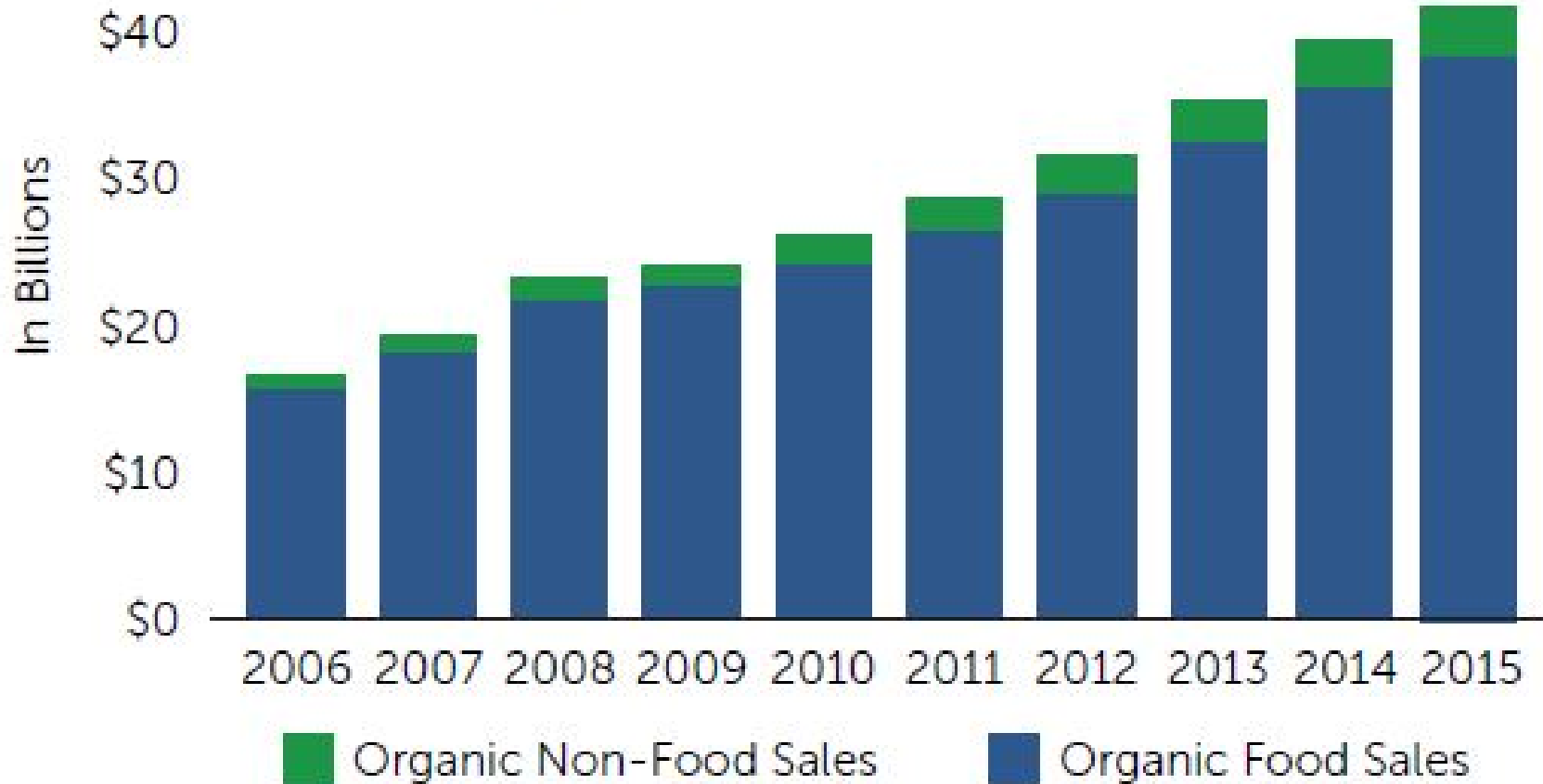


Introductory Organic Agriculture Curriculum for Undergraduate Students

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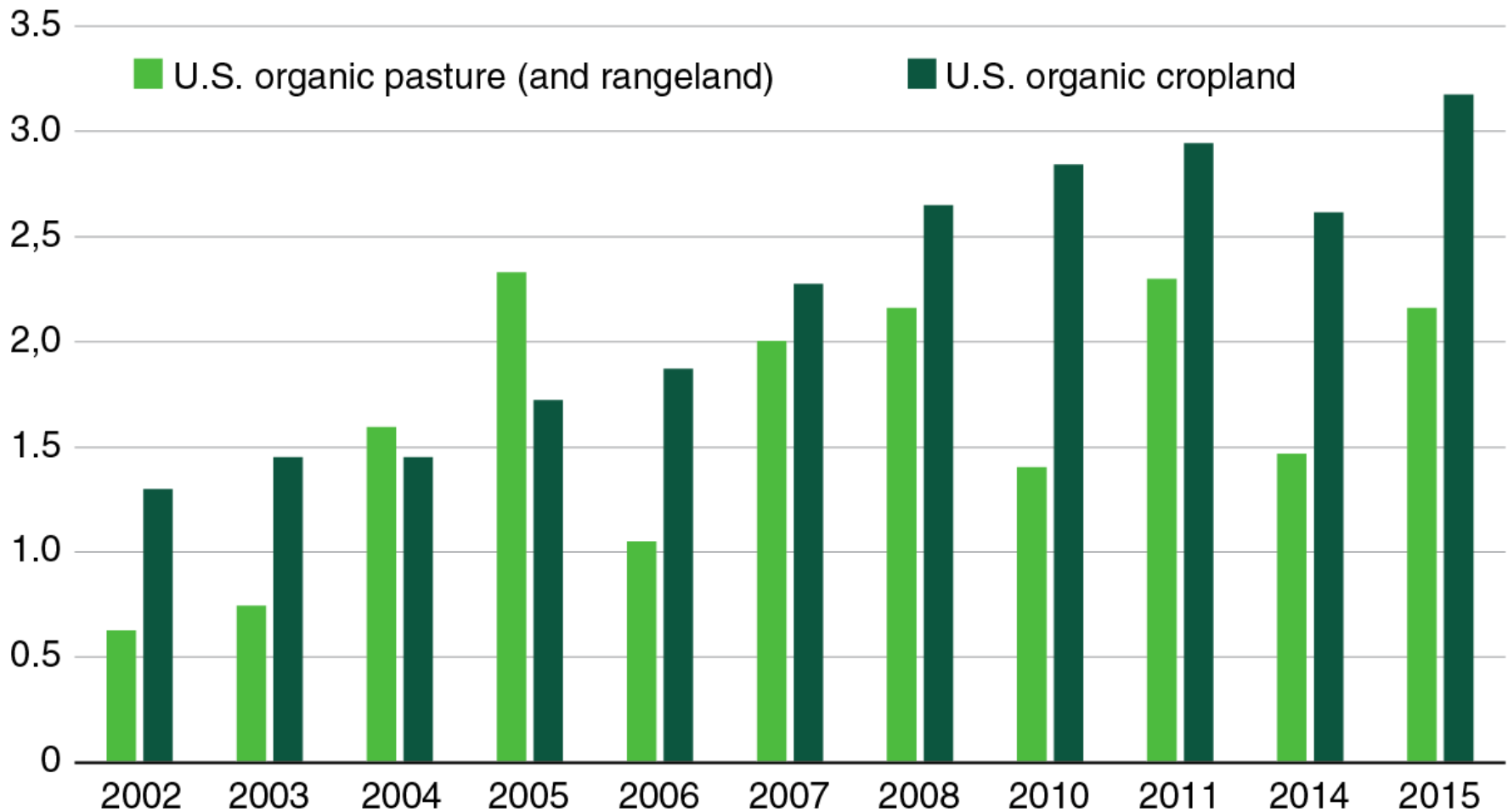
Organic agriculture continues to grow in the marketplace...

Total U.S. Organic Sales and Growth, 2006–2015



...and in the field.

Million acres



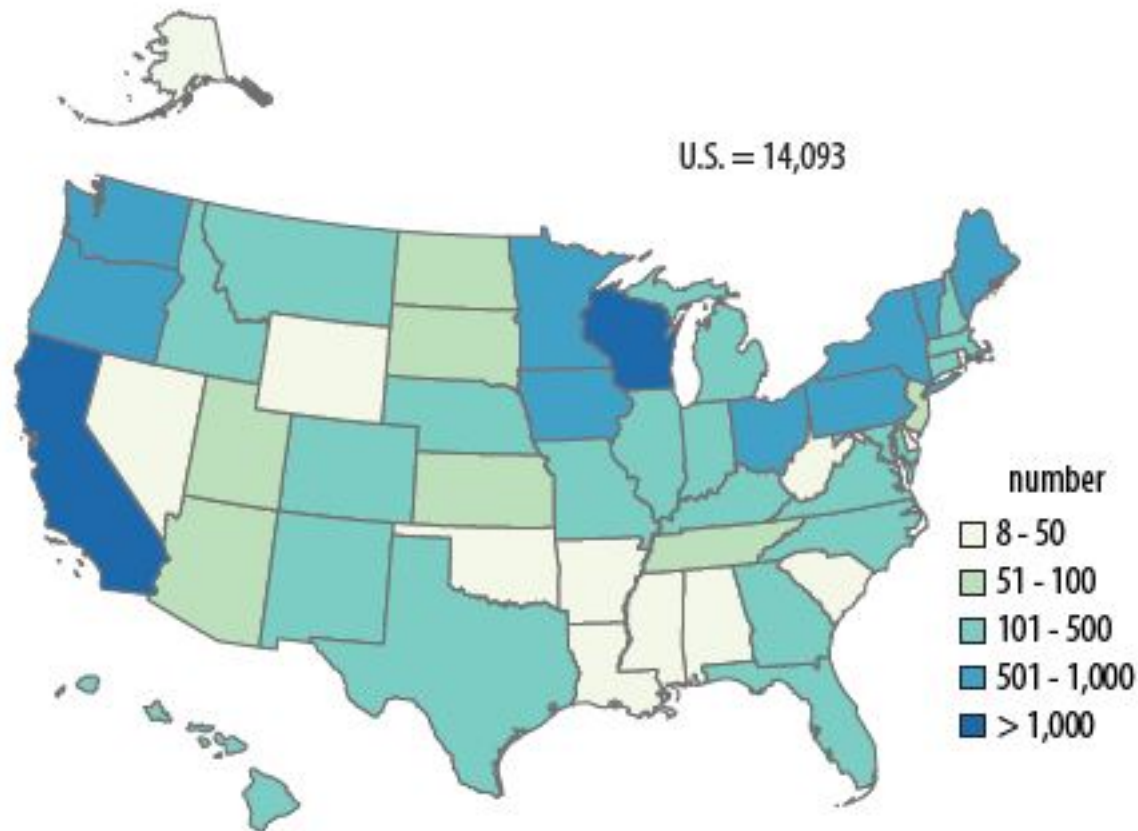
Universities are increasingly offering organic ag learning opportunities.

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

But organic ag presence is patchy.

Fig. 1

Number of Organic Farms (certified and exempt), by State, 2014

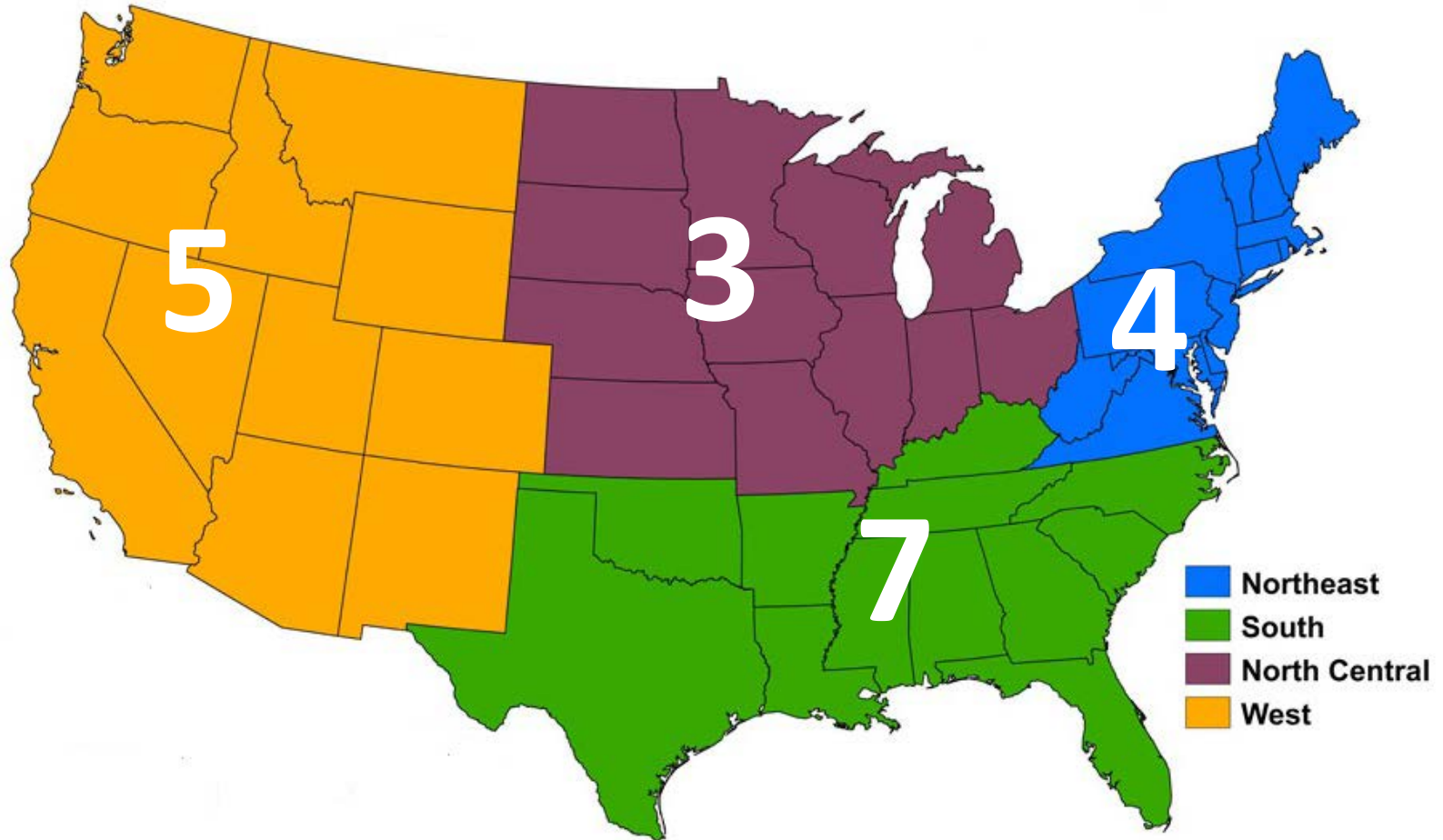


Source: USDA NASS, 2014 Organic Survey

Our Overall Project Goal

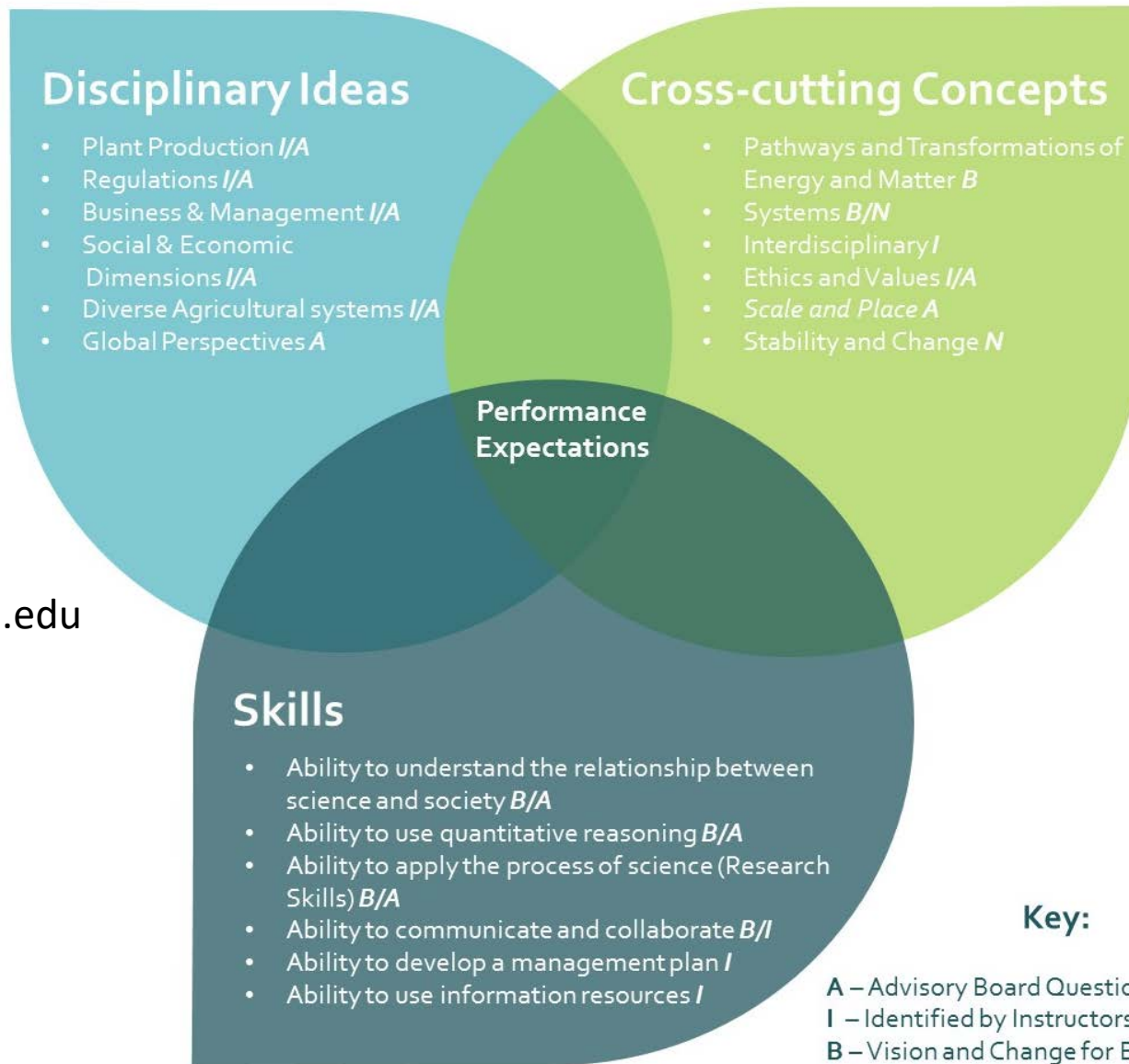
- Develop multi-regional organic agriculture undergraduate curriculum at the introductory level for diverse student audiences

Step 1: Interview Faculty (n = 19)



Includes those at land-grant (12) and non-land-grant (5) institutions

Step 2: Develop framework

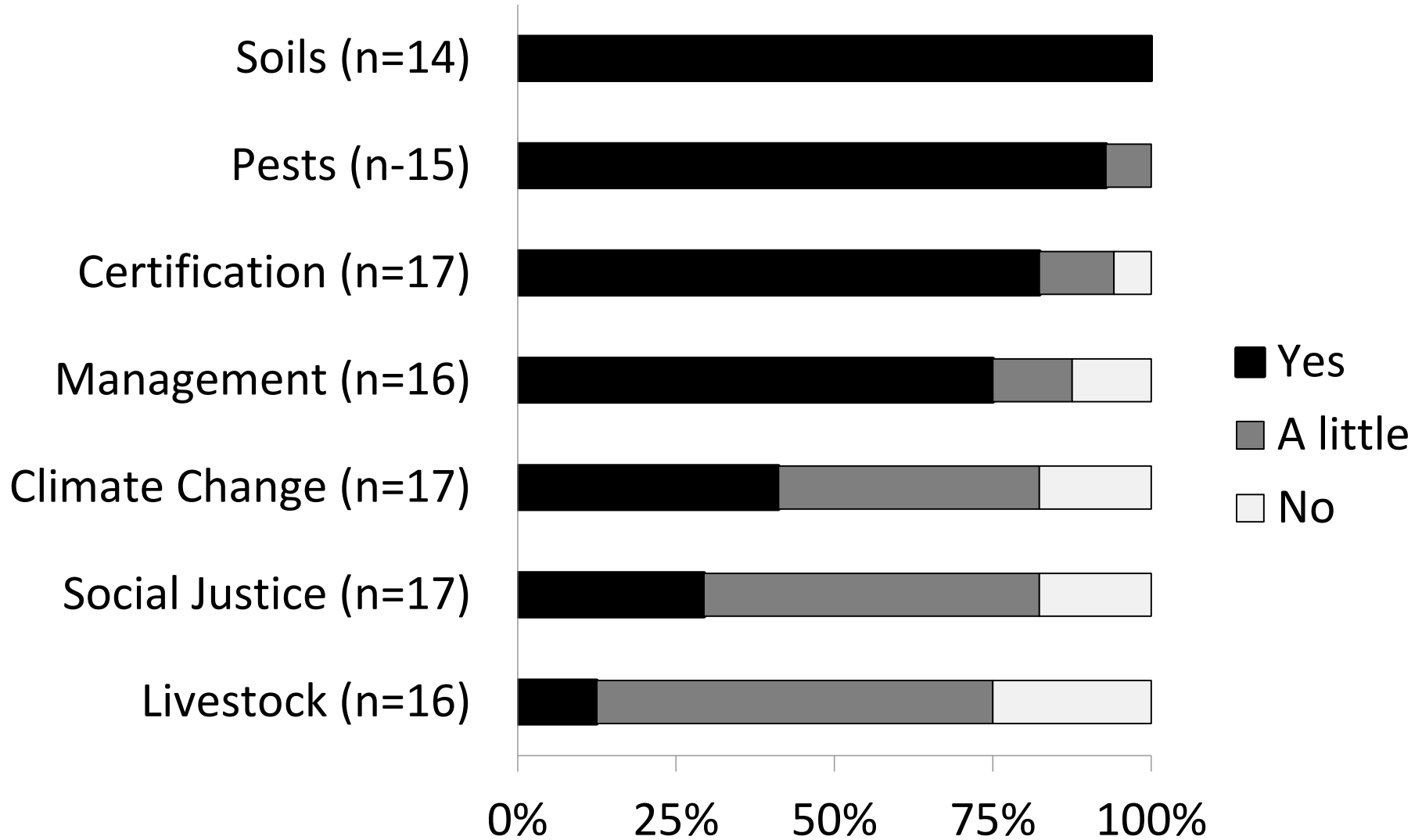


Key:

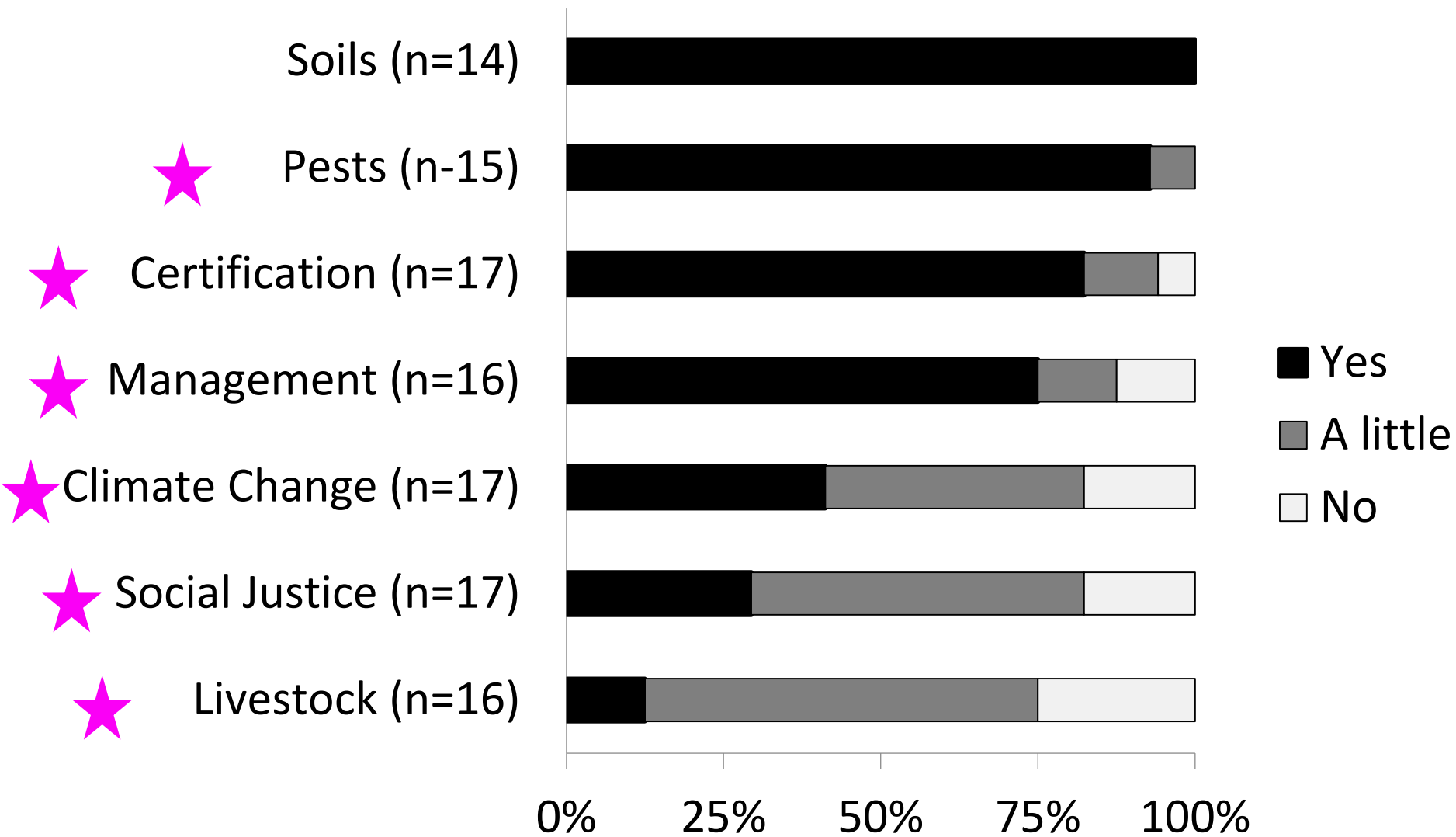
- A** – Advisory Board Question Topics
- I** – Identified by Instructors in Interviews
- B** – Vision and Change for Biology
- N** – Next Generation Science Standards

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Are these topics covered in your class?



Step 3: Create modules



ORGANIC LIVESTOCK MANAGEMENT

Overview

The Livestock Management module introduces students to the National Organic Program rules and regulations for organic livestock production. This includes regulations covering the topic areas of livestock origins, feed, healthcare, living conditions, and pasturing of ruminants. Additionally, students will be asked to examine these topic areas in the broader context of ecological principles, marketing, and production scale. At the end of this module, students will have the ability to navigate the Federal Register website to find information about the National Organic Program. Students will be able to calculate parameters necessary for following the pasture rule.

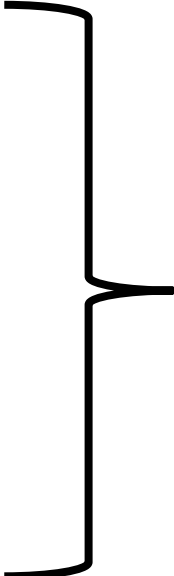
Learning Objectives

Concepts

- Organic production livestock regulations, including the topic areas of livestock origins, feed, healthcare, living conditions, and pasturing of ruminants.
- Similarities and differences between larger and smaller organic livestock operations (including scale, marketing, integrated crop and livestock systems).

Skills

- Navigate the Federal Register website to locate the national organic program regulations.
- Calculate the amount of pasture needed for a given number of livestock in order to comply with the pasture rule.



Each module's
contents are
mapped onto the
framework

Lesson 1: Exploring the National Organic Program Livestock Standards

Assignment: Navigating the Federal Register for
Livestock

Lesson 2: Complying with the Pasture Rule

Lesson 3: Livestock Video Case Studies

Short Films Created

Operations Represented

- Diverse vegetables (FL, TX, PA)
- Small grains (CO, NY)
- Livestock (WY, CO)
- Certification & compliance
- Marketing
- Livestock production
- Pest management
- Nutrient management
- Advice to students who want to farm
- Advice to eaters

Lesson 1: Exploring the National Organic Program Livestock Standards

Assignment: Navigating the Federal Register for
Livestock

Lesson 2: Complying with the Pasture Rule

Lesson 3: Livestock Video Case Studies



Small organic beef ranch in Wyoming

Large organic dairy in Colorado



Step 4: Module testing & updates

- All modules tested in an Organic Food Production course at University of Wyoming
- Individual modules shared with instructors at 8 other institutions for testing (currently compiling feedback from instructors)

Step 5: Public Sharing Plan

- Plan to place materials on Sustainable Agriculture Education Association curriculum sharing webspace
- Short films are publicly available on our Youtube channel “Organic Producers Perspectives”
- Please contact me in the meantime and I will gladly email you materials!
- rjabbour@uwyo.edu



Acknowledgements

- **Advisory board:** Eric Gallandt, Joe Dauer, Krista Jacobsen
- **Funding:** USDA Organic Agriculture Research & Extension Initiative (USDA OREI)
- **Faculty & farmers who participated**
- **Curriculum development support:** Zoe Nelson



Criteria	Range
Position	Instructor [2], Assistant Professor [6], Associate Professor [6], Professor [3], Regents Professor [1], Program Director [1]
Department	Horticulture [4], Plant Science [6], Crop & Soil Science [5], Agriculture [2], Biology [1], Natural Resources [1]
Institution Type	Land grant [12], Other 4-year [2], Liberal arts college [1], Hispanic serving [3]
Teaching appointment	15-100% (avg 54%)
Years Teaching Organic	2-15 years (avg 8.3 years)
