Local Food Logistics

Shakera Raygoza, Terra Preta Farm

Introduction

- For our children
- For health
- For the environment



How we began

Borrowing Land for Personal Use Weslaco ¼ acre, ½ acre plots



















Donna, Texas 2012



Farm Field Day







Donna

- 1 acre plot (Borrowed)
- Started Small CSA with 7 members
- Farmers Markets







TRANSPORTATION









Transplant production







THE PROPERTY OF

Leasing in Weslaco Texas







Opportunities

- Texas Department of Agriculture Young Farmer Grants
- Farm Service Agency Land Ownership Loan
- EQiP Grant from NRSC for High Tunnel





Building the Farm

- FSA Microloan for installations
- Irrigation Pond
- Irrigation System
- Washing Station
- Cold Room
- Utilities







Building the Market

- Farmers Markets
- CSAs
- Restaurants
- Schools
- Wholesale





Packing





Use what you have 50 bags for 3 years







Wholesale Logistics









Challenges using freight

- Less than Truckload Transportation
- Not being the Priority
- Inconsistency
- Cancellations
- Communications
- Timing Receiving Dates

Questions



Regional Food Transportation for Texas Farmers

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Food Supply System Sustainability & Resilience

Major challenges associated with our prevailing food supply system:

- Many consumers lack sufficient access to fresh and healthy food
- Significant food waste
- Reliance on distant food sources:
 - Long transport distances
 - Lack of accountability in production practices
- Centralized production and lean supply chains are cost-efficient, but they are also
 - Damaging to rural economies
 - Vulnerable to disruptions

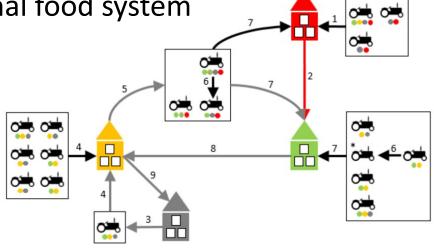
Source: NYT

Regional Food Supply Systems

- One alternative: regionalized food production
 - Small/medium-scale, diversified farms
- Major challenge: transportation and distribution
 - Farms are rurally-located and produce small volumes
 - Buyers are urban and seek large volumes
- Our research: How can we leverage existing logistics best

practices to improve regional food system

- Efficiency
- Effectiveness





Funded Research Project: Regional Food Transportation for Texas Farmers

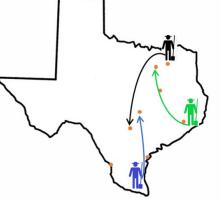






Project: Design a regional transportation system for small-scale Texas farmers

- Stakeholder-driven design
- Collaborative, but with decentralized control













Southern SARE Research Project: Overarching Goal

To investigate the transportation challenges faced by Texas farmers and ranchers

and to design, develop, and pilot a transportation management tool that will help farmers and ranchers begin to build efficient, collaborative regional food transportation networks

If successful, this project will strengthen the Texas regional food system by increasing the market reach of farmers and ranchers, thereby increasing farm incomes and long-term financial resilience

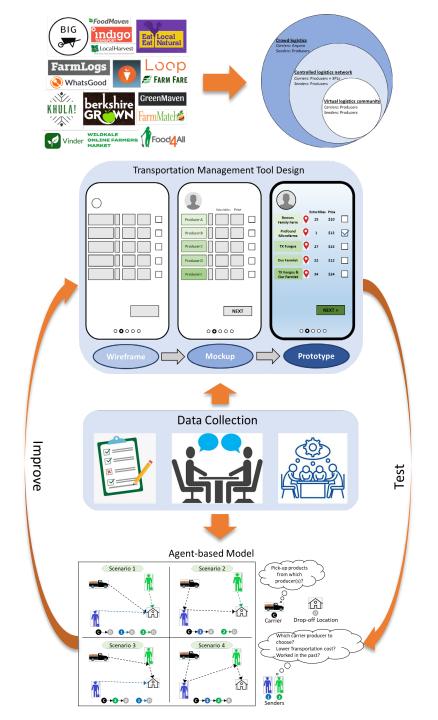
Southern SARE Funded Project: Regional Food Transportation for Texas Farmers

- Project collaborators:
 - Mike Morris & Robert Maggiani, National Center for Appropriate Technology
 - Sue Beckwith, Texas Center for Local Food
 - Juan Raygoza, Terra Preta Farm
 - Glen Miracle, Laughing Frog Farm
 - Jeff Bednar, Profound Microfarms
- Project participants:
 - Margaret Smith, The Common Market Texas
 - Stephanie Scherzer, Farmhouse Delivery
 - Rebekka Dudensing, Texas A&M

SARE Project: Approach

- A systems engineering approach:
 - Uncover the transportation requirements of a broad and inclusive set of regional food system stakeholders
 - Translate these requirements into the design and development of a transportation management tool (i.e., an app) that connects farmers and transportation providers
- Regional food system stakeholders:
 - Farmers and ranchers
 - Large-scale food logistics providers
 - Small-scale food logistics providers
 - Non-traditional partners

Research Project Overview



Preliminary Data Collection: Farm Visits & Farmer Interviews (2019)

- 12 in-person interviews with farmers across Texas
- Key takeaways:
 - Transportation is a major issue, and not just for moving products to customers
 - Expensive (time and money)
 - Difficult to get attention from LTL trucking companies
 - Requires connections
 - Generally, two categories of customers:
 - Restaurants
 - Larger wholesalers and retailers

Preliminary Data Collection (2020): Farmer, Rancher, & Distributor Interviews

- 25 phone/online interviews with
 - Farmers
 - Ranchers
 - Small and mid-sized distributors
- Key takeaways:
 - The COVID-19 emergency presented major challenges
 - Restaurant demand vanished
 - Direct-to-consumer demand skyrocketed
 - Required new distribution mechanisms
 - Major bottleneck: meat processing
 - Texas regional food system participants were able to pivot, turning challenges into opportunities
 - Six case studies: logistics best practices

Next Step: Farmer/Rancher Focus Groups

- Online focus group sessions with Texas farmers/ranchers
- What we want to know:
 - What are producers' transportation "pain points"?
 - Are they using intermediaries?
 - What technology are they currently using?
 - How do they feel about collaborating with other farmers for transportation?
 - How do they feel about the idea of crowd-based logistics?

Potential Solutions

- Ideas from our preliminary research:
 - Leveraging empty backhauls
 - Crowd-shipping platform
 - Peri-urban cross-docks/food hubs
 - Urban micro-storage
 - Farmer/rancher collaborative transportation and storage
- Major challenges:
 - Coordination is complex and costly
 - Distances are often large
 - Issues of trust and autonomy