

# Climate Change and Agriculture: Preparing the Next Generation via a Climate Change Workshop

Dr. W. Wade Miller, OP McCubbins, Laura Frescoln  
Iowa State University

## Purpose

- Disseminate information relating to climate change and impacts on agriculture to agricultural education & science teachers.

## Methods

- Develop a weeklong itinerary
- Invite teachers via email blasts from state agencies and local AEAs
- Screen applications
- Participant announcements
- Logistics planning (i.e., meals, lodging, travel reimbursements)



Participants conducting a climate simulation lab with Waterford Fermenters.

## Activities

- Expert guest speakers
- Lab demonstrations
- Readings
- Science fair project design, experiment, and presentations
- Field visits

## Advice to Others

- Incorporate a variety of teaching methods (expert lecturers/hands on activities) is ideal.
- Provide a learning community space (i.e., website) for continuous revision of climate change lesson material.
- Diverse background among participants is ideal.



Participants conducting a climate simulation lab with a carbon dioxide sensor.



Participants learning about cover crops during a field visit.

## Results and Feedback

Table 1. Before and After Camp Participant Opinions

	Before Camp Means (Std. Deviation)	After Camp Means (Std. Deviation)
1. I understand the process of climate change.	3.12 (.86)	4.71 (.47)
2. I understand scientific methods to study climate change.	2.94 (.83)	4.47 (.51)
3. I understand the general impacts of climate change.	3.18 (1.07)	4.59 (.62)
4. I understand climate change projections for the Midwest.	2.63 (1.15)	4.44 (.51)
5. I understand the connection between climate and row-crop agriculture.	3.00 (1.12)	4.47 (.62)
6. I understand some of the specific implications of climate change on agriculture production in the Midwest.	2.65 (1.06)	4.53 (.51)

Attendee comments include:

“I was on the fence about climate change but now I believe it is real.”

“Broadened understanding of how climate change might affect Iowa agriculture and how various crop management systems might be used to mitigate or respond to climate changes.”

“More interested in incorporating these concepts into my curriculum instead of avoiding them!”

Special thanks to Kristi Lekies and Marci Bird from Ohio State University for Evaluation Results