



United States Department of Agriculture
National Institute of Food and Agriculture

Agricultural Stakeholders and Their Attitudes towards Climate Change

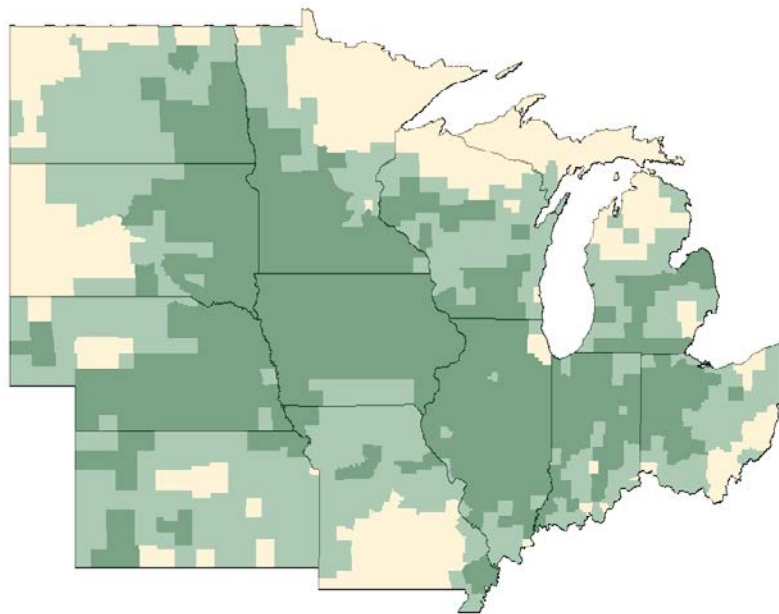
Melissa Widhalm
U2U Project Manager, Purdue University
Farm Policy Study Group – July 12, 2016



Transforming Climate Variability and
Change Information for Cereal Crop Producers

About U2U

Our Vision



Major Corn Growing Area

Minor Corn Growing Area

- Transform existing climate information into usable knowledge for agricultural decision making
- Give farmers the resources and training to more effectively manage variable climate conditions
- Increase Extension capacity to address agro-climate issues

More **resilient** and **profitable** farms
in a variable and changing climate



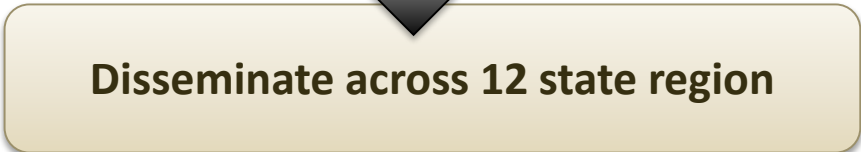
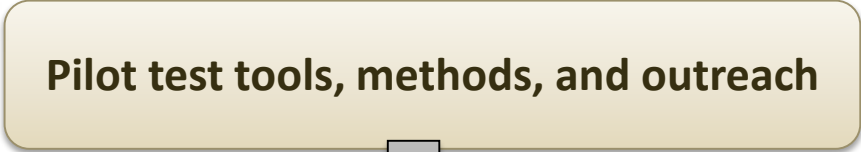
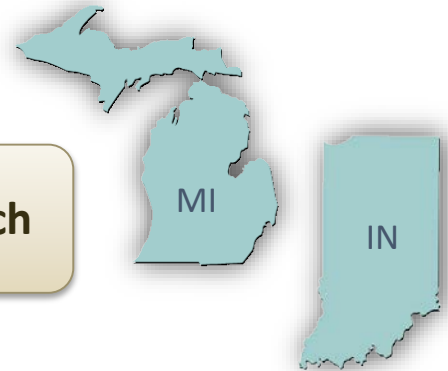
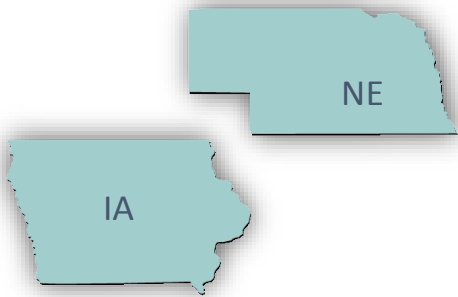
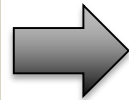
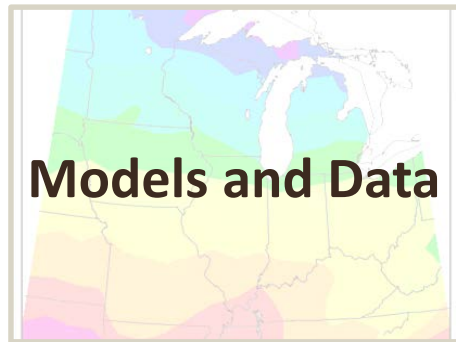
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U2U Team

climatologists, crop modelers, agronomists,
IT specialists, economists, sociologists, Extension, and more



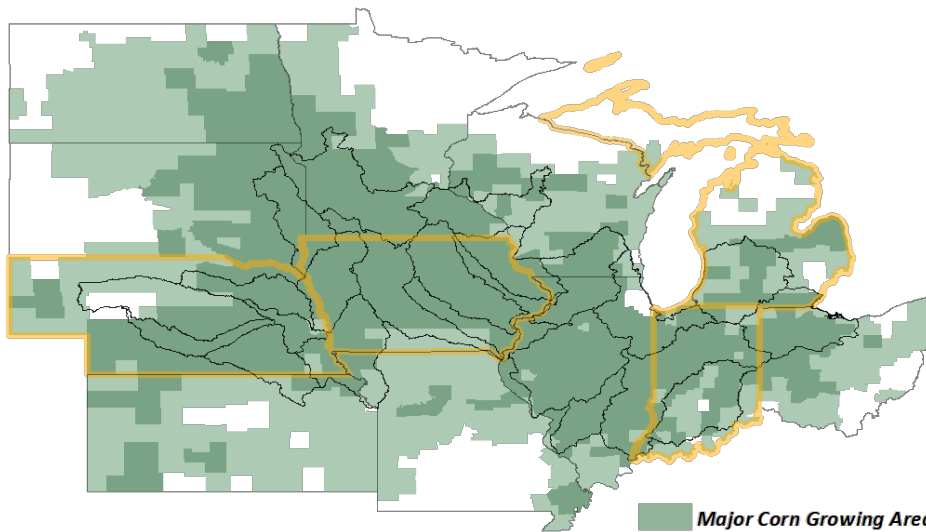
Project Objectives





Transforming Climate Variability and
Change Information for Cereal Crop Producers

Climate Needs Assessment Surveys



Crop data from National Agricultural Statistics Service (NASS)
U.S. 2007 Census of Agriculture
Major corn areas are counties that harvested over 60,000 acres of corn
Minor corn areas are counties that harvested over 5,000 acres of corn

Major Corn Growing Area
Minor Corn Growing Area
Producer Survey
Advisor Survey

Farmer Survey

- Large-scale farmers (\$100k+ gross revenue)
- 4,778 farmers in 22 HUC-6 watersheds
- Representing ~60% of US corn production
- Partnership w/ CS-CAP (Iowa State)

Advisory Survey

- 2,530 advisors (IA, IN, MI, NE + Extension in other 8 states)
- CCAs, Extension, bankers, agro-business, state/federal

Data collect Feb-March 2012

Survey results: Climate change beliefs

“Please select the statement that best reflects your beliefs about climate change”

	Farmers	Advisors
Climate change is occurring, and it is caused <u>mostly</u> by <u>human activities</u>	8%	13%
Climate change is occurring, and it is caused <u>equally</u> by <u>natural</u> changes in the environment and <u>human</u> activities	33%	37%
Climate change is occurring, and it is caused <u>mostly</u> by <u>natural changes</u> in the environment	25%	25%
There is <u>not sufficient evidence</u> to know with certainty whether climate change is occurring or not	31%	23%
Climate change is <u>not occurring</u>	4%	2%

Most farmers and advisors believe climate change is happening, but opinions differ on the role of human activity

	Farmers	Advisors
Climate change is occurring, and it is caused <u>mostly by human activities</u>	8%	13%
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Climate change beliefs significantly influence perceived climate risks, willingness to use climate info, risk management, adaptation/mitigation beliefs and trusted info sources.

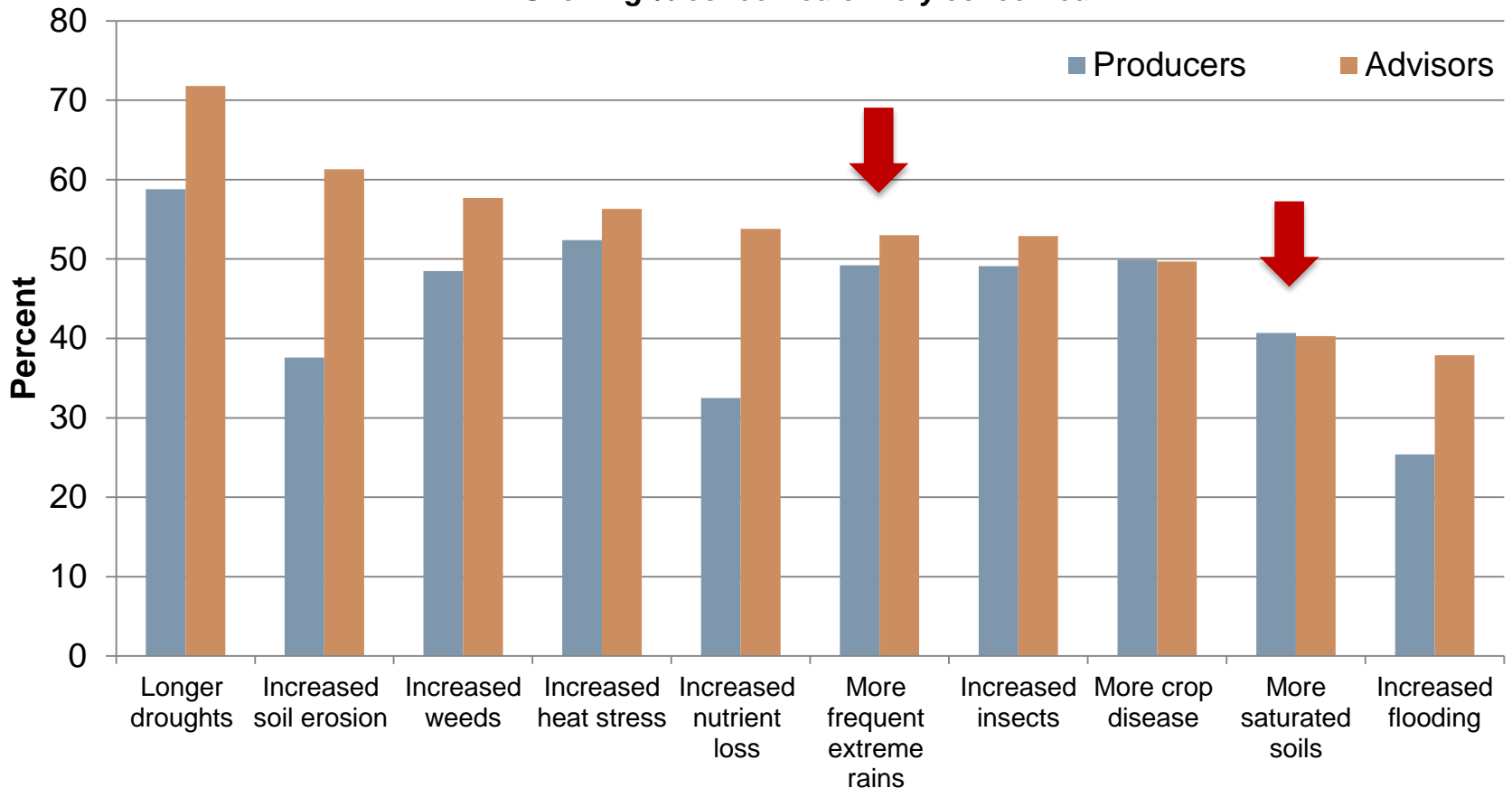
	Farmers	Advisors
Climate change is occurring	66%	75%
➤ Humans are at least partly responsible	41%	50%



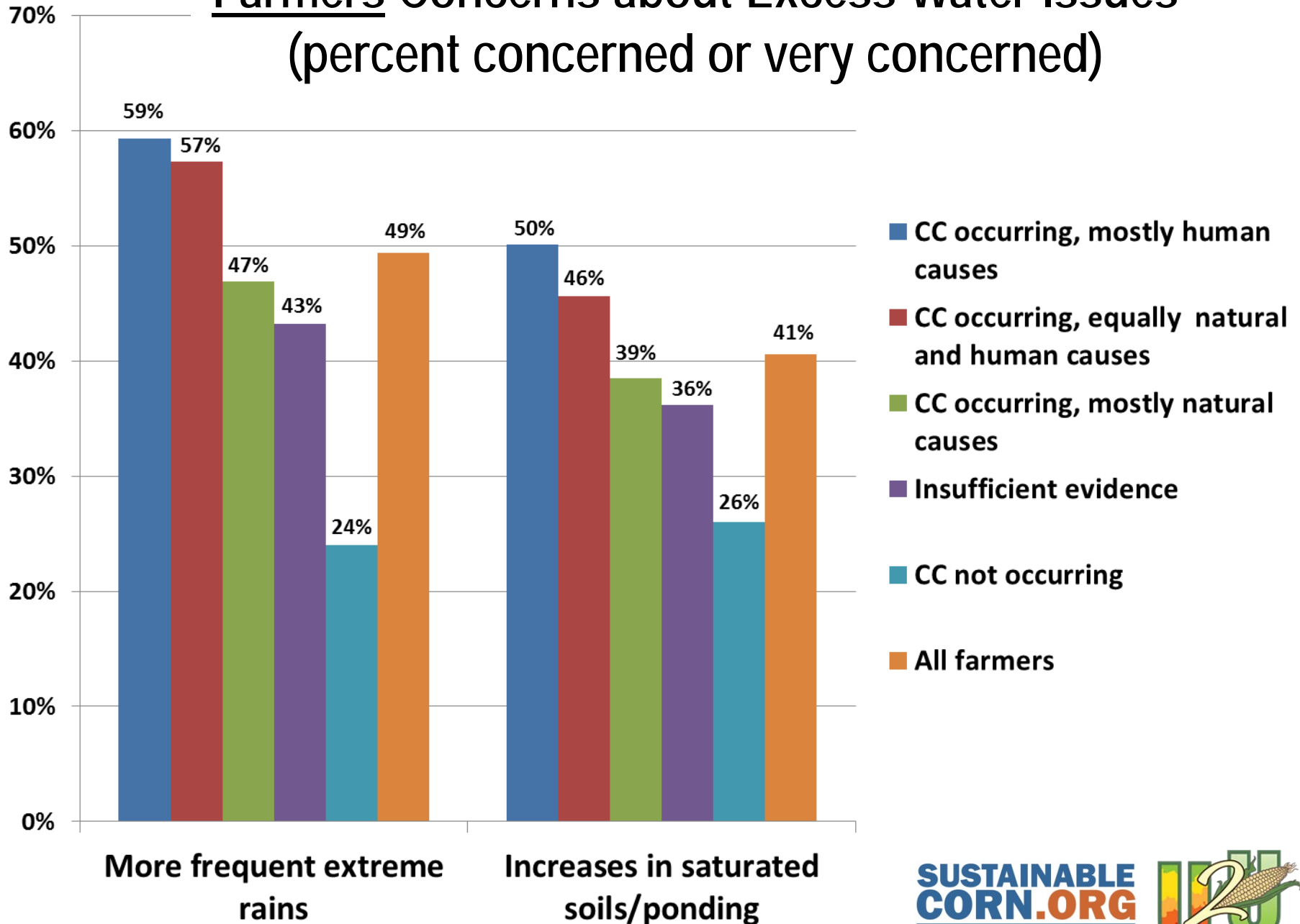
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Ag community is concerned about weather & pest problems

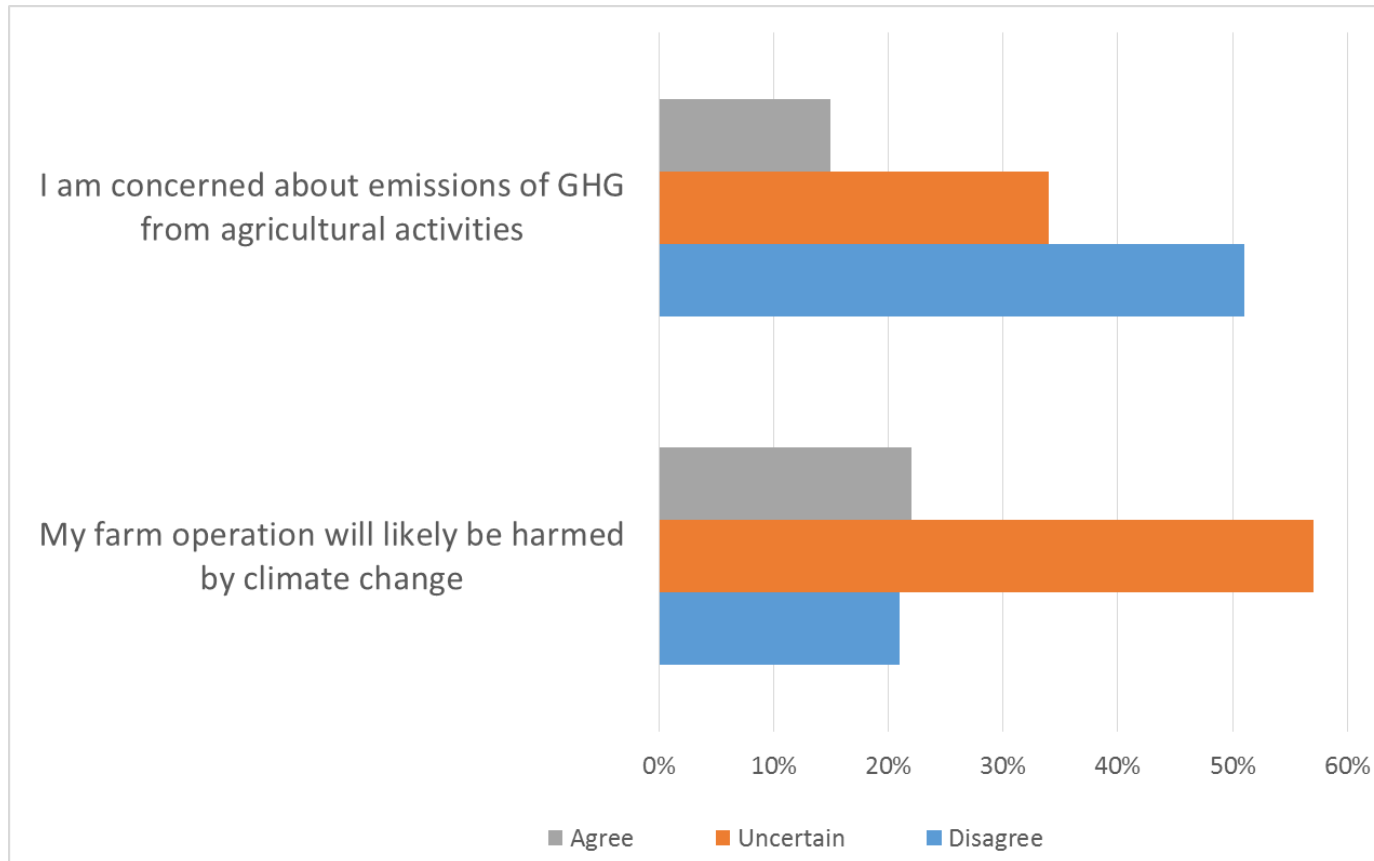
Showing % concerned or very concerned



Farmers Concerns about Excess Water Issues (percent concerned or very concerned)

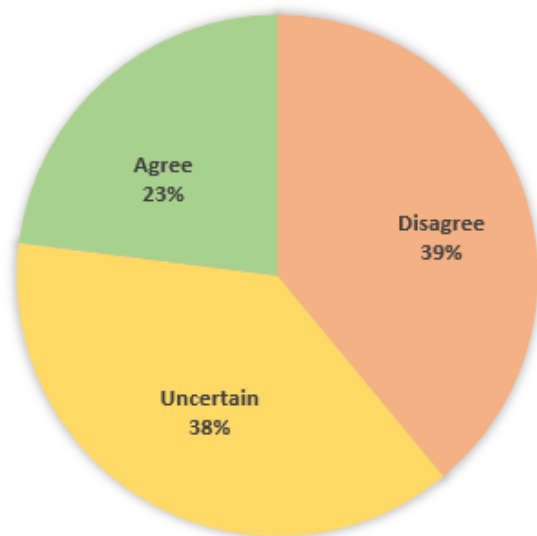


Farmer concern about GHG emissions and climate change

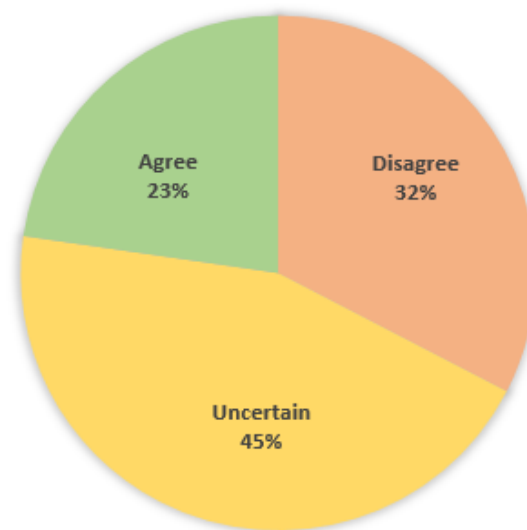


Farmer Support for Collective and Individual GHG Mitigation

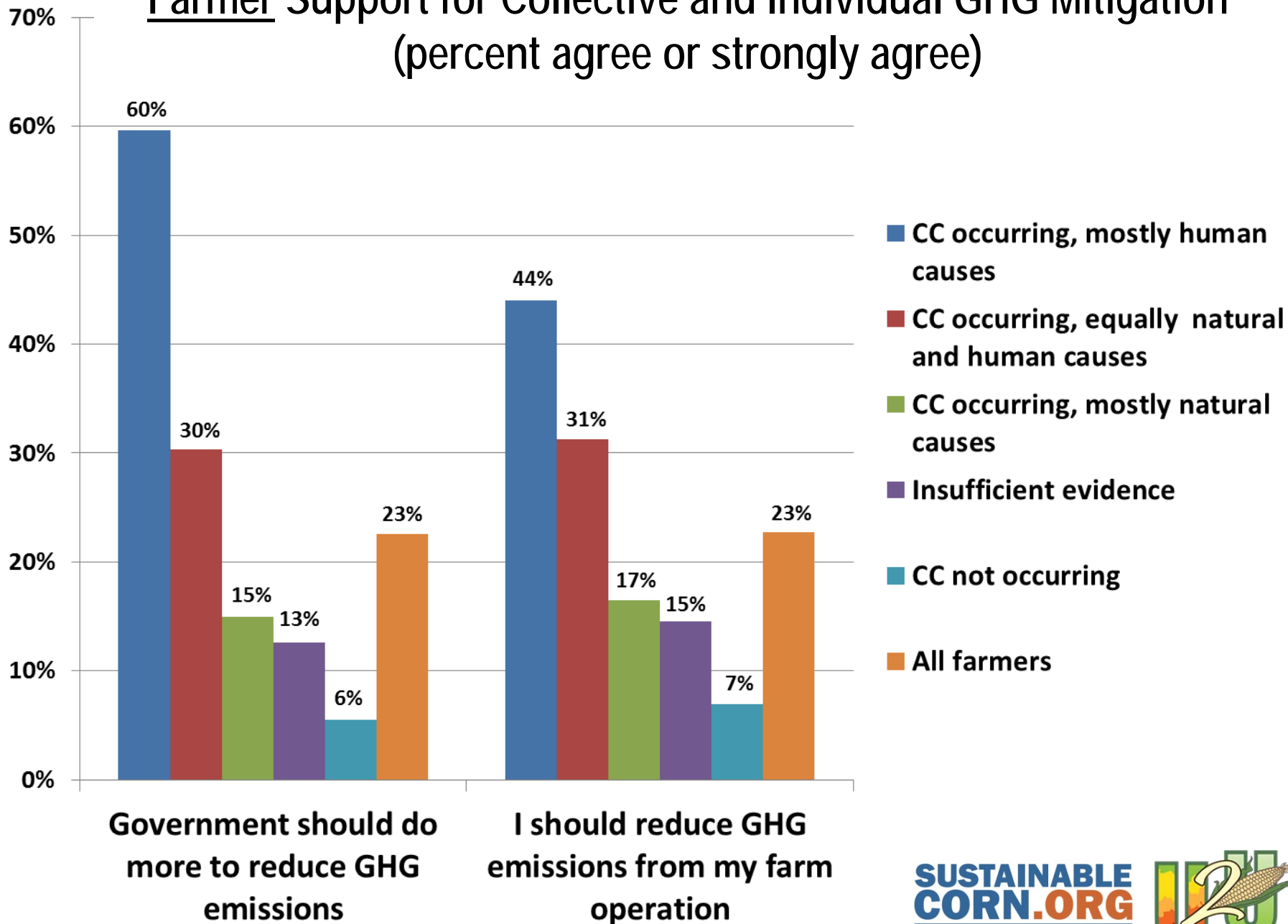
GOVERNMENT SHOULD DO MORE TO REDUCE GREENHOUSE GAS EMISSIONS



I SHOULD REDUCE GREENHOUSE GAS EMISSIONS FROM MY FARM OPERATION

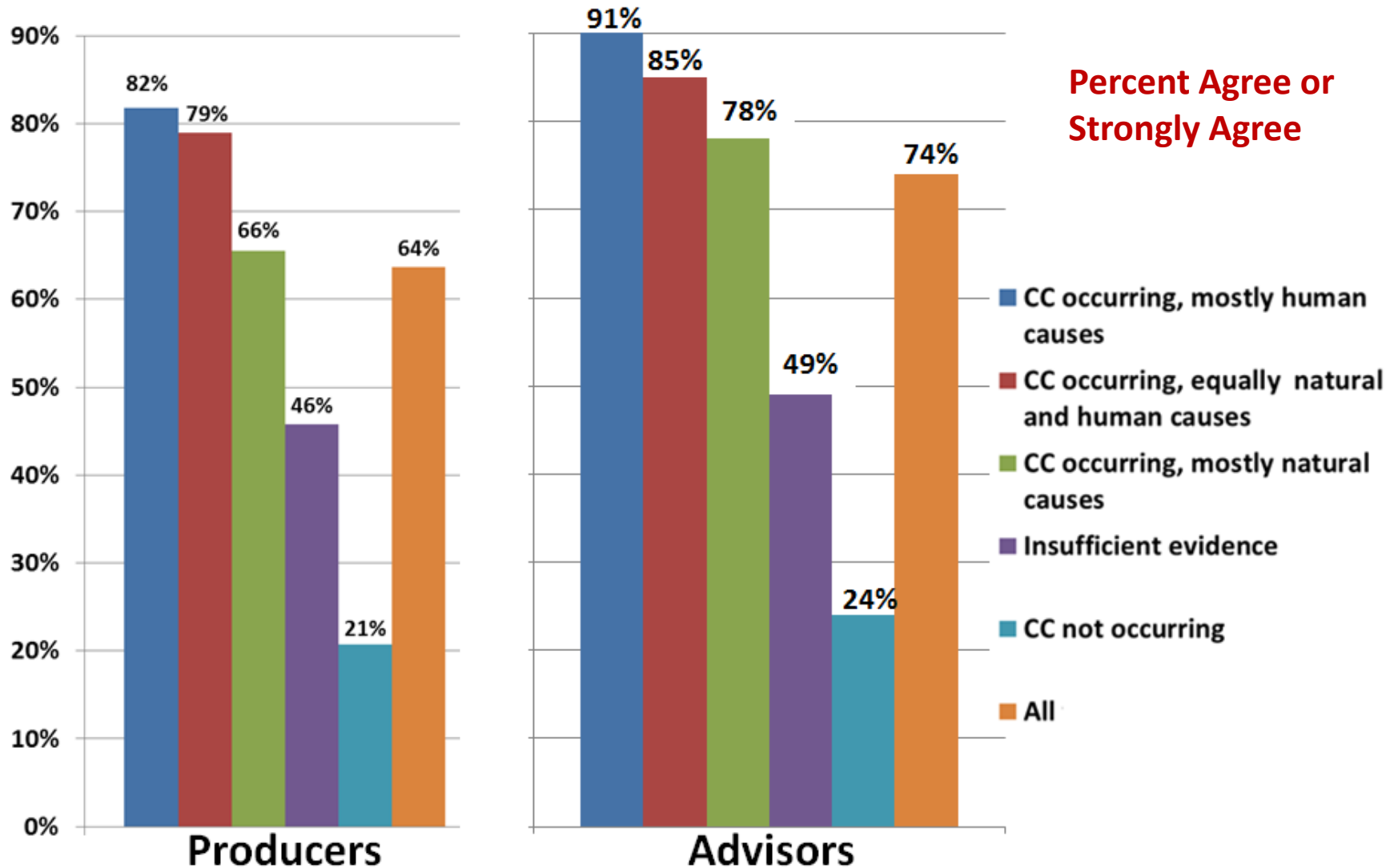


Farmer Support for Collective and Individual GHG Mitigation (percent agree or strongly agree)

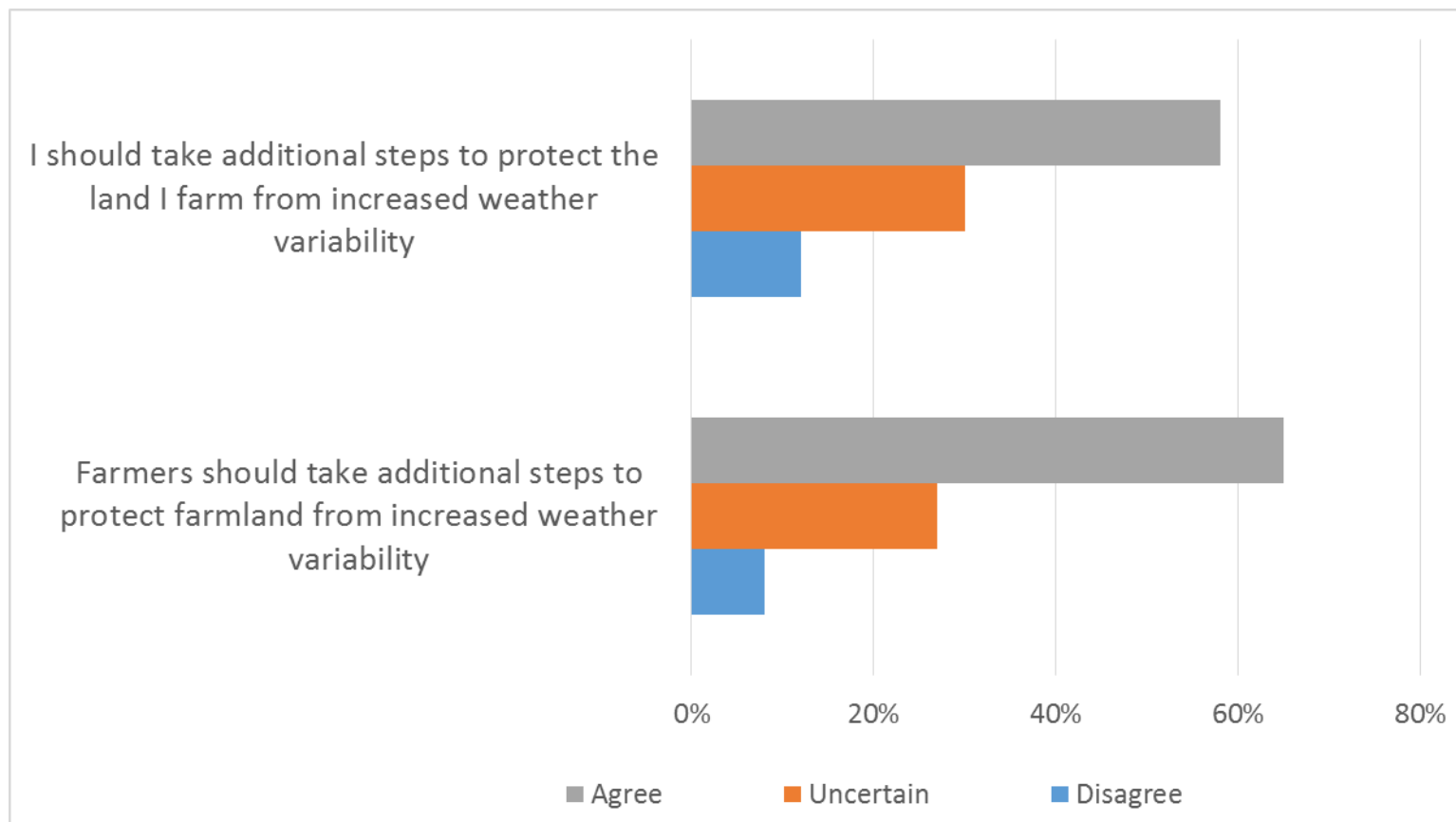




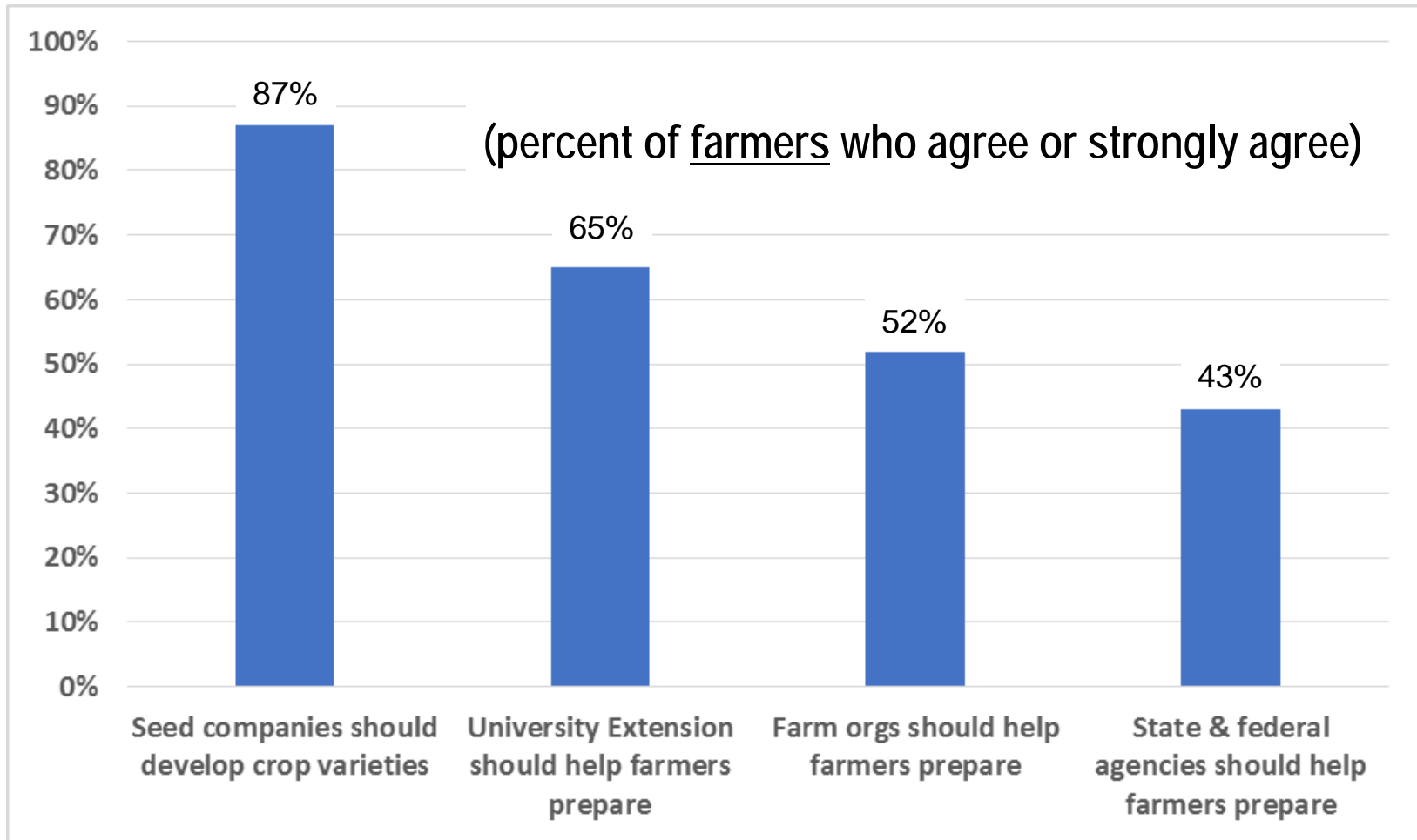
Question: It is important for farmers to adapt to climate change to ensure the long-term success of U.S. agriculture



Farmers agree farmland needs to be protected from “increased weather variability”

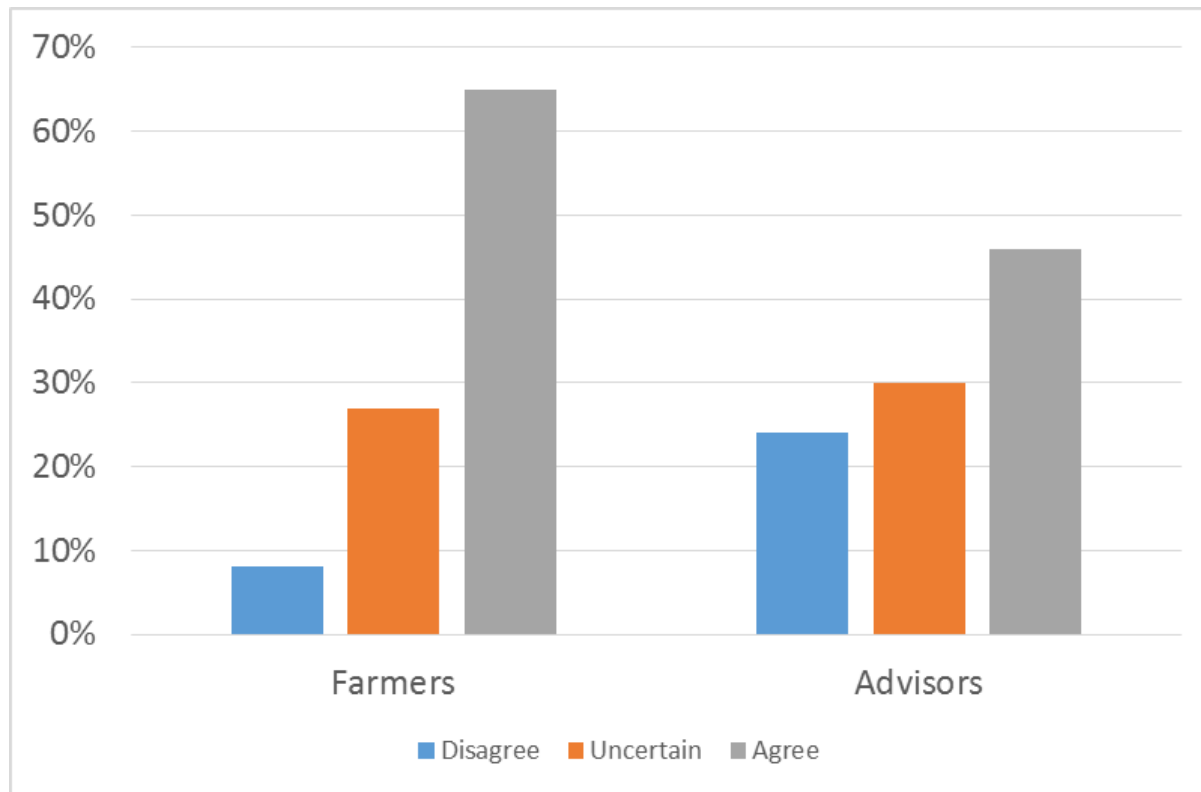


Who should help farmers prepare for “increased weather variability”



Ready to take action?

“There’s too much uncertainty about the impacts of climate change to justify changing agricultural practices and strategies”





What have we learned from farmers and advisors?

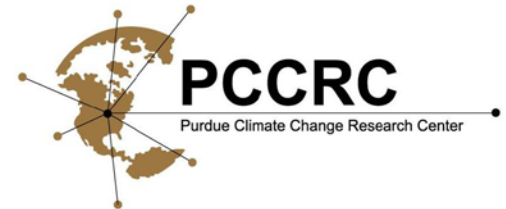
- Ag stakeholders are diverse in their perspectives on climate change and what should be done
- Most farmers (66%) and advisors (75%) believe that climate change is happening, but opinions differ on the role of human activity
- There is concern for specific weather and pest problems, and this concern varies geographically and by CC beliefs
- Farmers have low concern about GHG emissions, and there is low support for GHG mitigation
- Farmers and advisors are supportive of adaptation, but that doesn't necessarily mean they're ready to take action



IN CCIA

Indiana Climate Change Impacts Assessment

- New statewide effort currently underway to synthesize best available science regarding climate change impacts for sectors of state and local interest
- Lead by the Purdue Climate Change Research Center (PCCRC)
- Reports expect in late 2017 / early 2018
- For more information:
 - Website: <http://www.purdue.edu/climate>
 - Sign up for our newsletter



Thank you!



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