

## Study Background

### What is agricultural literacy?

The ability to understand, think critically about, & communicate key concepts surrounding systems of food and fiber production

### Why is agricultural literacy important?

It allows consumers to make informed food choices to:

- Support their personal health
- Decrease negative environmental impacts of agricultural systems
- Engage with local economies

### What is intergenerational learning?

The bidirectional transfer of knowledge between two or more generations.



Students harvest vegetables on a field trip.



Students pet a goat while visiting a farm.

### Why does this matter?

- Inherited ideas can affect literacy and future behavior
- Understanding variations in literacy can help educators target gaps and shift pedagogy



Students tour farms that grow food for their community.

## Research Questions

1. How is youth agricultural literacy shaped by parents and families?
2. How does youth agricultural literacy vary across demographic variables?

## Results & Discussion

### Student Knowledge (R<sup>2</sup>=0.26)

Variable	Unstandardized Beta	Standardized Beta
Knowing a farmer***	1.66	0.32
Where they live		
- Small town*	-1.08 (small town)	-0.13 (small town)
- Suburb***	-2.73 (suburb)	-0.27 (suburb)
- Large city*	-2.15 (large city)	-0.15 (large city)
Parental subjective norms**	-0.21	-0.15
Parent race*	1.81 (African Americans)	0.13 (African Americans)

### Student Attitudes (R<sup>2</sup>=0.15)

Variable	Unstandardized Beta	Standardized Beta
Knowing a farmer**	-0.51	-0.13
Parental attitudes**	0.17	0.16

### Student Behavior (R<sup>2</sup>=0.18)

Variable	Unstandardized Beta	Standardized Beta
Knowing a farmer**	-1.09	-0.14
Student gender**	1.86 (girls)	0.15 (girls)

\*P-value ≤ 0.05, \*\*P-value ≤ 0.01, \*\*\*P-value ≤ 0.001

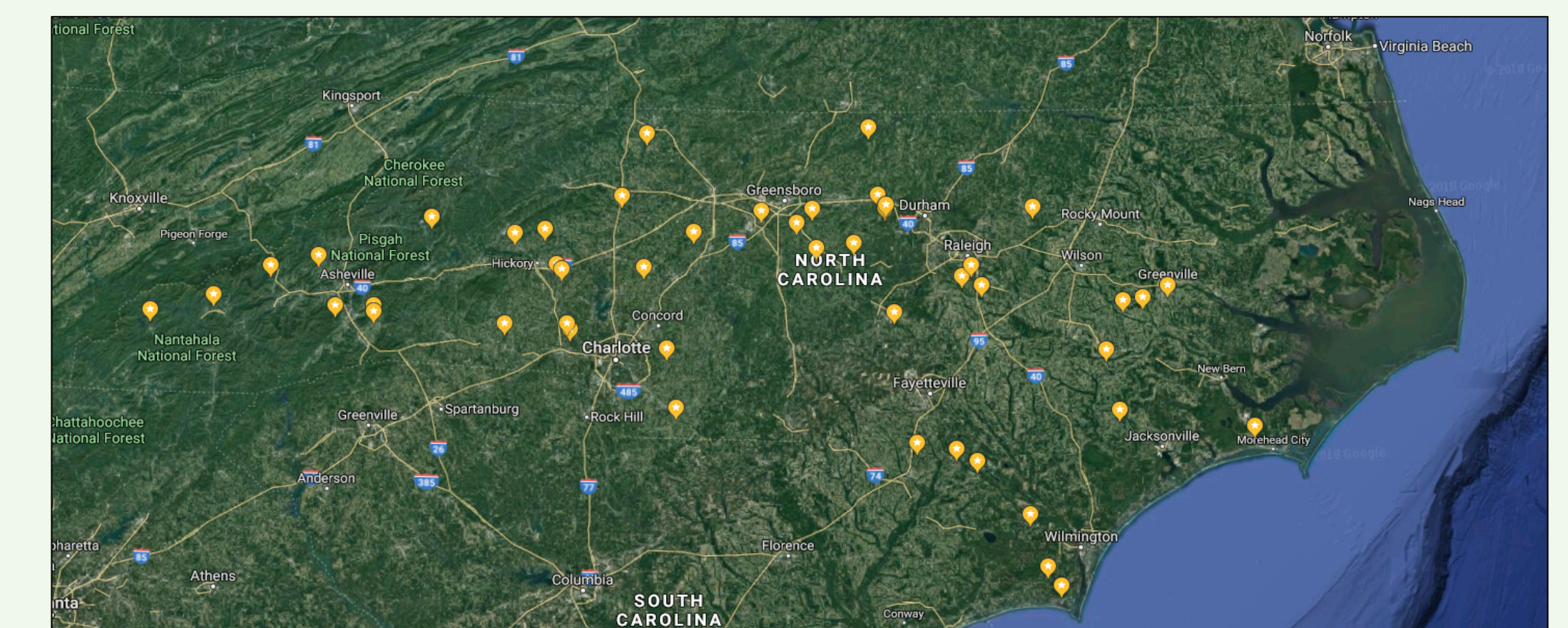
### What does this mean?

- Lack of relationship with student demographics suggests disparities usually associated with academic achievement may not apply in agricultural literacy settings
- Limited connection between student & parent measures may indicate low engagement around food & agriculture at home
- Significance of knowing a farmer & living in rural areas supports importance of direct experience for building knowledge
- Increased experience with agriculture does not lead to positive attitudes and behaviors related to local food
- Educational interventions need to work to bridge gaps between knowledge, attitudes, and behaviors and should target multi-generational engagement

## Research Methods

### Collection

- 55 teachers from 48 school recruited to administer surveys to students and parents
- Data collection also occurred at agritourism sites with families making unstructured visits to farms
- 470 paired student-parent family units included in analysis
- Student surveys assessed literacy in terms of knowledge of, support for, and attitude towards local food systems
- Parent surveys addressed consumer behavior & attitudes towards local food



Map of North Carolina with all participating schools marked.

### Analysis

Linear regression models were created to predict student knowledge, attitudes, and behavior by:

- Parental attitudes
- Parent race
- Student gender
- Household income
- Where families live
- If students know a farmer
- Parental subjective norms
- Parent-child interactions around cooking & shopping for food
- Where parents grew up

## Application

### What can we do?

- Opportunities for educational programming that targets multigenerational engagement
- Diversification of programming to engage audiences with varied knowledge and experience levels

### What's next?

Research focused on the effectiveness of place-based, experiential learning interventions on farms aimed at improving youth agricultural literacy & engaging parents