Labor Assistance for the Arizona Meteorological Network

Final Project Report
Submitted to:
Arizona Grain Research & Promotion Council

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Introduction

Access to timely and relevant weather information can assist grain producers with management related decisions related to variety selection, planting dates, irrigation timing, pest and nutrient management and harvest. The Arizona Meteorological Network (AZMET) has helped provide this much needed weather information to Arizona growers for more than 25 years. In 2011, the Arizona Grain Research and Promotion Council approved funding for a project entitled "Labor Support for the Arizona Meteorological Network". Funds allocated for this project were to provide partial salary support for staff employees that work for AZMET. This final project report summarizes the activities and accomplishments over the duration of the project which concluded on 30 September 2012.

Project Results

The primary objective of this project was to sustain the AZMET program which consists of a network of 28 automated weather stations and its attendant data processing center that performs quality control and quality assurance procedures on data received from the weather stations, then processes the data into a variety of informational formats for distribution to growers via the program's internet website (http://ag.arizona.edu/azmet). Budget cuts in the years preceding this project had eliminated state funding support for AZMET, forcing AZMET to self-fund the entire program from soft money (gifts, grants and contracts). Funds received from this project were targeted at AZMET's personnel costs because labor consumes ~70% of AZMET's annual operating budget. AZMET's personnel maintain the weather station network and its affiliated websites and assist in the development of data summaries, reports and weather related publications.

Support from this project allowed AZMET to remain fully functional during 2012. AZMET's labor force, consisting of Dr. Paul Brown (Extension Specialist), Mr. Bruce Russell (Program Coordinator) and Dr. Carolyn Watson (Research Specialist) remained fully employed during project which allowed AZMET to maintain normal operations. AZMET personnel visited each weather station a minimum of four times per year to perform routine and technical maintenance. Calibration of all sensors was completed quarterly, and key sensors were replaced in accordance with AZMET's preventive maintenance program that seeks to replace sensors prior to any degradation in calibration and performance. All weather stations remained functional with the exception of Marana where the landowner (Bureau of Reclamation) requested that the station be removed. Eventually, the Marana station was mothballed in storage due to the lack of a local funding source to support the non-labor operating costs of the station (a requirement for all AZMET stations). At the time of this report, we are presently working to reinstall the Marana AZMET station for the fall of 2013.

The second objective of the project was to support weather related reports, information and databases of value to Arizona producers. AZMET continued to support the development of the Small Grains Advisories (http://extension.arizona.edu/programs/forage-and-grain-crops) that are

produced by Dr. Mike Ottman These bi-weekly, location-specific advisories make use of temperature, heat unit and evaportranspiration data collected at local AZMET weather stations. Dr. Brown also produces a Southeast Arizona Crop Water Use Report each Monday that provides estimates of recent and projected water use for corn and several other crops produced in Cochise County (http://ag.arizona.edu/azmet/az-crop.htm). Finally, the continued operation of AZMET allows for the growth of a long-term agricultural weather database that can be used for feasibility/probability assessments related to crop production in Arizona (e.g., water supply assessment, frost probability, proper planting and harvest times for new crops, double crop assessments, etc.).

Summary

Both objectives set forth in the original project proposal were accomplished over the course of this project. The Arizona Meteorological Network remained fully functional and the program continued to support the development of reports and databases of value to Arizona grain producers.

In closing, the personnel associated with the AZMET program would like to express their sincere appreciation to the Arizona Grain Research and Promotion Council for supporting this project!