University of Idaho

AgKnowledge

COLLEGE OF AGRICULTURAL AND LIFE SCIENCES

For more information see the college web site at *www.cals.uidaho.edu or* call 208.885.6681. For other AgKnowledges see *http://info.ag.uidaho.edu/*.

WATER—Climate change could benefit Idaho's Snake River Plain, agriculture

CONTACT RUSSELL QUALLS at rqualls@uidaho.edu

SOUTHERN IDAHO'S SNAKE RIVER PLAIN (SRP) could gain "some benefit" from potential climate change during the next 20 to 70 years, models by University of Idaho scientists and economists suggest.

Russ Qualls, Idaho state climatologist and associate professor with the University of Idaho's Department of Biological and Agricultural Engineering along with university economists Garth Taylor and Joel Hamilton reported their findings in Boise, December 13, 2007 at the Idaho Water Symposium.

The Snake River Plain averages 10 to 12 precipitation inches a year, so most of the irrigation water supplying Idaho's $5.6 billion-a-year agricultural industry must come from the mountains. Central, and northern Idaho mountains historically average 30 to 80 inches of precipitation a year, but that moisture enters the river system downstream from the SRP. Snowmelt runoff feeding the SRP comes mainly from the Tetons on the Idaho/Wyoming border and the southern Sawtooths through the Big Wood, Boise, and Payette Rivers.

The university team fed data from snowpack and temperatures from 1981 through 2006 into computer models to estimate snowmelt runoff and irrigation water allocation. Then they modified the historical precipitation and temperatures with six possible scenarios to predict the potential range of affects on Snake River water supply by years 2030 and 2080.

"Results suggest we could end up with some small benefit from climate change," says Qualls. Many climate models indicate the northwest may get warmer and wetter. As a result, four of six scenarios predict 0.5 to 20 percent increases of water flows into the Snake. The two driest scenarios indicate a 2 to 5 percent reduction in water. All results showed runoff occurring 5 to 8 days earlier.

Qualls said models suggest Idaho growing seasons may need to move forward a week to capture the increased runoff. Idaho could benefit by increasing surface water storage capacity and using some of the early runoff to replenish the aquifer. Also, Idaho may wish to consider more flexible ways of trading water rights so available water can be better used, as it is available.

Extension educator helps Idaho growers fine-tune their need/use of water

CONTACT STEVE REDDY at sreddy@uidaho.edu

WHEN SOUTHWESTERN IDAHO growers of minor-acreage crops asked for help in evaluating soil-sensor technology, University of Idaho Extension responded.

- A pear grower who thought he wasn't watering his trees enough, but instead was actually overwatering them, soon reduced his water-use by a third.
- An asparagus grower with highly variable soils learned how to keep his soil moisture content at crucial 75 to 85 percent levels throughout the growing season.
- A poplar grower relocated his sprinklers, modified his nozzles, and rescheduled his irrigations, thereby improving the uniformity of moisture in his variably textured soils.

The goals of Washington County Extension educator Steve Reddy: "To demonstrate the technology, prove the value of improved irrigation management, and reduce leaching of soil nutrients to groundwater."

University of Idaho co-leads reviw of ag conservation

CONTACT JAN BOLL at jboll@uidaho.edu

ENVIRONMENTAL WATER QUALITY specialists at the University of Idaho will co-lead a $1 million national program to understand the effects of conservation practices funded by both agricultural producers and taxpayers.

Jan Boll, associate professor of biological and agricultural engineering, leads the Idaho team that got $420,328 from the U.S. Department of Agriculture to synthesize the lessons learned from the Conservation Effects Assessment Project in collaboration with North Carolina State University.

The teams will evaluate watersheds repaired thanks to competitive USDA grants across the nation. The Idaho team includes researchers from Cornell, Georgia and North Carolina A&T.

"Our work will analyze results from 13 watersheds—including Latah County's Paradise Creek—and synthesize them into a national framework for use in other watersheds," Boll said.

The project will tally the environmental benefits of 2002 Farm Bill investments to protect wetlands and wildlife habitat and reduce erosion.

DID YOU KNOW?

3.3 MILLION ACRES

ARE UNDER IRRIGATION THROUGHOUT IDAHO. OF THAT, ALL BUT SOME 300,000 ACRES ARE IRRIGATED FROM THE SNAKE RIVER SYSTEM.

Source: Idaho Department of Water Resources
www.idwr.idaho.gov/water/h2ofacts.htm

