

# Connecting Land, People and Place through the Local Food System: Evidence from Western North Carolina

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# A theory of food system change

- Consumers “vote with their dollars,” other purchase behaviors
- When consumer preferences change, producers respond
- Learning how preferences form, meld, and change over time allows us to better understand our complex, adaptive food system
- ...and nudge it?

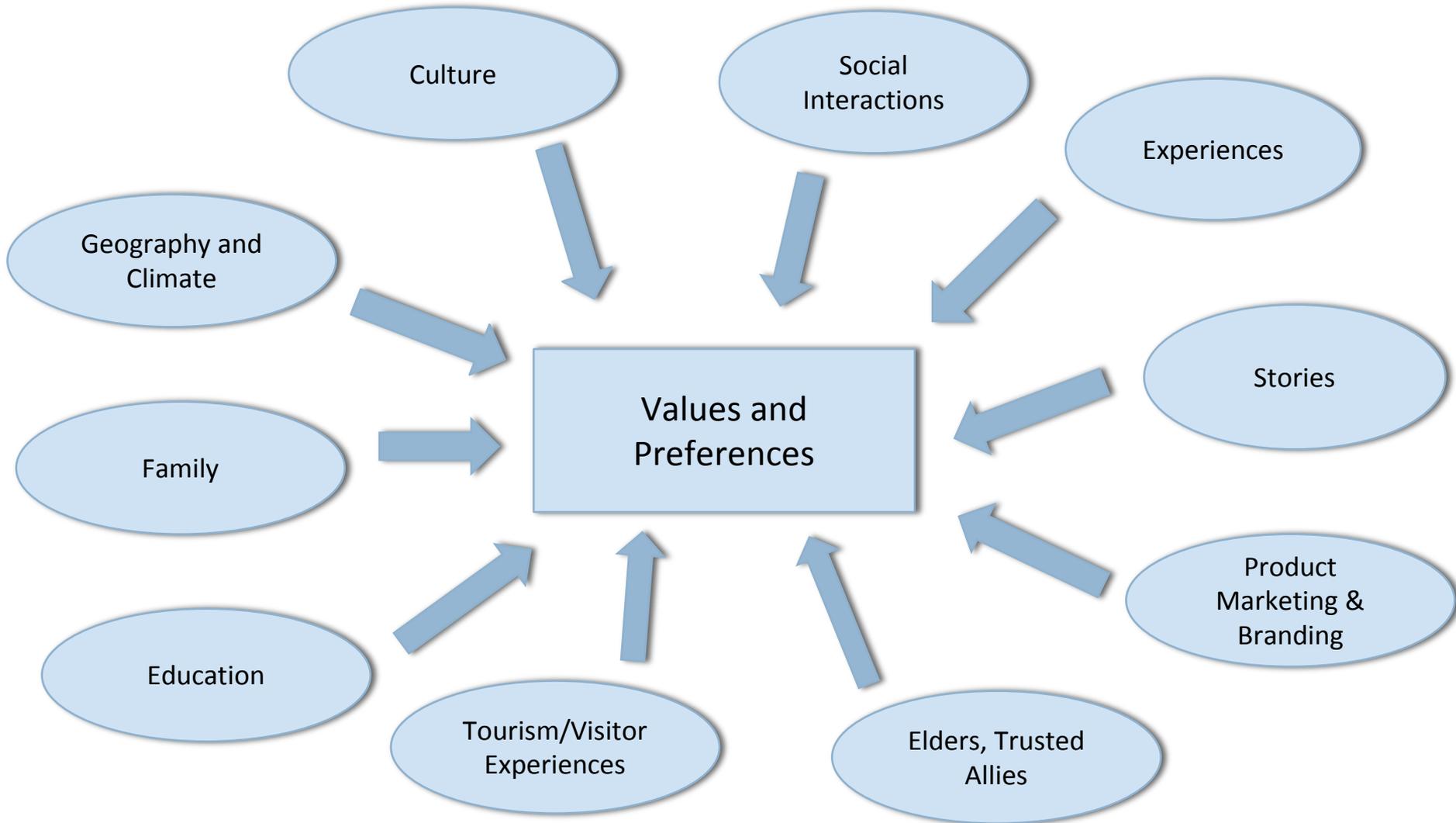


# Big Questions

- Why are people (you?) willing to pay a premium for local, organic, non-GMO, “authentic,” Fair Trade, regenerative, etc?
- How are these preferences formed?
- How do they change over time?
- What factors influence this change (or lack thereof)?
- How are preferences and values enacted in economic, social, and cultural systems?

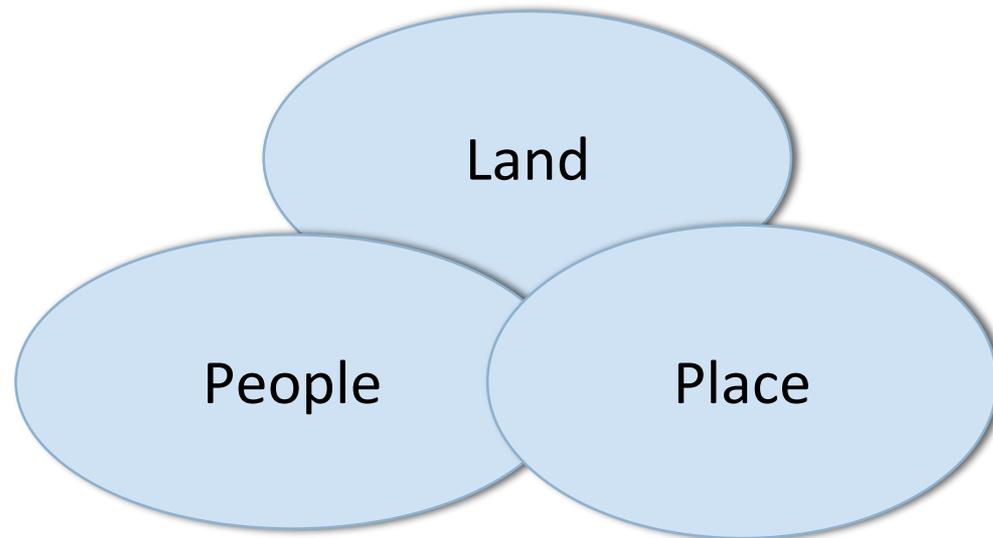


# Value and Preference Formation



# My approach: Study Land-People-Place Connections

- The “land-people-place” dynamic describes the relationships and connections between
  - Land = *Natural resources, natural capital*
  - People = *Culture*
  - Place = *Community or society*



# Research Objective

- Improve understanding of the economic connections among land, people, and place
- To do this, we must understand:
  - How value is created (a conceptual issue)
  - How it is embedded in place (an empirical issue)
- Outline for today
  - Case study evidence of economics of food systems
  - Conceptual Model
  - An invitation to engage in conversation

# Asheville, NC



# Western North Carolina Agriculture

- Small, diversified, changing
  - 70% of WNC farmland lost 1949-2007
  - Decline of historically important crops, esp. tobacco
- Asheville: local food hotbed
  - 17 markets/week (3 winter)
  - Direct-to-consumer sales increased 69% from 2007-2012
  - Food & beverage tourism



# Conceptual Framework: Start with Land

- Farmland provides many benefits
- Relationships with the land enable values, preferences to be formed

Farmland



Values,  
preferences for  
food, fiber,  
forest products



# Case Study 1: Farmland Values Project



# Case 1: Farmland Values Project

- Research Objective
  - To collect, analyze, and communicate the many benefits that people gain from farmland in 4 Western North Carolina (WNC) counties
- Methods
  - Focus groups and interviews
  - Survey (n=1243)
  - Participatory geographic information system (PGIS) map exercise

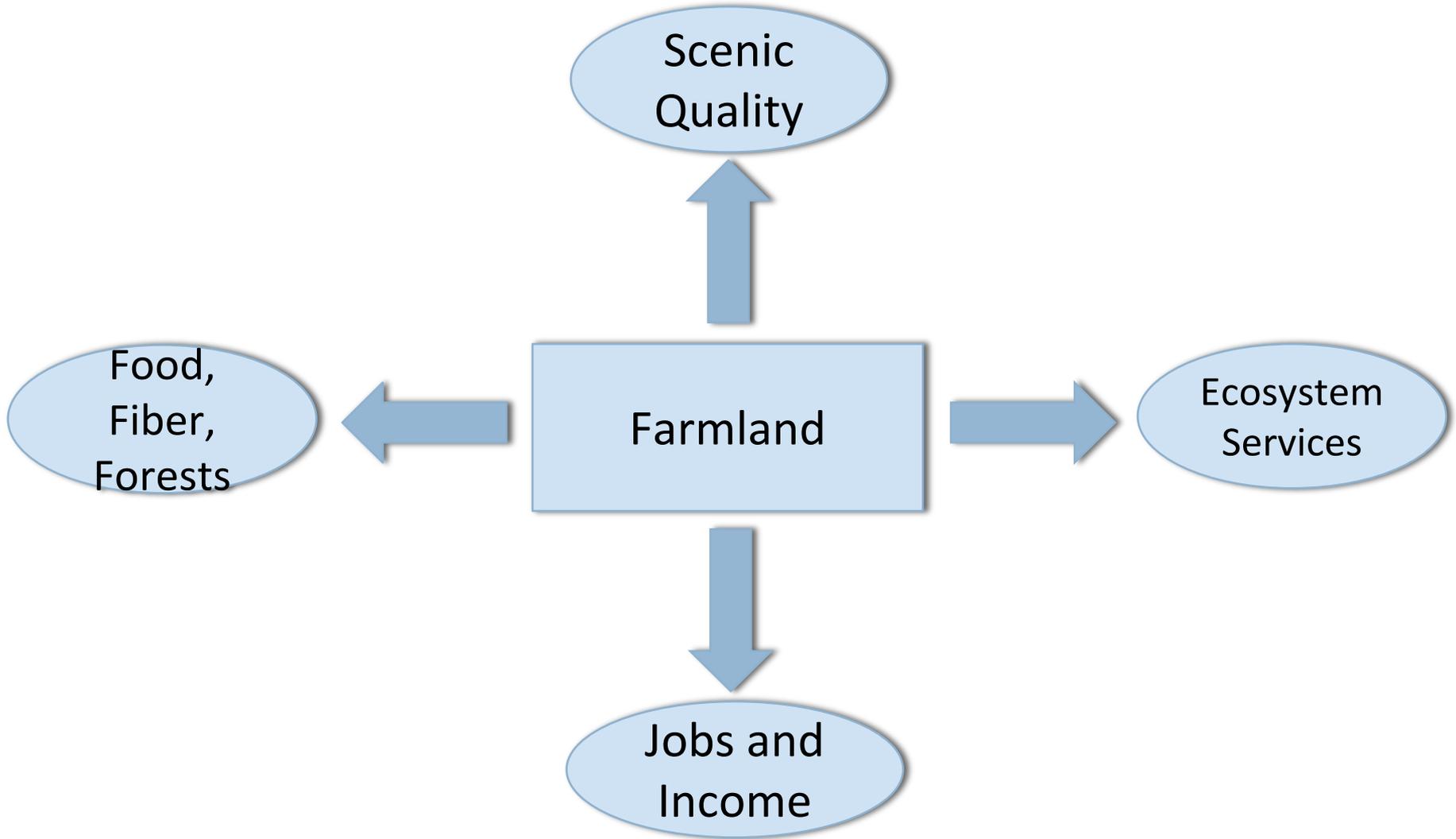


# Case 1: FVP Key Findings

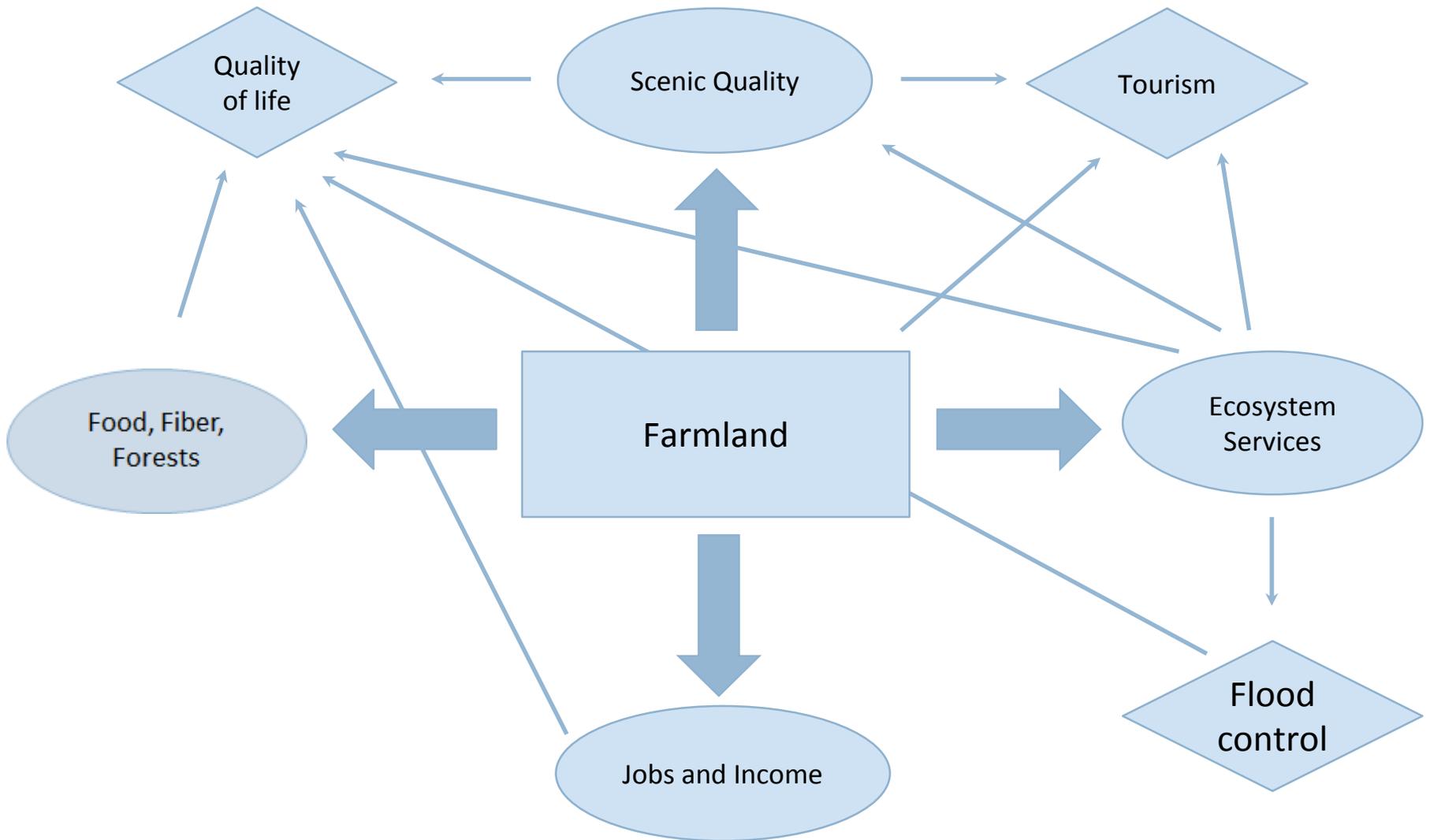
- Farmland provides significant benefits to community
  - Local food
  - Scenic beauty
  - Jobs for farmers
  - Agricultural heritage
- >50% respondents willing to donate to protect farmland
- [www3.unca.edu/farmlandvalues](http://www3.unca.edu/farmlandvalues)



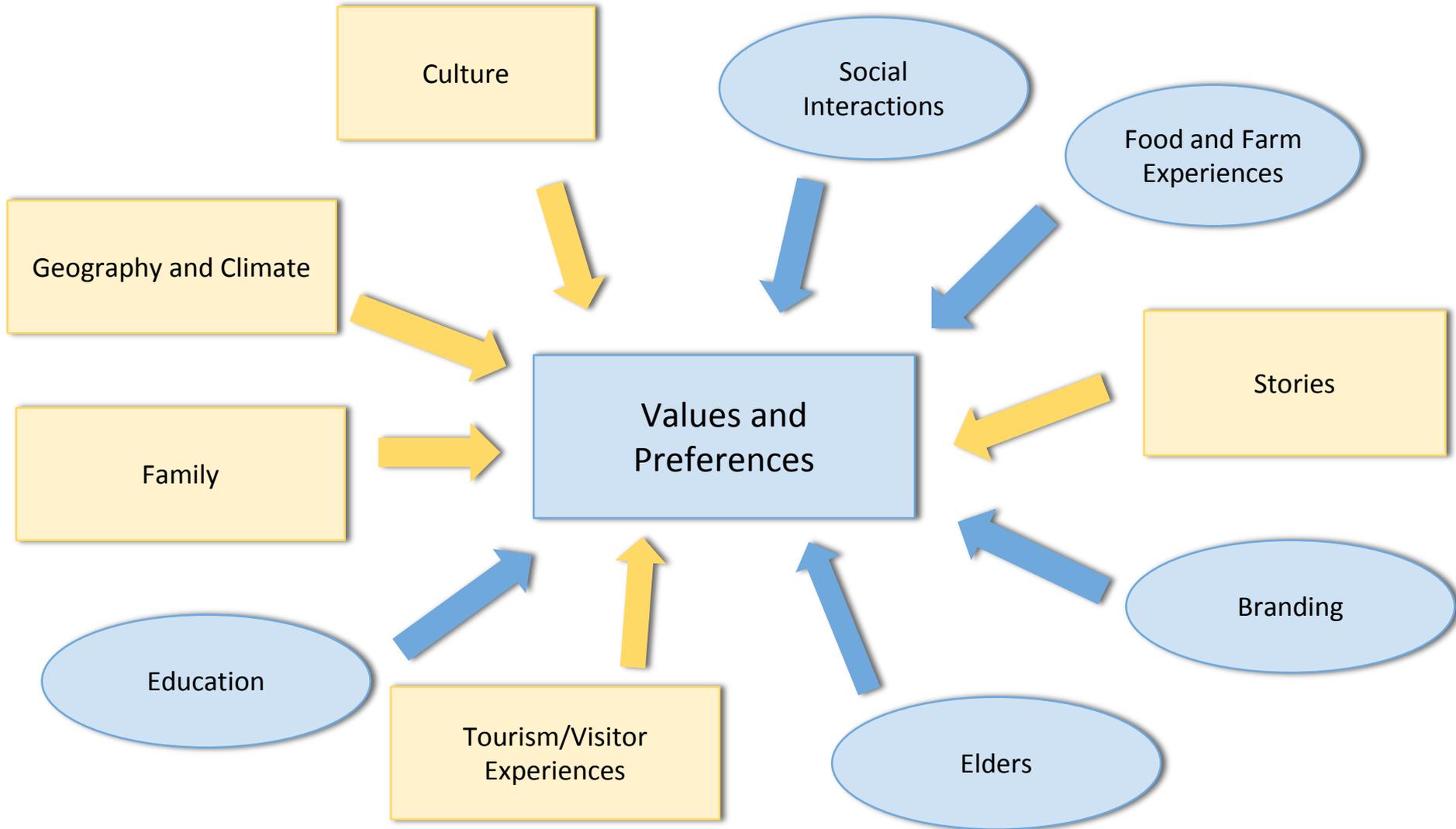
# Both tangible & intangible elements



# ...are part of a complex system



# Place matters in preference formation



# Case 2: Year-Round Locavorism



# Case 2: Year-Round Locavorism

- **Research Question**
  - **Can increased knowledge about and experience with a local food system lead to more healthful food purchase and eating behaviors?**
- **Methods**
  - Pre- and post- surveys
  - Intervention: participation in food events
  - Participants: UNC Asheville faculty, students, staff, members Osher Lifelong Learning Institute



**Get Growing!**  
ORGANIC GARDENING SERIES

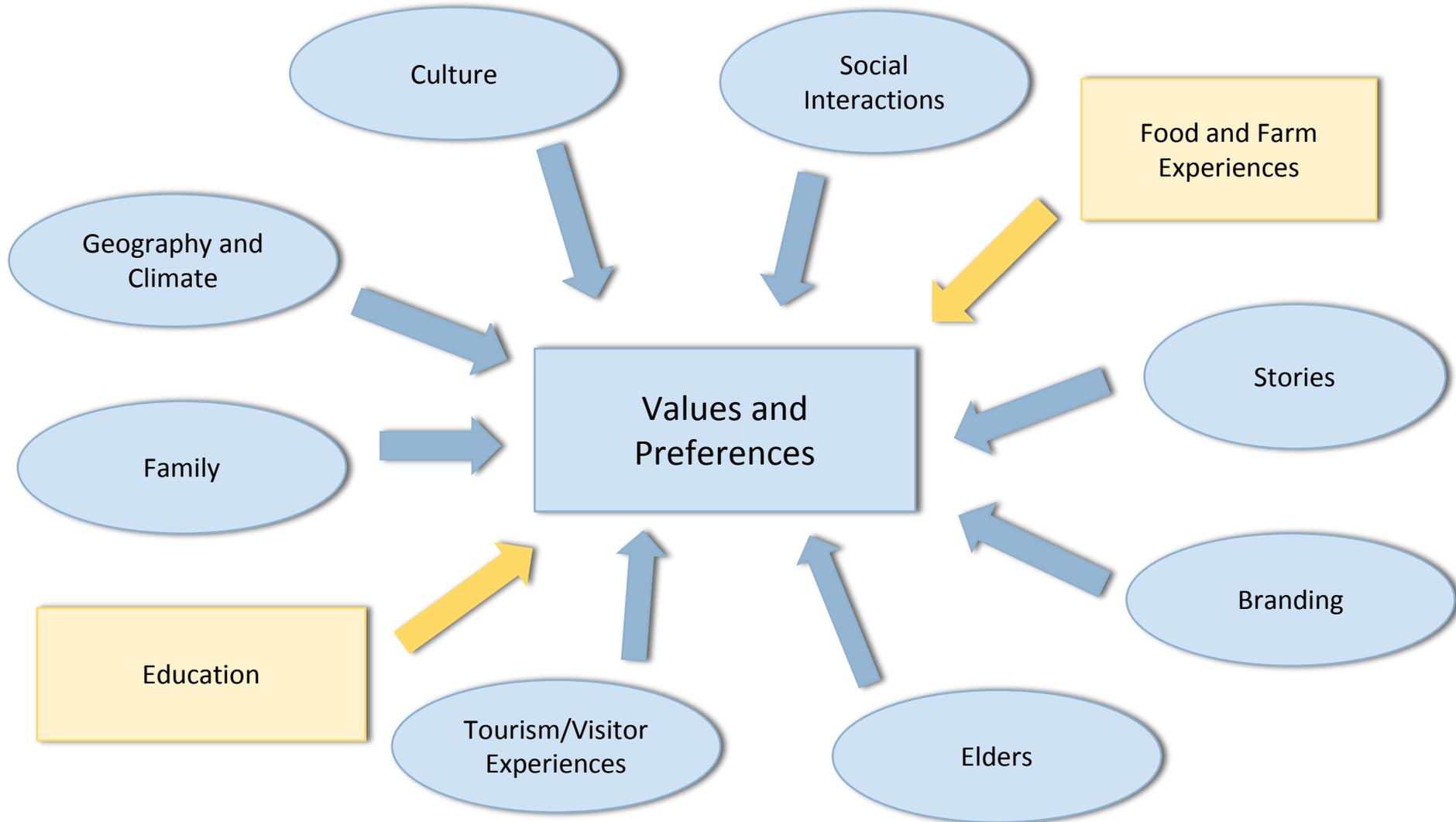
# Case 2: Year-Round Locavorism

- **Key Findings**

- Significant positive change in overall composite scores (paired t-test;  $n=55$ ;  $p<.0001$ )
- Significant positive change in purchasing behavior subgroup
  - Greater intention around food selection,
  - More frequent tailgate market attendance & at groceries that offer local food



# Experiences change preferences



# Case 3: Talk at Tailgate Markets



# Case 3: Talk at Tailgate Markets

- **Research Question:**
  - **How do interactions at tailgate markets affect purchasing behavior?**
- **Methods**
  - 6 farmers markets
  - Surveys (349 respondents)
  - Interviews
  - Observations
    - 23 vendor stands
    - 537 market interactions

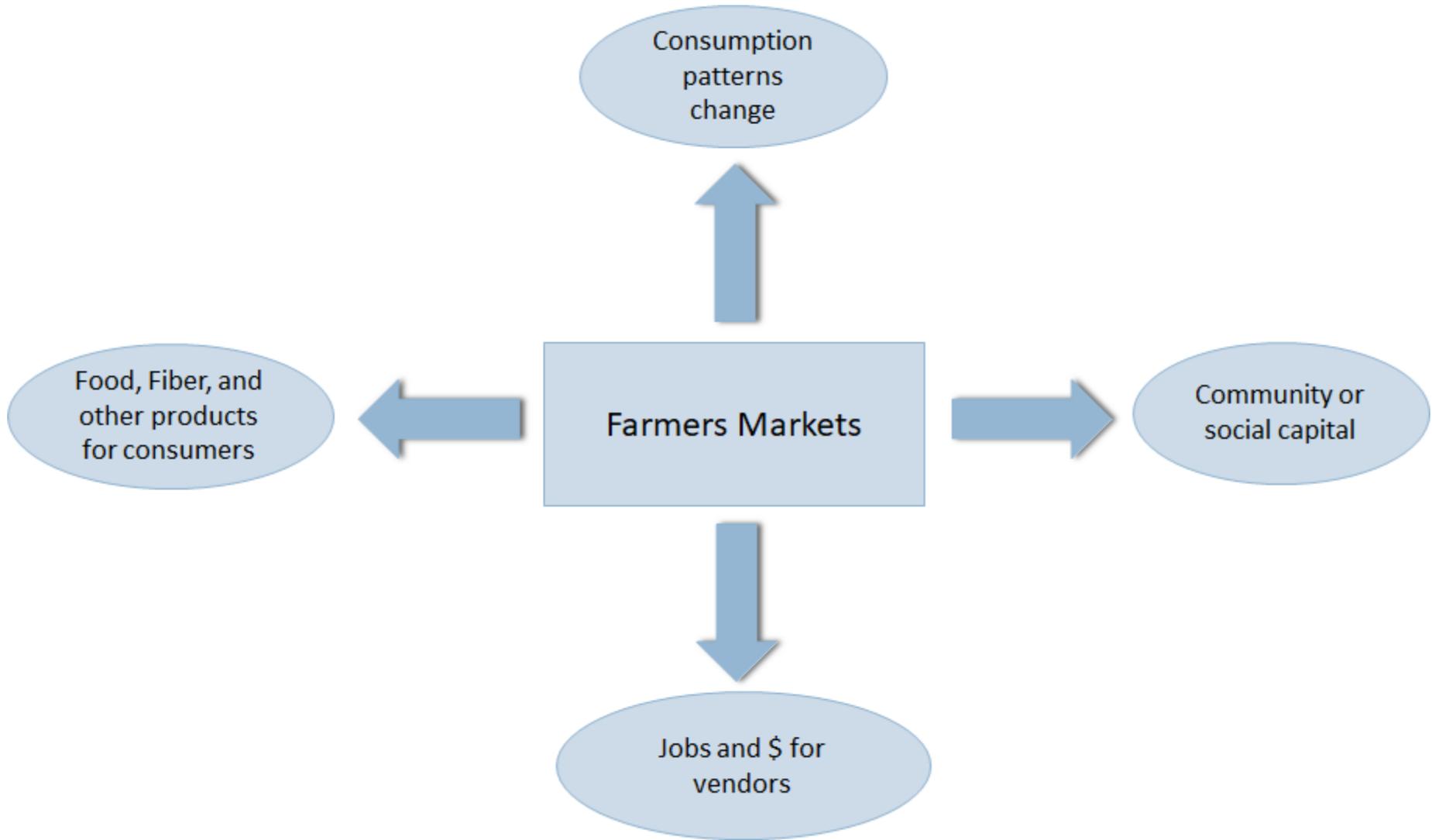


# Case 3: Talk at Tailgate Markets

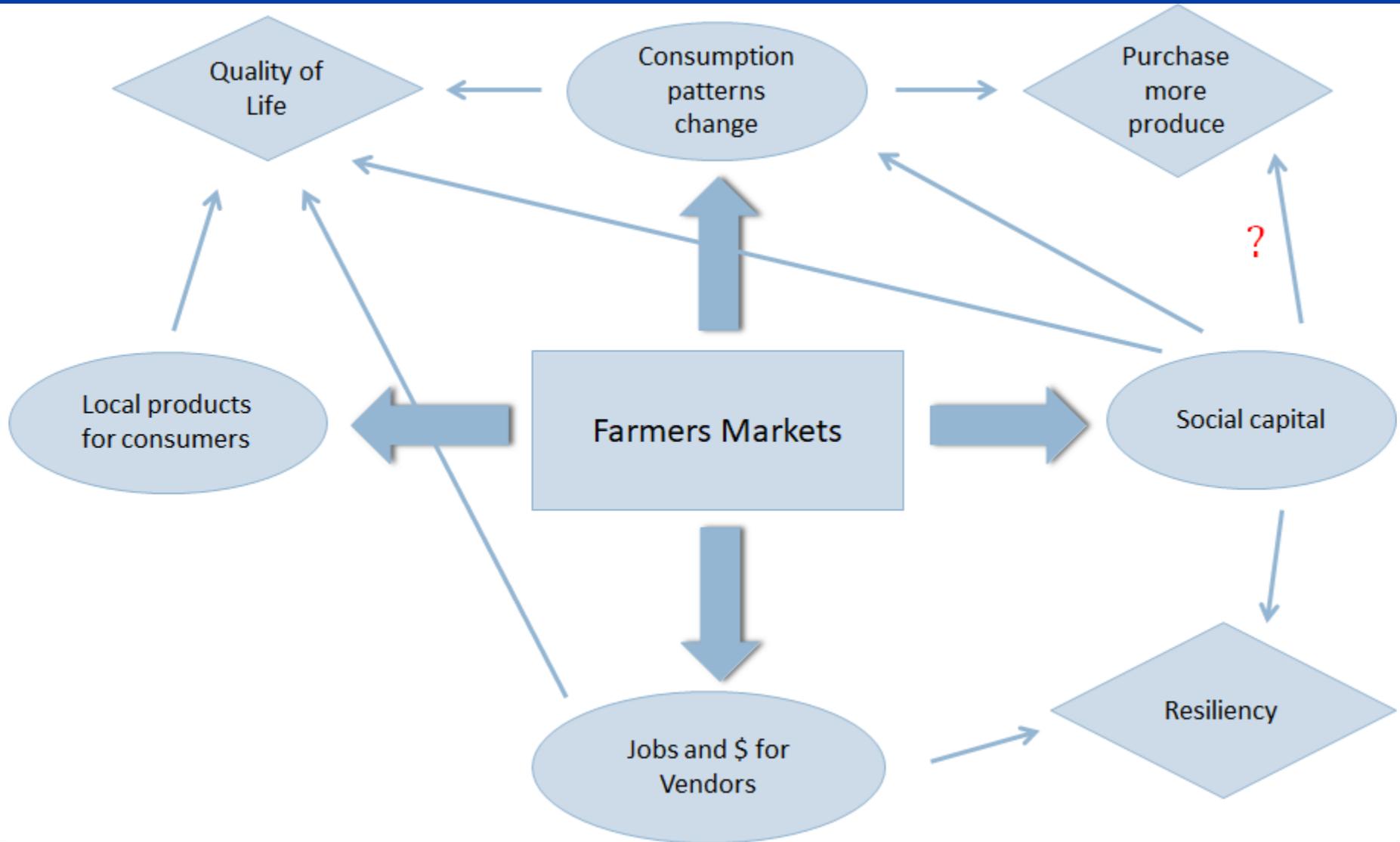
- **Key Findings: Three main factors promote change in consumer purchasing behavior**
  - Symmetrical motivations (personal, economic, informational)
  - Shared values
  - Mutual dependence on interactions
    - Building social capital
  - ***Short-term behavior changes can lead to changes in preferences, which can lead to long-term behavior changes***
  - Differences in urban and rural markets



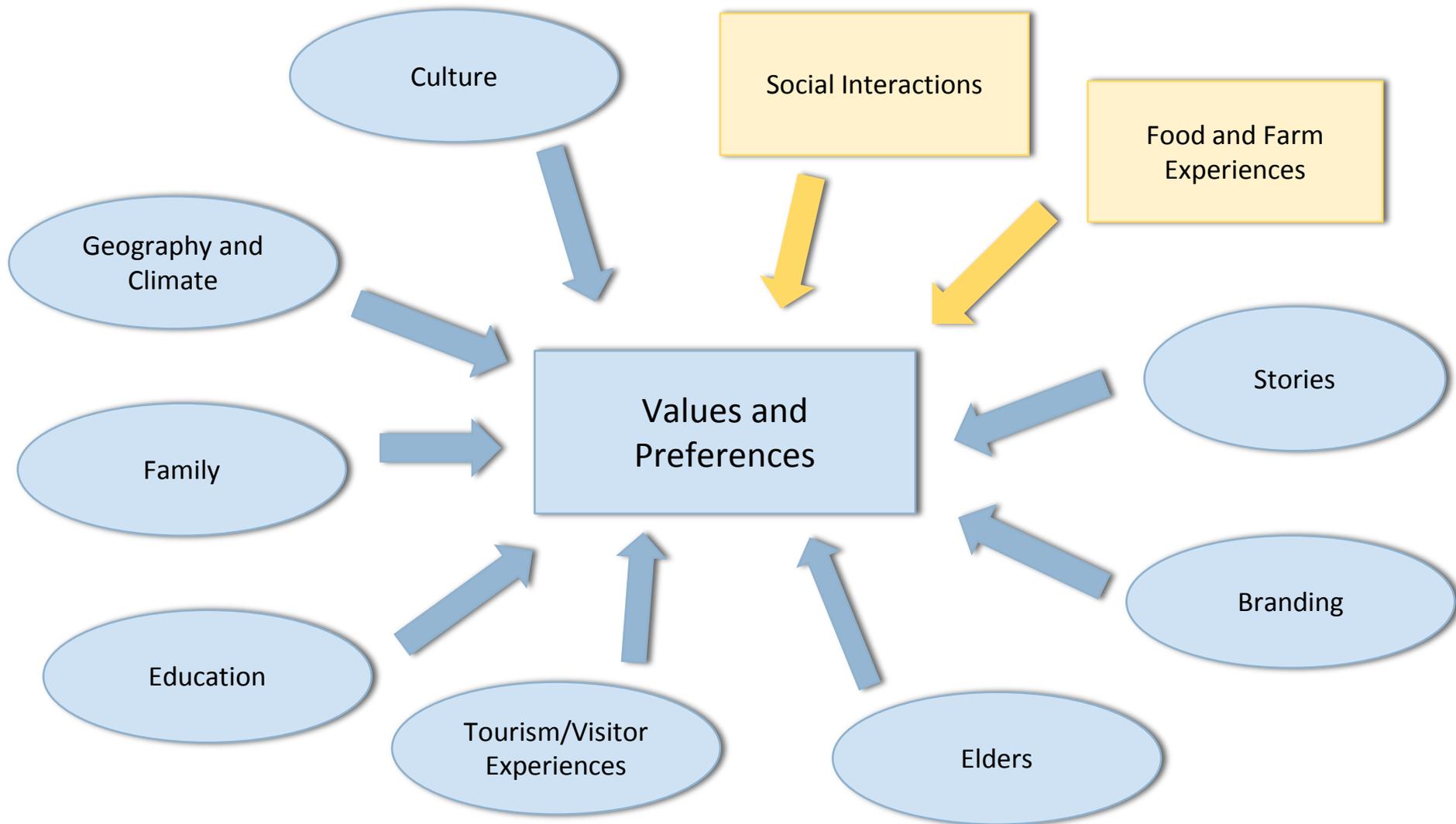
# Farmers Markets Connect Land, People, Place



# Intangible Value Created by Farmers Markets



# Social Interactions Change Preferences



# Case 4: Appalachian Grown™ Program



# Case 4: Appalachian Grown™

- **The Appalachian Grown™ Marketing Program: Measuring the Impact of Branding on Farms**
- **Research Questions**
  - Do consumers recognize, use AG label?
  - How do farmers perceive the program?
    - What value do they receive from it?
    - Are they willing to pay for it?
- **Methods**
  - Producer, consumer pre-intervention surveys
  - Implementation of marketing efforts in three stores (one “control”)
  - Post-intervention surveys

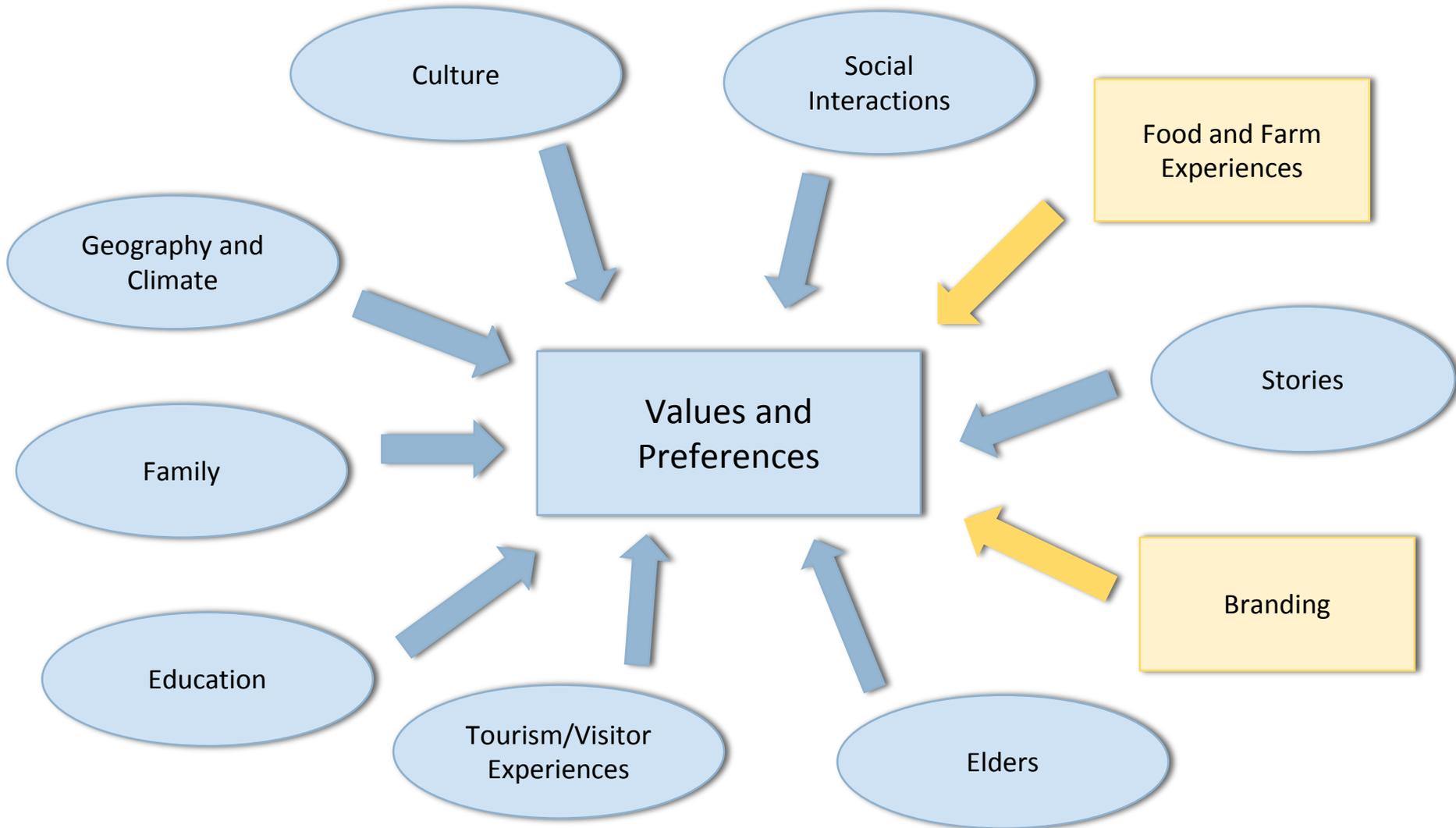


# Case 4: Appalachian Grown™

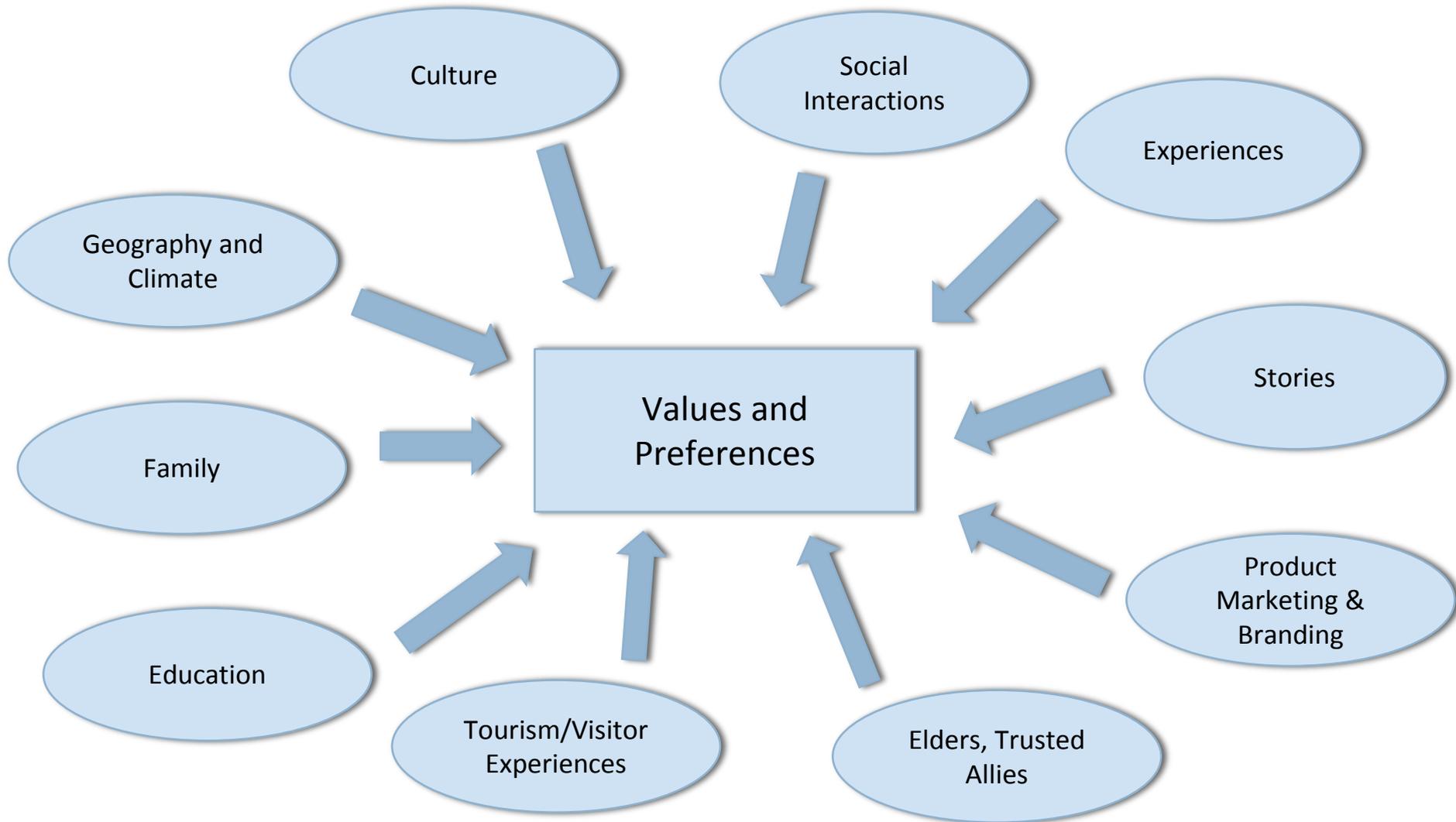
- Key Results
  - Consumers
    - use the label as it was intended
    - don't need pictures of farmers, just farm location
    - average WTP for local: 48% premium
  - Farmers
    - Baseline: Majority attributed only 0-10% of sales to the program
      - 2/3 said it helped increase sales
    - Post: farmers attributed **25%** of sales to the program



# Effective Branding Changes Preferences



# Values and Preferences are Complex



# Summary of Key Take Aways

- The value of the food system is not just jobs and income
- Interactions at farmers markets can (do) change preferences
- Experiences with food systems can lead to demonstrated changes in food purchasing behaviors
- Brands help people make decisions (and help producers, too)
  - trust is essential
- Preference formation is complex



# Complexities

- Land, people, place dynamics are unique across places, spaces
- Land (climate), market pressures, and people all change
- Value can be embedded in place even if you're not physically there



# Food for Thought

- What are the social and cultural mechanisms that influence preferences in your region?
- How might economics connect land, people and place in your contexts?
- How is value embodied, embedded, and enacted in land, people, place?
- How might these be explicitly incorporated into the model?
- What suggestions, questions, or comments do you have?



# Next Steps

- Dialogue with you and others to better understand the dynamics of preference formation
- Collect additional case studies from other regions
- Refine model



# Acknowledgements

- **Interdisciplinary Distinguished Professor of the Mountain South at UNC Asheville**
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  - National Research Initiative of the USDA Cooperative State Research, Education and Extension Service, grant 2005-35618-1567
  - Campus and community collaborators
  - 80 (ish) student RAs
- **Case Study #2: Year-Round Locavorism**
  - North Carolina Center for Health and Wellness Focus Area Grant
  - Appalachian Sustainable Agriculture Project
  - Osher Lifelong Learning Institute
  - UNC Asheville Chartwells Dining Services
  - 3 student RAs



# Acknowledgements

- **Case Study #3: Talk at the Tailgate Markets**

- Sarah and Joseph Breman Professorship in Social Relations at UNC Asheville
- 7 student RAs

- **Case Study #4: Appalachian Grown™**

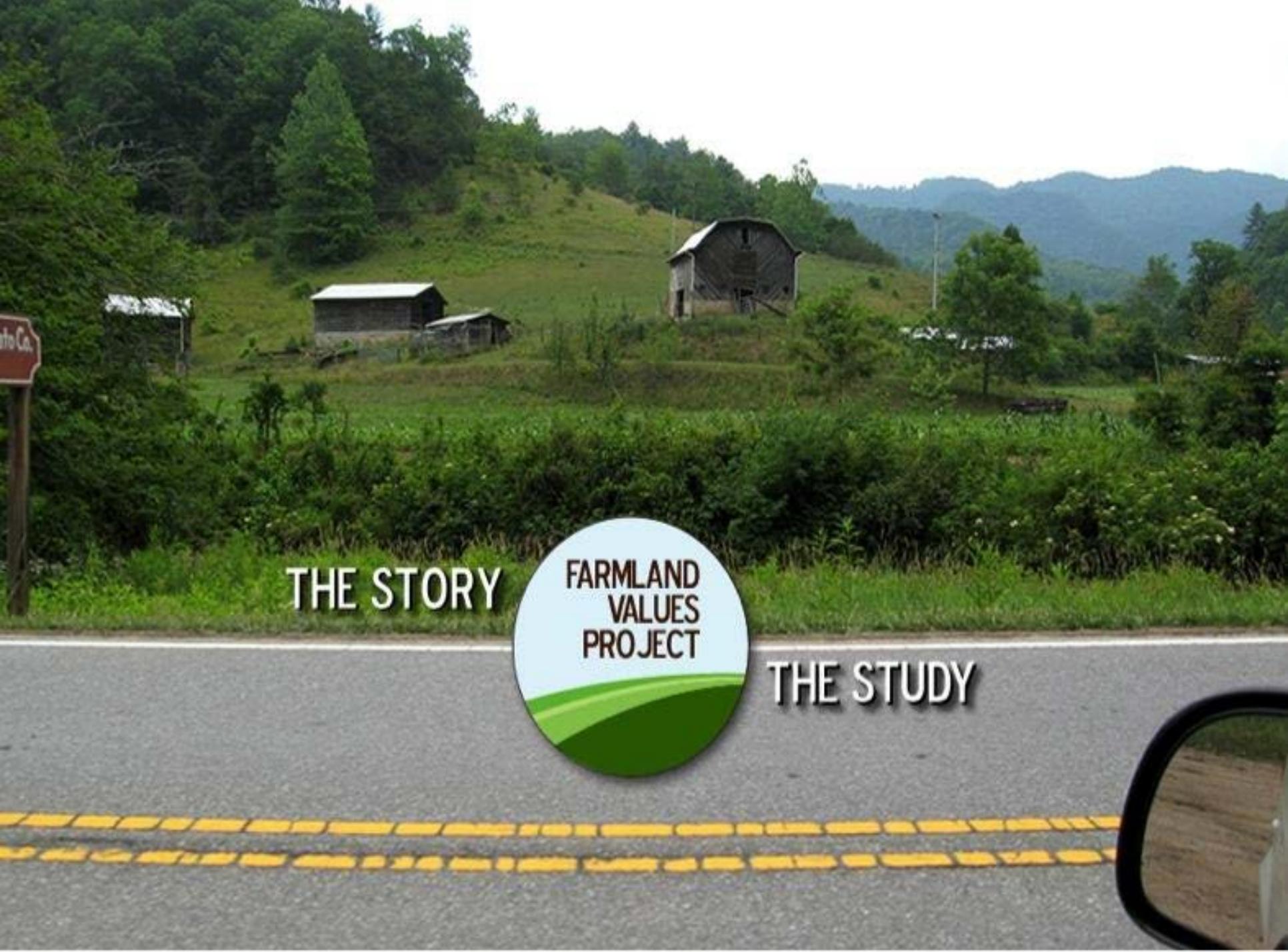
- The National Research Initiative of the National Institute of Food and Agriculture, United States Department of Agriculture, Grant #2012-68006-30182
- 22 student RAs



# Questions? Comments? Let's Chat!

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to Co.

THE STORY



FARMLAND  
VALUES  
PROJECT

THE STUDY



# THE STORY



WHAT IT IS



HOW IT  
BENEFITS YOU



WHAT IS  
HAPPENING



WHAT YOU  
CAN DO

# Jargon

- **Land:** a catch-all term used to describe natural resources, environmental amenities, ecological systems, natural capital
- **Space ≠ place**
  - Space: geography, physical location
  - Place: space with meaning (value)
- **Price ≠ value**
  - It's not just monetary value!
  - In addition to economic elements, value includes social and cultural components
  - Often intangible (which is why price ≠ value)
  - Not all economic activities will provide all of these values all of the time



- Intangible elements such as preferences, values influence both consumer and producer behavior
- Yet, we don't have a good idea of how these preferences and values are formed or how they are enacted in economic, social, and cultural systems



# Why Space and Place Matter

- Natural resource endowments, environmental conditions, climate, and ecosystem services vary across space
  - Mineral deposits
  - Water resources
  - Surface v. groundwater resources
  - Whether a groundwater aquifer is “recharged” (renewable) or not
- Resource composition and function may vary across space
  - Wetlands
  - Forests
- **Place** matters because if people *connect* with a particular place, they may be willing to protect it



# Why Space & Place Matter in Economics

- Economic inputs and endowments (and access to them) also vary across space
- Economics literature describes the link between space and income and/or wealth determination
  - Relationship between school quality, academic performance
  - Intergenerational economic mobility
    - Chetty et al, 2014: *Where is the Land of Opportunity? The Geography of Intergenerational Mobility in the United States*
    - Describes how economic mobility varies across space
    - The authors have not yet untangled *why* this is so
    - That is, we don't yet understand the economic mechanisms for connecting mobility and space



# Why Space & Place Matter: Sustainability

- To envision, plan, and create landscapes that are economically, socially and environmentally sustainable we need to know the values people have for the land
- But, it is difficult to inventory the complete set of values that people have for land (natural resources, environment, ecosystems)
  - Many values are intangible & not priced in markets
    - Values aren't expressed through typical transactions
    - Requires qualitative methods and/or nonmarket valuation
  - Values vary across time and space
    - Community, land and behavior vary across space
    - Values are formed by social customs, cultural traditions, geography, topography, and other factors



# Case 1: Farmland Values Project

- **Key Findings for Model Development**
  - Local food as primary benefit of local farmland
    - Visitor WTP to protect WNC farmland > resident WTP
  - Scenic Quality
    - Important for resident quality of life
    - Also a tourist draw
    - Similarities between two types of food system actors



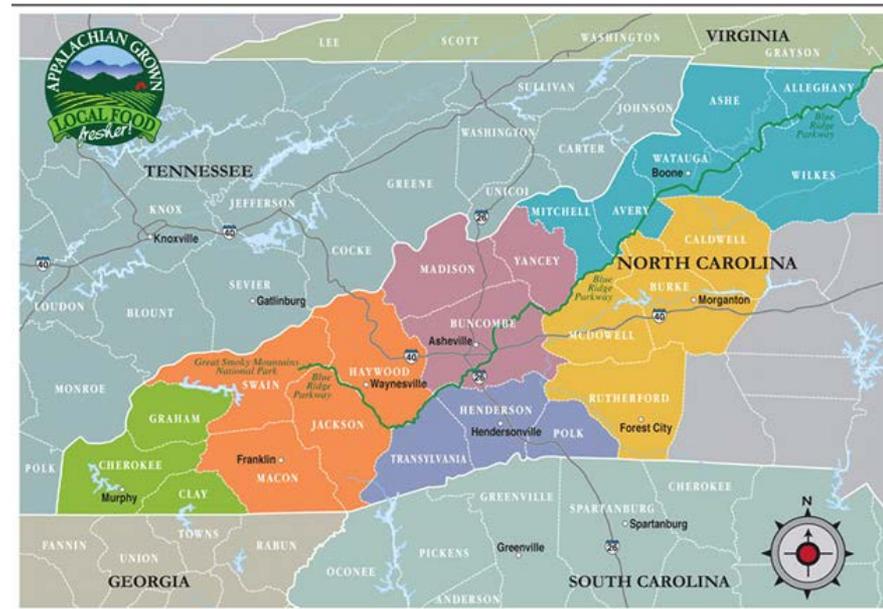
# Methods: Nonmarket Valuation

- Most of the time, we can't buy scenic quality
  - We could buy the view outright—but that's expensive and not an option for many (most?) people
  - We may be able to buy a house with a view....but protection of that view usually doesn't come with the price of the house
  - We may value the view even if we don't live next to it: tourism, quality of life link.
- To capture these “nonmarket” values, we need to use *nonmarket valuation (NMV) methods*
  - a method to estimate values for goods/services that can't be exchanged in markets
- There are several NMV methods that can be applied
  - Method selection depends on
    - the research question
    - the resource you're trying to value
  - We used Contingent Valuation, Contingent Behavior and Choice Models in the studies I talk about today.



# What is “Appalachian Grown™”?

- Began in 2006
- Trademark of Appalachian Sustainable Agriculture Project (ASAP)
- Certifies individual farms, farmer groups, and tailgate markets
  - Grocers, restaurants, and distributors may become AG licensed partners
- To use the brand, sellers must
  - Be located in an eligible county
  - Only label and market products grown on an *Appalachian Grown* certified farm



# 2015 Farmer Profile

- 16.6 years farming (median: 10; n=230)
- **25%** reported between 1-10% of their family income is generated by their farming business (n=225)
  - 16% of farmers report operating at a loss
  - Another 16% report farming generating 11-25% of their family income
- Slightly more than half were male (n=96)
- Age (n=97): 21 - 73 years



# WTP for Appalachian Grown™

Would you be willing to pay an annual fee of \$x for the services you receive from the Appalachian Grown Program?

- **2011:** median “Willingness-To-Pay” for the program was estimated at \$60/year
- **2015:**
  - Insufficient response to populate the bins; contingent valuation model wasn’t viable
  - 20.3% of farmers were willing to pay a given amount for Appalachian Grown™ services

# Consumer WTP for Local Products

- Ex: “Would you choose a locally grown produce over a non- local produce if the local produce was (10%, 20%, 30%, 40%) more expensive?”
- Consumers surveyed in indicate willingness to pay a premium for local food
  - Average premium: 48%

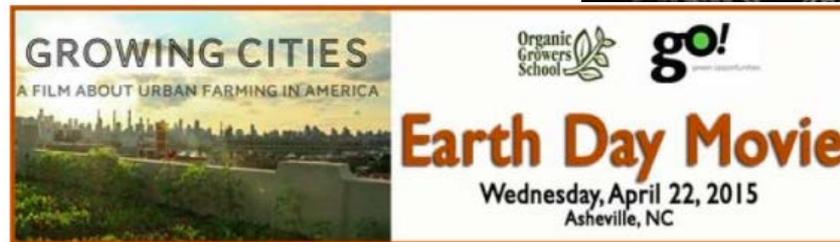


# Food Events for YRL Case Study

- Participants were asked to attend at least one food-related event
- Options for the event included:
  - on-campus lectures (8)
  - cooking or gardening classes (8)
  - community events related to local food and agriculture (5)
  - food tastings on campus or at local stores (8)
  - food-related film screenings (2)



Get Growing!  
ORGANIC GARDENING SERIES



# What's Ahead for Agritourism?

- More “agri-tainment”
  - Dinners, dancing on the farm
- Additional themed tourist trails, activities
  - Moonshine & other craft beverages
  - Herbs
  - Wild edibles
  - Physical activities connecting land, people and place
    - Cycle to Farm
    - “Goat yoga” (pictured: Franny’s Farm)



## FARM-TO-FORK RESTAURANTS

- 1 Albany Bistro | Decatur, AL
- 2 Big Bob O'Brien BBQ | Decatur, AL
- 3 Pie Lab | Greensboro, AL
- 4 Twin Dabbers Inn | Vernon, AL
- 5 Harvest of Mash | Blue Ridge, GA
- 6 The Sewall Place | Bristolville, GA
- 7 The Bluebird | Starford, KY
- 8 Red River Rockhouse | Campton, KY
- 9 SHIR | Frontsburg, MO
- 10 Council House Cafe | French Camp, MS
- 11 Near Pig | Tupelo, MS
- 12 Ole Country Bakery | Brooksville, MS
- 13 Restaurant Tyler | Starkville, MS
- 14 Bistro Roca | Blowing Rock, NC
- 15 Frigg Leap Public House | Waynesville, NC
- 16 The Mountain Restaurant at Fortuna Village Resort | Fortuna Dam, NC
- 17 Origins Cafe at Cashola Gardens | Cooperstown, NY
- 18 Rogue Harbor Inn, Restaurant, & Brewery | Lansing, NY
- 19 Great Head Bakery & Coffee Shop | Dover, OH
- 20 Lake Hope Dining Lodge | McArthur, OH
- 21 Herwig's Austrian Bistro | State College, PA
- 22 Old Toga Bakery | Stillwater, PA
- 23 Toronto Bar & Patio | Pittston, PA
- 24 Swamp Rabbit Cafe & Grocery | Greenville, SC
- 25 Sunrise Inn | Anderson, SC
- 26 Cooke Jar Cafe at Johnson Family Farm | Dunlap, TN
- 27 Ivy Hill Bed & Breakfast | Sevierville, TN
- 28 Harvest at Mountain Lake Lodge | Penderole, VA
- 29 The Palisades Restaurant | Eggston, VA
- 30 Rising Sun Breads | Martinsville, VA
- 31 Third Day | Martinsville, VA
- 32 Atomic Grill | Hagerstown, WV
- 33 Cafe Crows Country Inn | Sutton, WV
- 34 Dohle Equis | Beckley, WV
- 35 Dix River Inn & Restaurant | Duffalo, WV
- 36 Market Cafe | Lewisburg, WV

## MARKETS & PRODUCTS

- 1 Alexander City Downtown Market | Alexander City, AL
- 2 Belle Chèvre Creamery & Cheese Shop | Elkhorn, AL
- 3 Gordo Farmers Market | Gordo, AL
- 4 Homegrown Alabama Farmers Market | Tuscaloosa, AL
- 5 Tuscaloosa Farmers Market | Tuscaloosa, AL
- 6 Hillside Orchard Farms/Country Store & Farm Adventure | Lakemont, GA
- 7 New Ground Market | Etting, GA
- 8 Beech Springs Farm Market | Winchester, KY
- 9 Bear Cheese Trail | Winchester, KY
- 10 Sunflower Surprises | Mt. Olive, KY
- 11 Downtown Cumberland Farmers Market | Cumberland, MD
- 12 Historic Hagerstown City Farmers Market | Hagerstown, MD
- 13 Misty Meadow Farm Creamery | Smithsburg, MD
- 14 Hitching Post Farmers Market | Columbia, MS
- 15 Tupelo Farmers Depot | Tupelo, MS
- 16 Arhagary Farmers Market | Sparta, NC
- 17 Sunburst Throat Farm | Canton, NC
- 18 Carrot Barn | Schoharie, NY
- 19 Frontiers Farmers Market | Fredonia, NY
- 20 Thicket Farmers Market | Ithaca, NY
- 21 Golden Age Cheese | Woodfull, NY
- 22 Belle County Farmers Market | Gallopas, OH
- 23 4 Seasons Farm Market | Heshoppin, PA
- 24 East End Food Coop | Pittsburgh, PA
- 25 Herb's Frozen Custard | Conneaut Lake, PA
- 26 Mansfield Growers Market | Mansfield, PA
- 27 Cowpens Farmers Market | Cowpens, SC
- 28 Hub-City Farmers Market | Spartanburg, SC
- 29 TD Saturday Market | Greenville, SC
- 30 Dovesville Farmers Market | Dovesville, TN
- 31 Mooney's Market & Emporium | Monteagle, TN
- 32 Abingdon Farmers Market | Abingdon, VA
- 33 Blacksburg Farmers Market | Blacksburg, VA
- 34 Highland Farmers Market | Montross, VA
- 35 Independence Farmers Market | Independence, VA
- 36 Capitol Market | Charleston, WV
- 37 Fish Hawk Market | Rock Cove, WV
- 38 The Farmer's Daughter | Capon Bridge, WV

## FARMS

- 1 303 Farms | Mooreville, AL
- 2 LizaAnn Farms | Houston, AL
- 3 Bart's Farm | Dawsonville, GA
- 4 Jemour Farms | Alta, GA
- 5 Payne Farms & Produce | Cathoon, GA
- 6 The Veggie Patch at Goluchard Farm | Commerce, GA
- 7 Country Girl at Insect Farm Bed & Breakfast | Harfordville, Kentucky, KY
- 8 Heavenly Haven Farm | Columbia, KY
- 9 Hilliday Farm and Garden | Hazard, KY
- 10 Savage Farms | Louisa, KY
- 11 Allabout Farm | Sharpsburg, MD
- 12 Firefly Farms | Accident, MD
- 13 Pumpkin Patch Farms | Blue Mountain, MS
- 14 Reese Orchard | Starkville, MS
- 15 Hickory Nut Gap Farm | Fairview, NC
- 16 Wild Algrim Farmstead | Lenoir, NC
- 17 CNH's Blueberry Farm | Hindale, NY
- 18 Farmers Museum | Cooperstown, NY
- 19 Shaver Hill Farm | Harpersfield, NY
- 20 Balfett Maple Farm | Ross Creek, OH
- 21 Stargark Seed & Hill | Athens, OH
- 22 White House Fruit Farm | Centfield, OH
- 23 Owens Farm | Samburg, PA
- 24 Pleasant Valley Farm | Tionesta, PA
- 25 Schramm Farm & Orchard | Harrison City, PA
- 26 Chattanooga Belle Farm | Long Creek, SC
- 27 Dixie-Doe Farm | Dayton, TN
- 28 Farmhouse Gallery & Gardens | Union, TN
- 29 Bates Family Farm | Jonesville, VA
- 30 Nanberry Orchards | Bakewell, VA
- 31 Heathberry Farm | Dry Fork, WV
- 32 Serp Level | Lewisburg, WV
- 33 Thistle Dew Farm | Proctor, WV

## CRAFT BREWERIES & DISTILLERIES

- 1 Avondale Brewing Co. | Birmingham, AL
- 2 Back Forty Beer Co. | Gadsden, AL
- 3 Single Root Brewery | Florence, AL
- 4 Dalton Distillery | Dalton, GA
- 5 Stoneville Moonshine Distillery | Dawsonville, GA
- 6 Ale & One Bottling Co. | Winchester, KY
- 7 Jollyfist Brewery & Restaurant | Hagerstown, MD
- 8 Call Family Distillers | Wilkesboro, NC
- 9 Flat Top Brewing Co. | Banner Elk, NC
- 10 Long River Brewing Co. | Franklin, NC
- 11 Wicked Wood Brewing | Asheville, NC
- 12 Edgewater Brewing Co. | Elizaville, NC
- 13 Farm House Brewery & Pizzeria | Deerpark, NY
- 14 Black Bear Co. | Blacks, NY
- 15 Jackie O's Pub & Brewery | Athens, OH
- 16 Millersburg Brewing Co. | Millersburg, OH
- 17 Oler's Pub and Brewery | State College, PA
- 18 Sprague Farm & Brew Works | Vernalia, PA
- 19 St. Rockers Brewing Co. | Spartanburg, SC
- 20 Six and Twenty Distillery | Piedmont, TN
- 21 Short Mountain Distillery | Woodbury, TN
- 22 Big Fish Cider Co. | Henrieville, VA
- 23 Bear Lab Brewing Co. | Lexington, VA
- 24 The Domestic Brewery | Damascus, VA
- 25 Wolf Hills Brewing Co. | Abingdon, VA
- 26 Harfield & McCay Moonshine Distillery | Gilbert, WV
- 27 Smooth Ambler Spirits | Massanutten, WV
- 28 Steamtown Ale | Grafton, WV

## VINEYARDS & WINERIES

- 1 Stan Vineyard & Winery | Collins, AL
- 2 Whippenwell Vineyards | Rotunda, AL
- 3 Wits Creek Vineyards | Atala, AL
- 4 Englehart Vineyards & Winery | Effie, GA
- 5 Three Stars Vineyards & Winery | Dalton, GA
- 6 Cedar Creek Vineyards | Somerset, KY
- 7 Lake Cumberland Winery | Pentzville, KY
- 8 Red Heller Winery | Smithsburg, MD
- 9 Carolina Heritage Vineyard & Winery | Ekin, NC
- 10 Saint Paul Mountain Vineyards | Hendersonville, NC
- 11 Bully Hill Vineyards | Hammondsport, NY
- 12 Domino Wine Cellars | Runkle, NY
- 13 Merritt Estate Winery | Forestville, NY
- 14 Black Sheep Vineyards | Adams, OH
- 15 Harkley's Winery | Lake Milton, OH
- 16 Moyer Vineyard Winery & Restaurant | Manchester, OH
- 17 Bee Kind Winery | Clearfield, PA
- 18 8 Mile Cellars | Erie, PA
- 19 Shade Mountain Winery | Middleburg, PA
- 20 City Scape Winery | Pelzer, SC
- 21 Goodwater Vineyards | Mountain, TN
- 22 Sevierville Oaks Winery | Sevierville, TN
- 23 Starbuck Winery | Stuart, VA
- 24 Vincent's Vineyard | Lebanon, VA
- 25 Chestnut Ridge Winery | Spencer, WV
- 26 Hawk Knob | Lewisburg, WV

## LEGEND

- FARM-TO-FORK RESTAURANTS
- MARKETS & PRODUCTS
- FARMS
- CRAFT BREWERIES & DISTILLERIES
- VINEYARDS & WINERIES

This is just a sampling of what the Appalachian Region has to offer. For a complete listing of more than 900 local food destinations, including festivals and events, visit

[visitappalachia.com](http://visitappalachia.com)

Disclaimer: This map is for reference only; it is not intended for navigational purposes.



Skype\_7.46.56758.dmg

# Asheville, NC



# Today's Goal

- To develop a conceptual model for how connections between land, people, and place are formed, nurtured, and expanded in food systems across space and time
- “Place” is intangible, challenging to quantify, and thus typically not well-understood
- Focus on the role of
  - social networks and other forms of social capital,
  - cultural heritage,
  - human interaction, and
  - other less-tangible elements that influence consumer and producer behaviors

