

WRAP Gets January Updates
By Rachael Herpel
NU Water for Food Institute and UNL Water Center

The Water Resources Advisory Panel (WRAP) met with NU Vice President and IANR Harlan Vice Chancellor Ronnie Green and NU Vice Chancellor for Research and Economic Development Prem Paul in early January.

Green told the group efforts are underway to identify key positions to help faculty build bridges to achieve Nebraska's water research goals. Since the Jan. 4 meeting Green has proposed "Innovating Agriculture and Natural Resources to 2025: Food, Energy, and Water Security – for Healthy People in Vibrant Communities."

Proposed goals serve as the starting point for 11 innovation teams to develop recommendations and implementation plans. Goals specific to water include increasing production efficiency of Nebraska agriculture by 25 percent and increasing water utilization efficiency for agriculture by 15 percent. See <http://ianrhome.unl.edu/Home> for more information on this program and a video of Green's presentation.

Paul provided the latest on NU's Water for Food Institute, including how NU, Harvard University, and Massachusetts Institute of Technology have formed a consortium to work together on water for food research programs.

WRAP members viewed the Water for Food Institute's new website at waterforfood.nebraska.org and *2010 Water for Food Conference Proceedings*, also available online. The 2011 conference, *Water for Food: Paths to Solutions*, is May 1-4 in Lincoln and features plenary addresses by Jeff Raikes, CEO of the Bill and Melinda Gates Foundation; Anil Jain, managing director, Jain Irrigation Ltd. of India; Anders Berntell, executive director,

Stockholm International Water Institute; Pasquale Steduto, principal officer, United Nations/FAO Water; and others.

Technical sessions include *Quantitative Food Security: Yield Gaps, Water and Nitrogen Productivity* and *Maximizing Water Use Efficiency in Agriculture* and a workshop on aquifer characterization, focusing on *Water Resources for Irrigation in Sub-Saharan Africa*. A water quality caucus, led by the University of Nebraska Medical Center College of Public Health, will be held immediately following the conference. For the latest updates, go to <http://waterforfood.nebraska.edu/wff2011>.

Paul also briefed WRAP on a Food, Water, and Energy Resources Policy Retreat in December. There faculty began planning a large-scale interdisciplinary research initiative by identifying key national issues in food, water, and energy resources and critical needs for policy research. It also focused on leveraging UNL's strengths to face these challenges.

UNL's annual Research Fair will feature speakers and activities to further this work. The fair is April 12-14 and open to the public.

Faculty presentations began with Derrel Martin briefing WRAP on a recent meeting with the Nebraska Water Balance Alliance. The Alliance is posing questions similar to several of the research questions ranked as high priorities by WRAP.

Patricio Grassini, a post-doctoral research associate in UNL's Department of Agronomy and Horticulture, presented research on water productivity of irrigated corn in Nebraska, conducted in collaboration with UNL's Ken Cassman and the Tri-Basin Natural Resources District.

Grassini said the research is a framework for producers to diagnose and identify options for higher yields with better crop management using the same water supply; to use less water but

achieve the same yield with improved irrigation management; or get higher yields with less irrigation water. This research has been published in *Field Crops Research*, Volume 120 (citations below).

Karie Decker, Coordinator of the Nebraska Invasive Species Project for the Nebraska Cooperative Fish and Wildlife Research Unit within UNL's School of Natural Resources, closed the meeting by describing Nebraska's Aquatic Invasive Species Management Plan and efforts to contain the zebra mussel, an invasive species recently found in Lake Zorinsky in west Omaha. She said bills to create the Nebraska Invasive Species Council to help combat aquatic invasive species would be considered by the Unicameral this year.

Grassini, P., Thorburn, J., Burr, C., Cassman, K.G., 2011a. High-yield irrigated maize in the Western U.S. Corn-Belt: I. On-farm yield, yield-potential, and impact of agronomic practices. *Field Crops Res.* 120, 142-150.

Grassini, P., Yang, H., Irmak, S., Thorburn, J., Burr, C., Cassman, K.G., 2011b. High-yield irrigated maize in the Western U.S. Corn-Belt: II. Irrigation management and crop water productivity. *Field Crops Res.* 120, 133-141.