necessary to develop new/enhance existing local food systems to foster urban food security?</li> <li>b. Who are the key stakeholders in local food systems around the world?</li> <li>c. What are their incentives for organizing them?</li> <li>d. Who is benefiting from LFS? How are they benefiting?</li> <li>e. What classes of people may not benefiting/be harmed/be excluded from them?</li> </ul>
IV.	How can they overcome challenges related to the following variables?
	<ul style="list-style-type: none"> <li>a. Economic – e.g. profitability (both in normal economic conditions and during shocks), access to markets</li> <li>b. Social – e.g. social acceptance, available knowledge and skills, site safety</li> <li>c. Environmental – e.g. access to land and water, site quality, seasonality and climate</li> <li>d. Political – e.g. zoning and ordinances, legality, other policy restrictions</li> </ul>

Table 2. Detailed hypothesis.

<i>Food Security Component</i>	<i>Local Food Systems Characteristics</i>
1. Physical availability of food	<ul style="list-style-type: none"> <li>• Increases total food production within an urban region <ul style="list-style-type: none"> <li>○ Increases the productivity of existing production spaces that distribute food to urban residents</li> <li>○ Increases the number of production centers that distribute food to urban residents</li> <li>○ Increases the land in a neighborhood that is used for food production</li> </ul> </li> </ul>

2. Economic and physical access to food	<ul style="list-style-type: none"> <li>• Contributes to local employment and economic regeneration</li> <li>• Increases disposable income of urban residents <ul style="list-style-type: none"> <li>○ Provides direct income</li> <li>○ Increases access to food through self-production</li> <li>○ Provides food that is less expensive than available substitutes</li> </ul> </li> <li>• Provides food in a geographic area that is accessible to more urban residents</li> </ul>
3. Nutrition of consumption practices	<ul style="list-style-type: none"> <li>• Provides an educational space to learn about health and nutrition</li> <li>• Provides specific nutritional programming/education activities</li> <li>• Provides a wider variety of food products/enable consumers to increase their dietary diversity</li> <li>• Provides customers with greater trust in the quality components of their food</li> </ul>
4. Food safety	<ul style="list-style-type: none"> <li>• Provides a source of safe food in the case that non-local food supplies are contaminated</li> <li>• Provides a safety net (e.g. insurance) in case food provided by the LFS is unsafe</li> <li>• (-) Provides people with (local) food that may be more likely to be unsafe/contaminated due to its growth in urban regions or lack of safety regulations</li> </ul>
5. Stability of the other four dimensions	<ul style="list-style-type: none"> <li>• To provide resilience during <i>type of</i> shock, the organization...</li> <li>• <i>Natural/environmental:</i> <ul style="list-style-type: none"> <li>○ Employs technology that is resistant to environmental shocks and/or climate change</li> <li>○ Has physical barriers that defend the organization against natural disasters or inclement weather</li> </ul> </li> <li>• <i>Sociopolitical:</i> <ul style="list-style-type: none"> <li>○ Funding/revenue comes from non-political or socially independent non- sources</li> <li>○ Revenue streams are secure irrespective of changing social trends</li> <li>○ Organization/food is accessible to people no matter that social or political affiliations</li> </ul> </li> <li>• <i>Economic:</i> <ul style="list-style-type: none"> <li>○ Funding is provided by a financially secure, sustainable source</li> <li>○ Revenue is secure irrespective of declines to other economic sectors</li> <li>○ Revenue does not decrease if consumers' income decreases</li> <li>○ Provides consumers with an educational space to learn how to produce their own food</li> <li>○ Provides consumers with increased direct or disposable income</li> <li>○ Provide consumers with affordable food</li> </ul> </li> </ul>