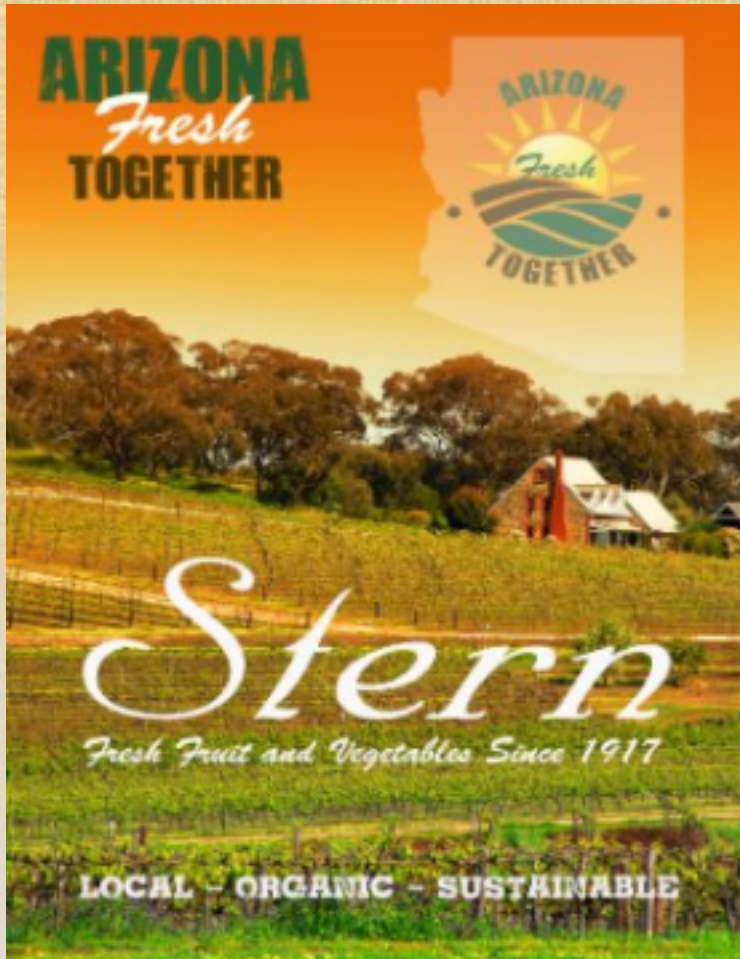


STERN PRODUCE : DEVELOPING SUSTAINABILITY METRICS FOR “ARIZONA FRESH TOGETHER” LOCAL FOOD PROGRAM



MSUS APPLIED PROJECT

SALOMI PRADHAN

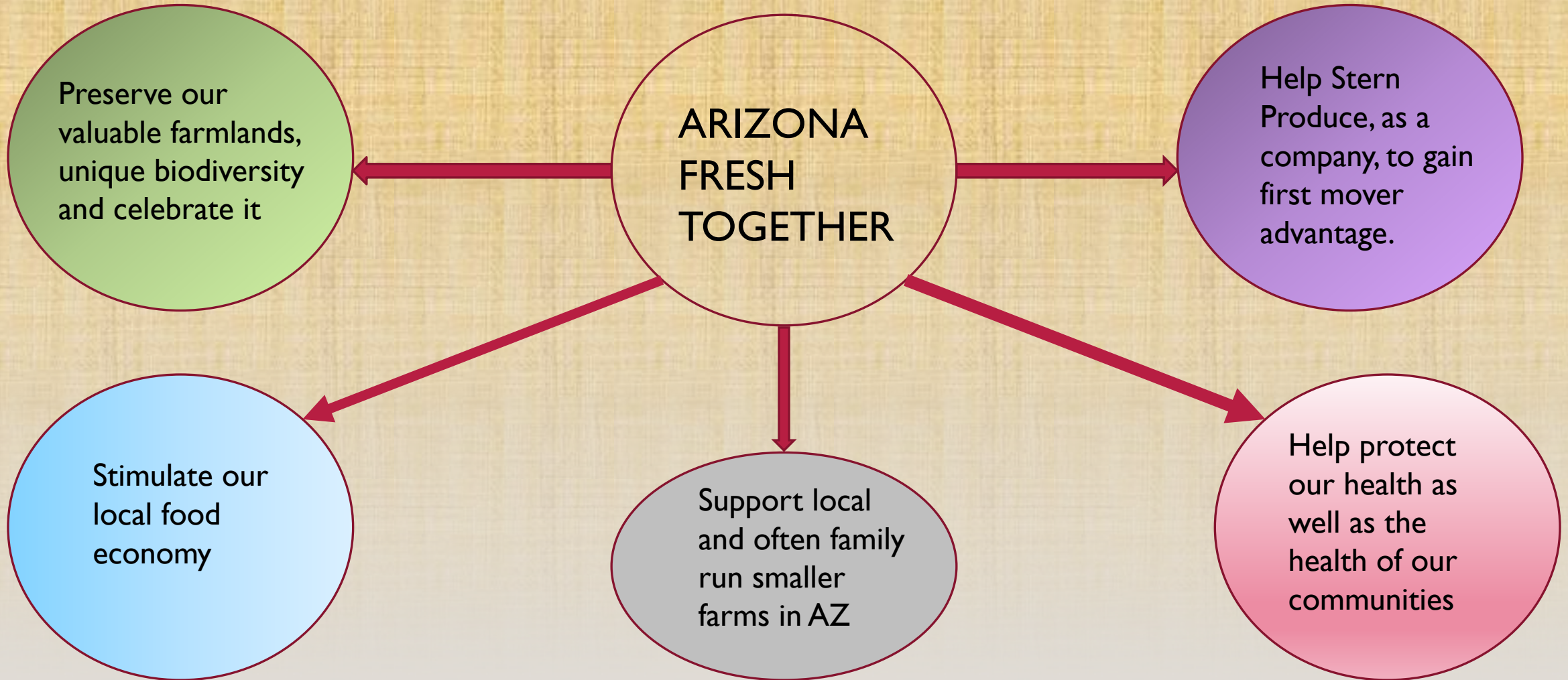
PROJECT PARTNER – KRISTEN OSGOOD

INTRODUCTION

- **Stern Produce Co.:** A family owned food distribution business in Phoenix since 1917
- Committed to building partnerships with local farms in Arizona to meet the wholesale demand for Arizona grown food.
- Embraced the responsibility to conduct business in a manner that invests in community wellness, fosters societal resilience and environmental health.
- **ARIZONA FRESH TOGETHER (AFT) :** Revolutionize Arizona with local food supply chain partnerships



AFT : GOALS AND OBJECTIVES



AFT METRICS AND INDICATORS

Food Safety & Food Nutrition

- Farm Certification
- Crop diversity
- Crop Food
- Pest Control
- GMO/Non GMO
- Food storage/processing
- Food taste and enjoyment

Ecosystem/ Biodiversity Stability

- Sustainable farming practices
- Water usability
- CO2 emissions
- Pest control methods
- Soil health

Economic Resilience/ Stability

- Food affordability
- Creation of local job opportunities
- Creation of secondary economic opportunities
- Stern local revenue indicators/profitability margins in local food distribution

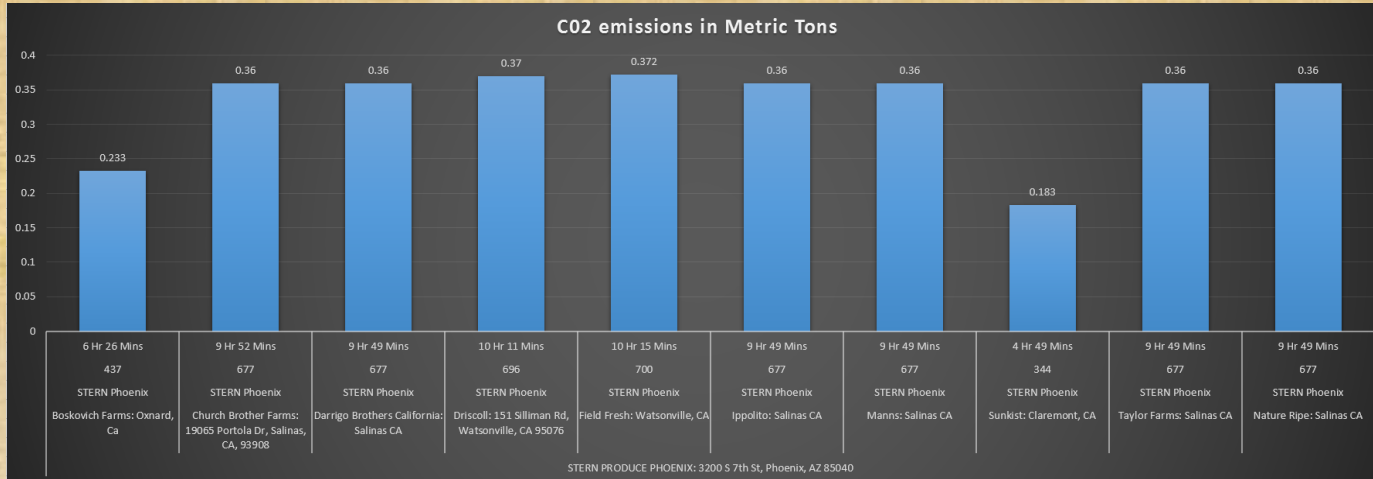
Socio-cultural Well being

- Human health & safety
- Quality of life/wellbeing
- Equity, Justice
- Biological and cultural diversity
- Resiliency in the system
- Happiness

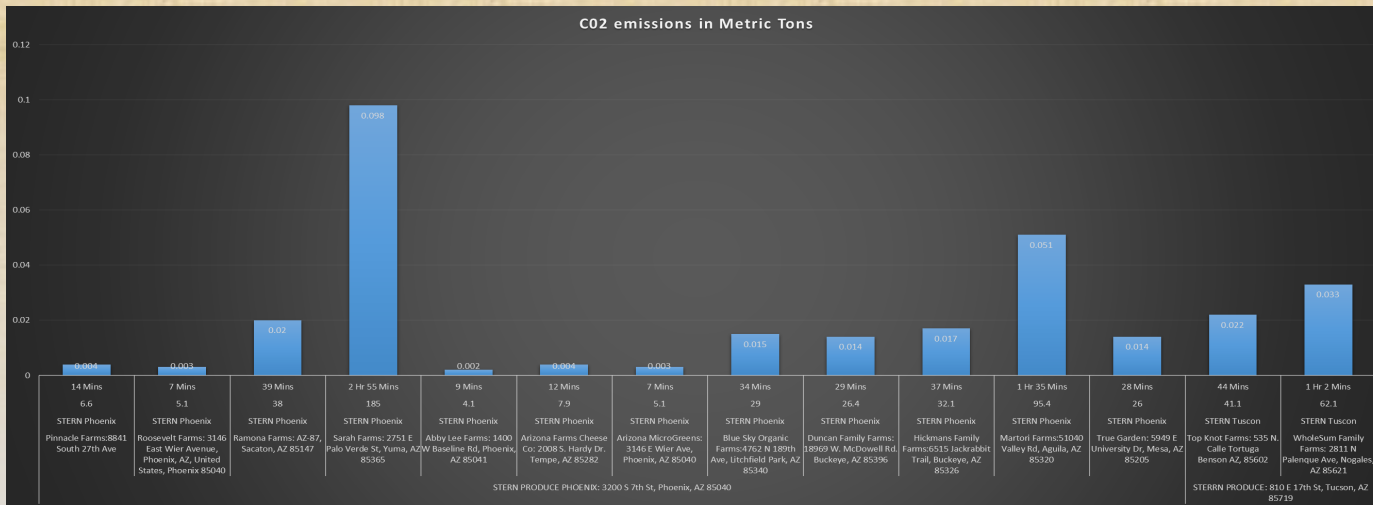
WHAT I DID ...

Environmental	Researched and collected data of potential GHG emissions to compare the environmental implications of local VS conventional food sourcing.
Economic	<ul style="list-style-type: none">• Relied on survey questionnaires and informal interviews with local Arizonian farmers• Extensive literature review and stakeholder engagement
Social	
Human Health	

ENVIRONMENTAL IMPLICATIONS



CO2 emissions released in conventional sourcing of food produce from out of state of AZ



CO2 emissions released in local sourcing of food produce from within the state of AZ

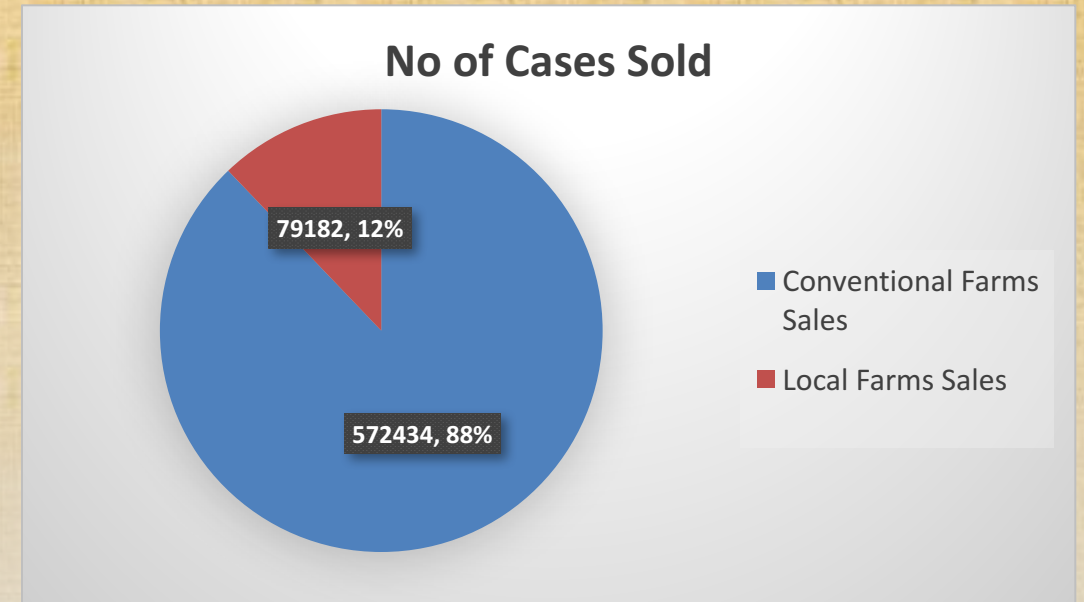
CONTINUED...

- Farms are certified either *Organic*, *GHP* (Good Handling Practices) / *GAP* (Good Agricultural Practices) certified or *Naturally Grown*.
- Strictly no use of any synthetic chemical inputs (e.g. fertilizers, pesticides, antibiotics, food additives)
- None of the farms use genetically modified seeds
- Use of sustainable farming practices like eliminating tillage, cover cropping, crop rotation, drip irrigation etc.
- No chemical sprays for pest control
- Water conservation strategies
- Lesser environmental pollution
- Greater accountability

ECONOMIC IMPLICATIONS

- Stern's Direct dollar value spent to the local providers/economy from 01/01/17 to 11/06/17 is appx 1.3 million
- Local farms projected a local sales revenue growth from in between 5% to 15% in the past 3-4 years
- The farmers that I interviewed employ an average of 30 to 50 people in their business in the peak season. (production side)
- Currently, it is out of the farmers' budget and capacity to track how much are they contributing to the local economy of AZ.

Stern's sales data for local vs conventional food distribution for 1-1-17 to 11-6-17



SOCIAL IMPLICATIONS

- Local farms GHP/GAP certified
- Safety protocols priority, regular inspections and audits, rigorous employee trainings, instant reporting and feedback assessments
- Workers wages above the state's average wage rate (community healthcare, community housing)
- Impressive biological and cultural diversity ratio. On average, every farm employed 30% women and 50% native Navajos and Latino workers
- Strong community cohesion
- Vulnerable and less resilient to shock strategies in case of natural calamities (hurricanes, floods, droughts), market crashes, social upheavals
- Happiness is the key!

CONCLUSION

Benefits of AFT

- AFT is a sustainable and successful food program
- The metrics created were well defined, meaningful, measurable, motivational and easy to understand and communicate to all stakeholders
- The metrics created will enable us to statistically measure benefits of local food programs like the AFT
- The project also provided a comprehensive assessment of health, resilience, fairness and transparency that are not generally used in a typical supply chain analysis
- Social capital is as important as the economic capital!

Scope for Improvement to make AFT a viable success

- Local farms and farmers are not resilient enough
- Need for Education, policies & Incentives to drive local food systems.
- Consumers must be willing to eat seasonally
- Heavy disparity and inconsistency issue with the supply and demand side in the markets for local produce
- Uncertainties around social characteristics of sustainability
- Lack of tracking or documentation of economic contribution of local food systems to the local economy.

CALL FOR ACTION...

- Scope to actually forecast, measure and compare the results of the indicators with time as AFT program continues to generate more revenue and consequently affect lives of more people
- The metrics I present can be used as a marketing tool for branding and marketing the AFT program to demonstrate the importance of local food systems



THANK YOU!