Characterizing instructor priorities for organic agriculture

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Organic: A Growing Sector of Agriculture

- Over 20,000 Certified Organic Operations[1]
- Retail Market Valued over $39 Billion[1]
- 39% of organic producers intended to increase production[2]

1. USDA (2016). *USDA Reports Record Growth In U.S. Organic Producers. Press Release 0084.16*
2. USDA NASS (2014). Results from the 2014 Organic Survey. ACH 12-29.
3. Organic Trade Association (2016). State of the Organic Industry.

Young People are Interested in Organic…

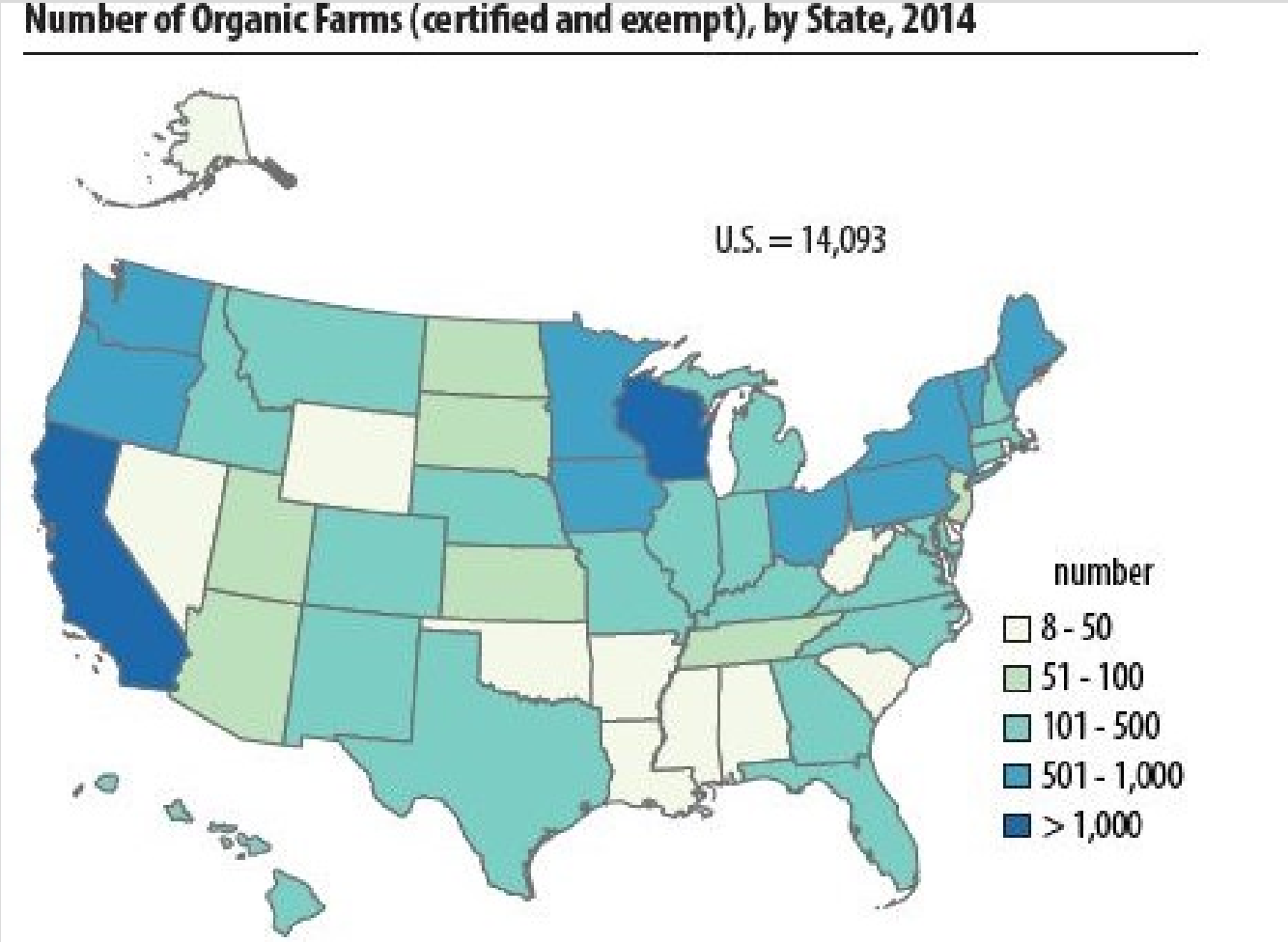
- On average, organic farm operators are younger than conventional[1]
- Young consumers (age 18-29) are more likely to buy organic products[1]
- Creation of organic programs and student farms

Land Grant Organic Trends	2003	2011
# of states with certified organic research acres	18	37
# of student organic farms	9	36
# of organic academic programs offered	0	8
# of states offering organic Extension resources	42	45

2

1. Greene, Catherine et al. (2017). Growing Organic Demand Provides High-Value Opportunities. USDA ERS Amber Waves.
2. OFRF (2012). 2012 Land Grant Assessment. www.ofrf.org

Industry is Patchy Across U.S.



- Some areas have fewer organic examples for teaching students
- May have fewer resources and less support for teaching this topic

1. USDA NASS (2014). Results from the 2014 Organic Survey. ACH 12-29.

Develop a curriculum for organic production

What are the most important topics and skill sets to include?

What resources are instructors already using?

What are instructors biggest challenges and support opportunities?

Project Objectives

1. **Characterize instructors' mental models for organic agriculture education**
2. Develop introductory curriculum to address critical concepts identified by instructors
3. Test curriculum in target classes across regions, accounting for student perceptions

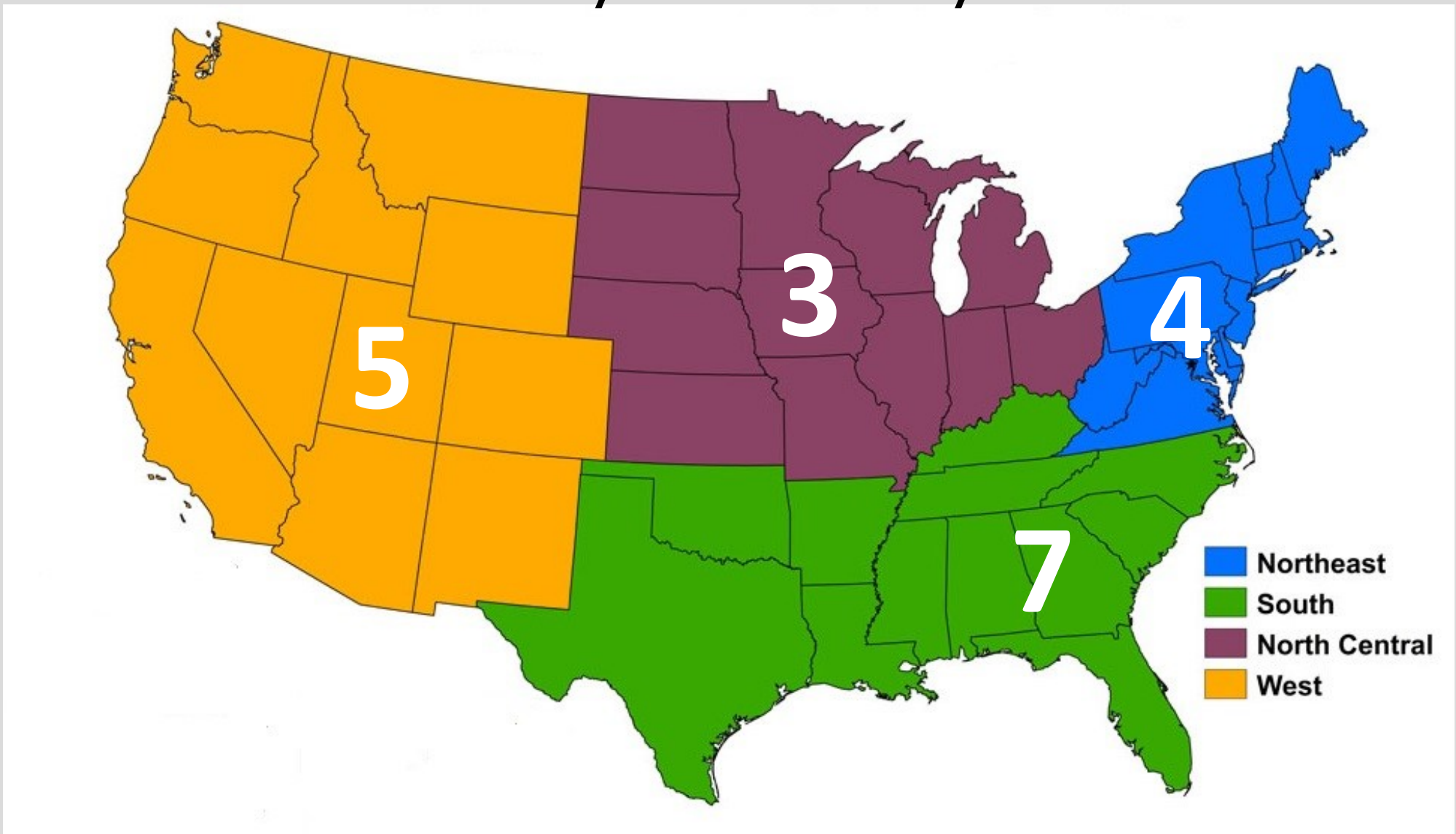
Methods: Finding Faculty

- To find faculty who teach organic courses we searched
  - Sustainable ag education association (SAEA) program listing
  - Land Grant Universities
  - Hispanic Serving Institutions
  - 1890 Historically Black Colleges
- Searched **130** universities for organic courses
- Found **38** Faculty currently teaching organic courses
- Contacted **26** Faculty
- Interviewed **19** Faculty

Methods: Faculty Summary

Critera	Range
Positions	Instructor - Regents Professor
Institution Types	Land Grant, Other 4-year, Liberal Arts
Teaching appointments	15-100%
Years Teaching Organic	2-15 years

Methods: Faculty Summary



Methods: The Interviews

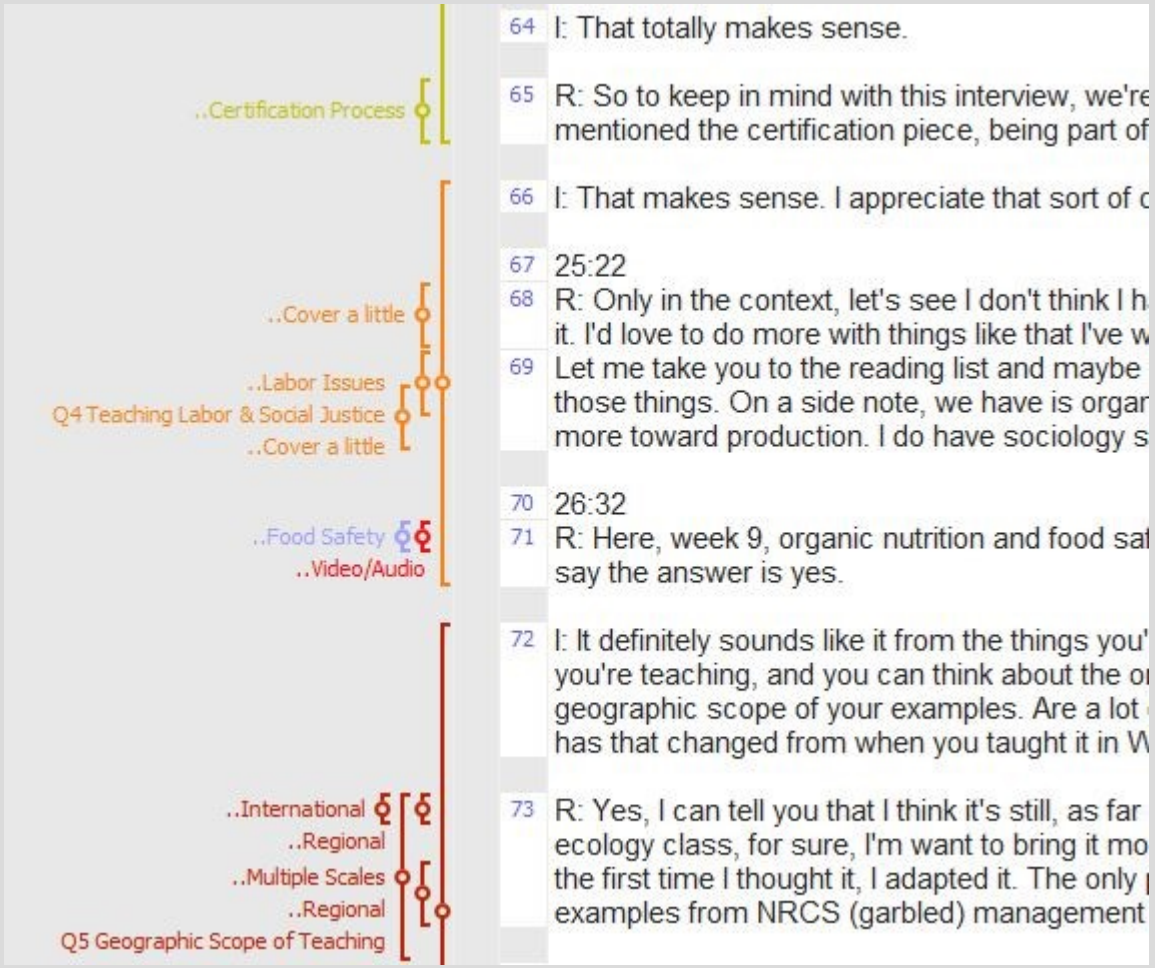
- Via phone or in-person
- Semi-structured, open-ended interview strategy
- Questions developed via meetings w/ an advisory board
- Interested in:
  - Concepts & Skills Covered
  - Scope of Teaching Examples
  - Challenges and Opportunities

Methods: Question Examples

- What two topics do you consider critical for teaching organic agriculture?
- In your class, do students learn about organic certification regulations? If yes, how do they learn about the history and implementation of regulations?
- Which topics or skills are most challenging for you to teach?

Methods: Coding and Analysis

- Transcribing
- Labels or ‘codes’ assigned to segments of interview
- MAXQDA software
- Calculated Frequency of Mentions



how you can, you know one of the analogies we use is related to soil/organic matter is the bank account analogy. So you can either take less money out or put more money in. Same kind of thing so.. Organic matter you can either reduce tillage and conserve what you have there or you can focus on adding more organic matter inputs through cover crops or through compost. So that's a pretty big one. That's probably the primary thing.

39 16:39

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Results: Identify Two Critical Topics…

Topics	% Respondents (out of 18)
Soils	44.4%
Ecological Principles	38.9%
NOP Standards /Certification	27.7%
Systems	16.7%
Insects	16.7%
Cover Crops	11.1%

Results: Example – National Organic Program

Concept	% Respondents (out of 17)
Standards and Regulations	88.2%
Certification Process	58.8%
People & Organizations involved	52.9%
National List Allowed/ Prohibited Substance	41.2%
History	35.3%

Results: Teacher Challenges

Teaching Limitations & Challenges	# Respondents
Lack of Resources/Materials	9
Time & Timing	8
Lack of Knowledge/Expertise	8
Lack of Administrative Support	5
Philosophical/Political	5

Results: Difficult to Cover Topics

Topics	Cover 'a little' # respondents	Don't Cover # respondents
Livestock	10	4
Social Issues	9	3
Climate Change	7	3
Management & Marketing	2	2
Certification & NOP Standards	2	1

"It's not my specialty. Something I'm extremely sympathetic to and I think like a lot of natural science folks, not trained in it, don't know quite how to do it, but really want to do it."

Results: Support & Opportunities

Support & Opportunities	# Respondents
Guest Lecturers	15 (mentioned 47 times)
Co-teaching	7
Connections with Farmers	7
Partner Institutions & Organizations	4
Conferences/Associations/Societies	4

- 17 out of 19 respondents use spaces outside of the classroom

Conclusions

Focus on production and foundational principles

Topic areas of need:

- Livestock
- Social Issues
- Climate Change
- Marketing

Areas of Instructor Support:

- Guest Lecturers
- Outside Teaching Spaces

Next Steps…

- Analyzing faculty syllabi for:
  - Content
  - Sequencing
- Developing modules
- Module testing

Questions?

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