Improving Student and Teacher Knowledge of Climate Change and Agricultural Science in the Inland Pacific Northwest

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REACCH Education Initiatives Overview

The Regional Approaches to Climate Change-Pacific Northwest Agriculture (REACCH-PNA) project brings together over 20 scientists from four institutions (UI, WSU, OSU, and USDA-ARS) to develop more sustainable wheat-production systems given current projections of climate change. One of the goals of REACCH is to develop a network to improve agricultural and climate change education across the Inland Pacific Northwest. This goal is in response to the recognized need for improved agricultural and climate change literacy among future agricultural professionals and the general population.

K-12 Students and Teachers: The K-12 component of this project includes hands-on teacher workshops and the development and distribution of lesson plans. A specific goal is to engage students in the study of agriculture and climate change through development of curriculum based on regional issues. The formation of partnerships with other education-based projects (NASA-funded ICE-Net) has allowed expansion of the REACCH geographic influence and the number of teachers served.

Teacher Professional Development: Teachers participated in hands-on sessions such as: Using pitfall traps to teach about agro-ecology, phenology themed citizen science efforts around the country, cropping systems research, and an overview of greenhouse gas monitoring.

REACCH graduate and undergraduate students collecting biomass samples at the WSU experimental farm; REACCH graduate students at the first annual Graduate Student Retreat.

Undergraduate Students: Undergraduate students are trained through a summer research internship program. Students are recruited from across the country and spend nine weeks conducting research at one of the three academic institutions.

High School Curriculum: PhD students and faculty are working together to develop a 9th - 12th grade agricultural education curriculum (Agriculture 515) based on teacher identified content needs and local issues. The curriculum is designed to be used as stand-alone units of interest to both high school agricultural and science teachers.

Elementary School Curriculum: REACCH faculty and staff are working with local elementary schools to provide hands-on learning experiences related to REACCH research. Teachers can ask for specific topic activities that align with classroom grade level standards.

"Regional Approaches to Climate Change for Pacific Northwest Agriculture" is funded through award #2011-68002-30191 from the National Institute for Food and Agriculture.

Left to Right: Undergraduate interns work with the REACCH project director to identify pests. The intern group poses for a final photo after the summer research symposium. Interns sample soil organisms in a wheat field.

Young students have their first lesson in earthworm sampling with REACCH scientists and graduate students.

A REACCH PhD student shares his curriculum development work. The curriculum is comprised of local, relevant topics that align with Common Core Standards.

A REACCH student processes biomass samples using a Vogel stationary thresher.

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REACCH soil scientist teaches local kindergartners about soil and decomposition before earthworm sampling.

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