



USDA-CSREES 2007 National Water Quality Conference

Integrating Water Research, Education, and Extension in the Northern Plains & Mountains Region

Situation: Water is a significant defining element in both economic and environmental terms in the Northern Plains and Mountains Region. Its presence (or lack of) impacts not only local, state, and regional economies, but also the appearance of the natural environment. Furthermore, human manipulation of water resources determines the productivity of the agricultural lands as well as the location and size of communities. Therefore, the management of water quantity and quality is a very high priority in the Northern Plains and Mountain Region. New demands on the natural resource base, changes in agricultural production methods, and increasing in-migration, require new responses in water resource management. Objectives: Research and educate landowners on the effects of CBM development and product water on the environment Facilitate better management systems for irrigated and rain fed lands involved in crop and animal production Engage in participatory research to educate agricultural producers on the most effective use of water on irrigated lands and in the handling of AFO/CAFO residuals Apply new technologies of GPS/GIS designed to improve water and land management Preserve the quantity and quality of local and regional water resources on a small acreage scale Educate youth on water issues as a way to sensitize the expanding population on the importance of water in a semi-arid environment Methods: Create a water quality team for the region that communicates frequently to share resources and collaborate on programming. Conduct appropriate research, education and outreach across the region to address water quality issues. Maintain and expand linkages to other partners in the states. Partnerships: State: NPS Councils, Depts of Ag, Env. Qual, Educ, and Commerce, Assoc of Cons Dists, Commodity Groups. Federal: EPA, NRCS, USFS, BLM, USGS, USFWS, BOR, DOE Examples of Integration of Research, Teaching, and Extension include: Educate landowners on ways to monitor their land and water resources in areas of coal bed methane development with a recently published resource monitoring manual Research, publish and disseminate information related to optimizing irrigation water use on a variety of crops in Region 8 Dissemination of BMPs through factsheets and workshops that educate agricultural producers on the proper handling and disposal of AFO/CAFO animal wastes Utilizing the most current geospatial technologies to bring relevant information to agricultural producers in Region 8 Creation of a program to develop an arsenic educational network within Region 8.

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