

# Partners & Contractors

## Narrative

### **Colorado Corn Administrative Committee**

- Provided project oversight, coordinated reporting, and facilitated team interaction among project partners.
- Maintained and updated a web site about the project, which promoted precision irrigation technologies.
- Presented/displayed at industry meetings and trade shows a multimedia kiosk about the project and precision irrigation technologies.
- Distributed at industry meetings and trade shows a brochure about the project and precision irrigation technologies.

### **USDA Agricultural Research Service**

- Utilized GPS technology to integrate field data on water, nutrient, vegetative, weed, insect, disease, and yield variables into GIS layers. Created maps that identify where variable rate application is required.
- Developed program codes and wrote software to control the Accu-pulse system for site-specific application. Created user-friendly documentation that details how to properly manage, maintain, and troubleshoot the Accu-pulse system.
- Developed management strategies for variable rate application utilizing Accu-pulse systems. Utilized integrated software system to implement variable rate application management strategies.
- Evaluated, monitored, and provided scientific supervision for field operation of Accu-pulse system.

### **Valmont Irrigation**

- Provided Accu-pulse system equipment and made technological modifications and update as necessary throughout the project.

## **Quality Irrigation and Construction**

- Installed and maintained Accu-Pulse systems with industrial controllers and proportional injection pumps at demonstration host-sites.

## **Servi-Tech, Inc.**

- Conducted field and aerial scouting to search for insects and weeds and to assess crop maturity, evaluated irrigation water samples for nutrients, measured sub-surface soil fertility, and generated yield maps utilizing GPS technology.
- Maintained hard and electronic copies of field collection data and yearly tabulations for collaboration and information sharing with USDA-ARS agricultural engineering and hydrologic technicians.
- Disseminated information and data as it relates to the goals of this project; encouraged agricultural industry representatives and producers to adopt variable rate application technology and precision farming techniques.

## **Y-W Well Testing**

- Tested each host-site well to document energy and water usage; set and read gypsum blocks to measure water infiltration; sampled soils to determine nitrate concentration; and conducted pit studies to identify management issues.
- Maintained hard and electronic copies of field collection data and yearly tabulations for collaboration and information sharing with USDA-ARS agricultural engineering and hydrologic technicians.
- Disseminated information and data as it relates to the goals of this project; encouraged agricultural industry representatives and producers to adopt variable rate application technology and precision farming techniques.

## **Foster Communications**

- Developed and maintained a web site describing project design.
- Developed a photo-based kiosk describing project design.
- Developed a multimedia kiosk describing project design.
- Developed a brochure describing project design.

## **Demonstration Host Sites**

There were two demonstration host sites. At one site, located in Wiggins, Colorado, Bob Geisick provided 130 acres and a center pivot sprinkler irrigation system with a Valmont CAMS control panel. Geisick provided all the tillage, cultivation, irrigation, and harvesting operations and provided all the seed, fertilizers, and pesticides during the production scale commercial demonstration. He also allowed the installation of an Accu-Pulse system on his pivot and provided the project with a yield map after harvest.

At the second demonstration host-site, located in Yuma, Colorado, Greg Jones provided 320 acres and two center pivots equipped with the latest technology in water application packages, including computerized control panels with telemetry systems allowing them to be controlled and/or programmed from the field, home, or office. Jones did all the tillage, cultivation, irrigation, and harvesting operations and provided all the seed, fertilizers, and pesticides during the production scale commercial demonstration. He allowed installation of the Accu-Pulse system and collection of evaluation data, and provided a yield map of the fields after harvest. Jones also provided storage for all project equipment during the off-season.