

## **Background**

Our laboratory was established in 1963 as part of the USDA - Agricultural Research Service (ARS) and was first named the 'Snake River Conservation Research Center' and later the 'Soil and Water Management Unit.' It was renamed the **Northwest Irrigation and Soils Research Laboratory** in 1995 to better reflect its mission and area served. Research done on the irrigated lands near Kimberly, ID applies throughout the western United States and many of the irrigated arid areas of the world.

Adjoining the Headquarters complex of offices, labs, greenhouse, shop and storage buildings – are 30 acres leased for field research. In 1990 a 74-acre farm, located three miles southwest, was purchased to expand field research. Additional research is conducted on cooperators' farms.

## **Vision**

Sustainable and economically viable irrigated agricultural systems in harmony with social and environmental needs.

## **Mission**

The mission of the Laboratory is to develop environmentally compatible and economically sustainable new and improved integrated water, soil, nutrient and crop management practices for irrigated agriculture in the United States.

Currently, research at the NWISRL is organized under five major research programs, listed on the facing page:

## **Major Research Area 1**

**Manure Management to Assess Nutrient Losses, Emissions, and Pathogen Transport.**

## **Major Research Area 2**

**Water Quality Protection in Irrigated Cropping Practices and Systems.**

## **Major Research Area 3**

**Irrigation Management to Reduce Erosion and Improve Water Use Efficiency.**

## **Major Research Area 4**

**Enhancement of Sugarbeet Germplasm for Improved Disease Resistance and Productivity.**

## **Major Research Area 5**

**Improving Soil Resource Management for Irrigated Agricultural Systems.**



## **NWISRL Staff**

Current permanent staff totals 34, including: Eight soil scientists, two agricultural engineers, one sugarbeet geneticist and one sugarbeet pathologist. The remaining 22 staff are technical, administrative, and operational support personnel. The NWISRL usually hires several summer employees. The latter are excellent opportunities for introductory experiences in the sciences and often open doors for science-based or technical careers. We advertise our job opportunities on our website and fully support the USDA's EEO principles and encourage applications from minorities or individuals with disabilities.

Over 250 Idahoans have worked for the NWISRL in its 40 years of service to irrigated agricultural research and the environment.

## **Guiding Principles**

### **We Value:**

- Our employees, customers, partners, colleagues, and their ideas.
- Science-based technology.
- Agriculture, the environment and our soil, water, and atmosphere resources.

### **We Advocate:**

- Excellence through quality research, service, publications & technology transfer.
- Team research with a customer focus.
- Quality work environment that fosters a diverse work force and career opportunity.
- Sustainable agricultural production meeting environmental and human needs.
- Development of technology in cooperation with federal, state, local & private entities.
- Increased farm production efficiency, profit and rural community quality and life style.
- Efficient use of soil and water resources.
- Understanding the interconnection of urban forest, farm and wilderness needs & reality.
- A systems approach to conducting research, interpretation and application of results.

2004: NWISRL 40 yr Anniversary,



ARS 50 yr Anniversary,  
Twin Falls and Kimberly Centennials.

## Some World Famous NWISRL Research Achievements & Inventions

**Wright-Penman Evapotranspiration Equation** (formerly the Kimberly-Pennman Equation). This is the world's foremost crop water use equation used on 200 million acres to scientifically schedule irrigation for optimal crop response and water conservation.

**Turbulent Fountain Trash Screens.** These simple, non-powered devices are used around the world to reduce trash-plugging of irrigation pipes, siphon tubes and furrows, and to reduce the transfer of weed seed in canals and ditches, thereby improving irrigation uniformity and crop performance, and reducing weed spread and need for herbicides.

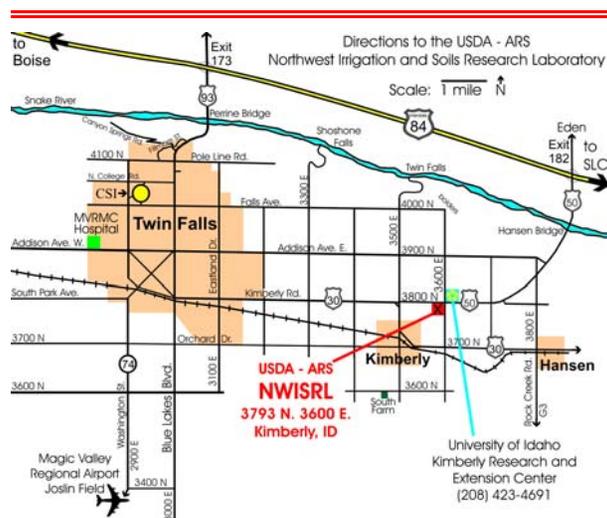
**Cablegation.** This water-powered technology provided the first means of automating furrow irrigation for reduced labor cost and ease of management without the high capital cost or technical infrastructure needs of sprinklers.

**PM-Harvested Forages.** This no-cost practice greatly increases animal preference and provides as much as 5% increase in forage dietary value, with comparable increases in animal weight gain and dairy lactation.

**PAM.** NRCS has called the development of polyacrylamide (PAM) use for irrigation-induced erosion control and infiltration management, the greatest single advance ever achieved in surface irrigation soil and water conservation.

U.S.D.A. - A.R.S.  
Northwest Irrigation and Soils  
Research Laboratory  
3793 N. 3600 E.  
Kimberly, Idaho 83341

Telephone: (208) 423-5582  
FAX: (208) 423-6555  
Email: [Kimberly@nwisrl.ars.usda.gov](mailto:Kimberly@nwisrl.ars.usda.gov)  
Web: <http://www.nwisrl.ars.usda.gov/>



**Factoid:**  
USDA's **Agricultural Research Service** fulfills its mission to conduct research to develop and transfer solutions to agricultural and environmental problems of high national priority and provide information access and dissemination at a **cost of 1¢ per citizen per day**. See what this penny a day buys you at:

<http://www.ars.usda.gov/>

July 2004

Agricultural  
Research  
Service



United States  
Department of  
Agriculture

## Northwest Irrigation and Soils Research Laboratory

### Kimberly, Idaho



**Research for the Irrigated Northwest  
Since 1964**

Cooperating with the University of Idaho, NRCS, and many other state, federal and private agricultural, environmental and conservation organizations.