REACCH Regional Approaches to Climate Change – PACIFIC NORTHWEST AGRICULTURE

Follow-up Survey of Inland Pacific Northwest Wheat Producers

The Inland Pacific Northwest region of Idaho, Oregon, and Washington is one of the most agriculturally productive places in the world. This survey is a follow-up to the 2012 effort assessing how social, economic, and climatic factors affect your on-farm decisions. The survey is part of a larger study funded by USDA-NIFA.

University of Idaho

Oregon State University OSU

Photo credit: Brad Stokes

USDA United States Department of Agriculture
Agricultural Research Service

Washington State University

1. Please provide the zip code of the *single largest parcel* you currently farm (for the 2015 production season).

   ___ ___ ___ ___ ___ zip code of largest parcel I farm

2. How many TOTAL acres of *wheat* did you harvest for the 2015 production season? Please choose only *one* option.

   _____ 0-49 acres
   _____ 50-99 acres
   _____ 100 acres or more
   _____ I do not farm wheat

NOTE *If you do not farm wheat, please stop here and return the survey in the envelope provided. Thank you!*

This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2011-68002-30191 .

3. How many TOTAL acres did you farm (or manage) in 2015? _____ acres

4. How many acres of each of the following *harvested* crops or land use types did you manage during 2015? (Include land that you leased *and* owned)

Crop or Land Type	Acres
Winter wheat	
Spring wheat	
Peas/lentils/garbanzos	
Alfalfa or hay	
Bluegrass or other grass seed	

Crop or Land Type	Acres
Canola or other oilseeds	
Barley	
Summer (2015) fallow	
CRP (Conserv. Res. Program)	
Other _____	

5. Please rate the importance of each of the following types of information for determining rates of fertilizer application.

Subject	Information Source	Very Important	Important	Somewhat Important	Not Important At All	N/A
Economics	Crop market value	1	2	3	4	5
	Cost of fertilizer	1	2	3	4	5
Agronomy	Previous yields	1	2	3	4	5
	Parcel variability (i.e., need for specific N rates)	1	2	3	4	5

6. Please circle the number for the month in which you typically make the decision about each of the following practices related to winter wheat production. If you do not typically carry out a practice, circle "NA."

	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	N/A
Decide purchase of winter wheat seed	1	2	3	4	5	6	7	8	9	10	11	12	NA
Decide purchase of seed for spring crop(s)	1	2	3	4	5	6	7	8	9	10	11	12	NA
Decide seeding rates	1	2	3	4	5	6	7	8	9	10	11	12	NA
Decide fertilizer rates and purchase	1	2	3	4	5	6	7	8	9	10	11	12	NA
Decide crop rotation	1	2	3	4	5	6	7	8	9	10	11	12	NA

7. How strongly do you agree or disagree with each of the following statements regarding your management practices?

	Strongly Agree	Agree	Neither	Disagree	Strongly Disagree
I consider myself to be an aggressive adopter of conservation practices.	1	2	3	4	5
Chemical fallow is the basis for my weed management program.	1	2	3	4	5
On-farm environmental outcomes are more important than net returns when considering changes to my management practices.	1	2	3	4	5
The timing of management practices has changed since I started farming.	1	2	3	4	5
I manage erosion with my tilling practices.	1	2	3	4	5
Cost is my greatest concern when considering a new production practice.	1	2	3	4	5
I am concerned about soil pH decreasing.	1	2	3	4	5

8. Please mark an "X" in the box next to the category that best fits your tillage practice. Please choose only *one* option.

	Tillage
	Conventional: Leave less than 30% residue on surface after planting, followed by multiple secondary tillage and application trips.
	Conservation: Leave more than 30% residue on surface after planting, followed by multiple secondary application trips.
	No-Till: Leave more than 30% residue on surface after planting, and leave soil undisturbed harvest to planting.

9. In the following table, please mark an "X" for each of the following precision agriculture technologies that you use. Please choose only one option for each column.

Level of Use	Precision Agriculture Technologies				
	Aerial Crop Imagery	GPS Guidance	Variable Seeding Equipment	Variable Fertilizer Equipment	Yield Monitor
Have and use					
Do not have					

10. Since 2007, have you changed your crop rotation for any of the following reasons? Please mark all that apply.

_____ To improve soil quality
_____ To manage weeds
_____ To capitalize on crop prices
_____ Because of fuel costs
_____ Because of fertilizer costs
_____ I replaced fallow with crop
_____ Due to weather
_____ I have not changed my crop rotation since 2007

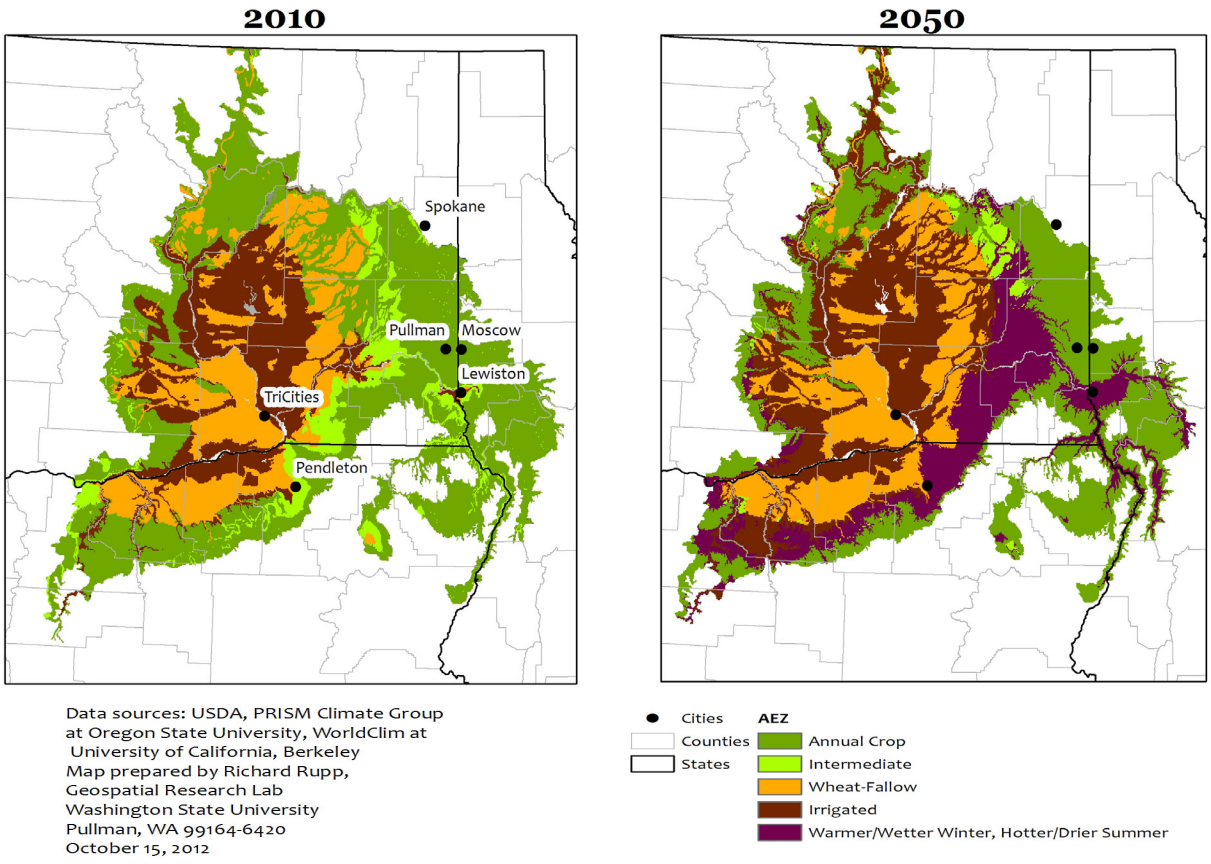
11. Please indicate how strongly you agree or disagree with each of the following statements:

	Strongly Agree	Somewhat Agree	Neither	Somewhat Disagree	Strongly Disagree
I have observed changes in weather patterns over my lifetime.	1	2	3	4	5
Average global temperatures are increasing.	1	2	3	4	5
Human activities are the primary cause of climate change.	1	2	3	4	5
I will have to make serious changes to my farming operation to adjust to climate change.	1	2	3	4	5
Changes in precipitation and snowpack in the PNW will affect my operation in the next decade.	1	2	3	4	5
My perceptions of climate change have shifted since 2012.	1	2	3	4	5
Crop insurance will protect my operation from climate change.	1	2	3	4	5

12. How great or small of a risk to your farm operation do you perceive each of the following changes to be? Please circle the level of risk for each item.

	No Risk	Low Risk	Moderate Risk	High Risk	Do Not Know
Increased occurrence of extremely warm days	1	2	3	4	0
More variable precipitation	1	2	3	4	0
Cost of inputs	1	2	3	4	0
Long-term drought	1	2	3	4	0
Climate change policies	1	2	3	4	0

The following maps are the results from one climate model for the Inland Pacific Northwest.



13. If you were faced with the changes presented in the maps above, what amount of change would you likely make to the following practices for your operation?

	No Change	Small Change	Moderate Change	Big Change
Current cropping system	1	2	3	4
Current rotation	1	2	3	4
Current tillage practice	1	2	3	4
Current soil conservation practice	1	2	3	4
Current crop insurance	1	2	3	4

14. If conditions change as in the maps above, please circle the degree of both environmental risk and economic risk you perceive to farm production in *your growing area*.

	No Risk	Low Risk	Moderate Risk	High Risk	Do Not Know
Environmental risk	1	2	3	4	0
Economic risk	1	2	3	4	0

15. With respect to **climate change information**, how trustworthy do you find information from the following people?

Source	Climate Change Information				
	Very Trustworthy	Somewhat Trustworthy	Neither	Somewhat Untrustworthy	Very Untrustworthy
Other producers in your county	1	2	3	4	5
Soil and Water Conservation District	1	2	3	4	5
Independent crop advisor	1	2	3	4	5
Crop advisor associated with a particular company	1	2	3	4	5
University Extension	1	2	3	4	5
State-Level NRCS (Natural Resources Conservation Service)	1	2	3	4	5

16. Based on what you have read and heard, do you believe there is scientific evidence supporting the claim that average global temperatures have been increasing over the past four decades?

_____ Yes
_____ No
_____ I don't know

17. Use the following table to describe your crop rotation for your **single largest parcel**. In each column, mark an "X" next to crop(s) you grew, including *fallow*, in a given year.

Crop	2010	2011	2012	2013	2014	2015
Winter wheat						
Spring wheat						
Barley						
Pulse crops (peas, lentils, garbanzos) specify_____						
Oilseed, specify_____						
Hay, specify_____						
Kentucky Bluegrass or perennial seed crop						
Fallow						
Other _____						

18. Please mark with an "X" which pests, weeds, and pathogens affect your **largest parcel** and the degree to which you can control them.

		Not Observed	Observed, Not a Pest	Treated, but Not Controlled	Treated and Controlled
Pests	Aphids				
	Cereal leaf beetle				
	Hessian fly				
	Wireworm species				
Weeds	Downy brome				
	Italian ryegrass				
	Mayweed chamomile				
Pathogens	Wheat stripe rust				
	Fusarium crown rot				
	Rhizoctonia root rot				
	Barley yellow dwarf virus				

19. To what degree have you perceived impact from earthworm populations on any of your parcels within the last three years? Please choose only *one* option.

_____ I have observed enough earthworms to change the soil properties.
_____ I have observed earthworms but not enough to change the soil properties.
_____ I have not observed any earthworms.

20. Which of the following categories best reflects your average gross annual sales from your entire farm operation?

_____ Less than $24,999
_____ $25,000 - $49,999
_____ $50,000 – $99,999
_____ $100,000 - $249,999
_____ $250,000 - $499,999
_____ $500,000 - $999,999
_____ $1,000,000 - $1,999,999
_____ $2,000,000 or more

21. Which of the following best describes your plans for the future of your farmland?

_____ Sell land
_____ Lease land
_____ Transfer to family member(s)
_____ Undecided at this time
_____ Other (please specify)
_____

General Information

22. Circle the number that best describes the highest level of education you have.

Level of Education	
Elementary school (8th grade or less)	1
Some high school	2
High school graduate or GED	3
Vocational training beyond high school	4
Associate's degree	5
Some college, no degree	6
Bachelor's degree	7
Graduate / professional degree	8

23. In what year were you born? **1 9** ___ ___

24. How many years have you been managing a farm operation? _____ (# years)

25. How many generations has your family been farming in this area? _____ (# generations)

Project Impacts

26. During the past five years, have you attended presentations or accessed information provided through the REACCH project? Please check all that apply.

_____ Heard an oral presentation at a grower or other professional meeting
_____ Attended a REACCH field day
_____ Accessed the REACCH website and reports posted there
_____ Accessed the REACCH website and viewed a video posted there
_____ None of the above

27. Please mark an "X" next to each of the items below that applies as a result of having accessed REACCH sponsored information.

_____ Learned something new and useful about farming practices
_____ Changed or adopted a new practice on my farm
_____ Discovered new sources for accessing farming information
_____ Shared information from REACCH with others
_____ None of the above

If you wish, please add any additional information or comments you would like to share. Use an extra page if needed.

THANK YOU FOR YOUR PARTICIPATION!

Additional comments: