Volume 17 No. 3

July - August 2006

Water. Power. Environment.

KRCD
Kings River Conservation District

Reliable resources for the Valley.

IRRIGATION NEWS

The most recent issue of the Kings River Conservation District's Irrigation News (March-April 2006) sought to establish a dialog with growers regarding management practices that limit any off-site movement of storm water runoff that could potentially contain pesticide or fertilizer residues. Initiation of this dialog is particularly important in demonstrating to the Regional Water Quality Control Board that best management practices in this region are widespread and highly effective.

Unfortunately, some agricultural interests both within and nearby the Kings Rivers Conservation District service area interpreted the wording of the article as suggesting that they have not implemented management practices that limit such risks. To infer that growers are not concerned or have not implemented adequate safeguards was not the intent of our article. Most growers within the region have been extremely proactive in the creation of management practices that are both innovative and practical. Some practices have even been written into the regulations that govern the usage of the particular chemistries.

The goal of Irrigation News is to expand the knowledge base by describing what has been done in the fields of irrigation and other management practices for the benefit of all the growers within our service area. In this case, we also sought to begin a process of identifying and quantifying effective practices in response to requirements set forth in the irrigated lands waiver program, a process that we must continue. Any misunderstanding or confusion created by the recent issue is regrettable, and I as the General Manager sincerely apologize to any interests that felt harmed by the article.

David Orth
General Manager

Irrigation Management Using AgLine

There are many strategies for scheduling irrigations, ranging from the direct measurement of soil moisture (neutron probes, capacitance probes, gypsum blocks, or tensiometers), to plant stress measurements (measurement of leaf water potential or thermal variances), to the simple use of a calendar, because that is when the ditch water is available. Proper irrigation management controls unwanted vegetative growth and can impact crop quality at harvest.

The best indicator for scheduling irrigations is the crop plant itself. The crop will tell you when its supply of available soil moisture is running low, either by drooping its leaves in the afternoon, or by changing the color of its leaves to a darker shade of green, or both. Eventually, the stress will reach a terminal point where the plant will not recover. Water stressed plants become susceptible to a different set of pest pressures than what is seen in normal to over-watered conditions.

The Kings River Conservation District's AgLine service is designed to give growers a daily estimate on their crops water usage, so that when used in conjunction with the known values of soil moisture content and the maximum amount of depletion the grower wants to allow for, they can predict the number of days between irrigation events.

(continued on back page)

Irrigation Management Using AgLine (continued)

The system is based upon a sliding crop coefficient scale for many of the crops grown within the District. This takes into account the various growth stages of the crop from spring through fall. The coefficients were determined using published research from the University of California or other credible sources.

The crops covered by the AgLine system represent the major crops grown within the district. Tree and Vine crops covered include: grapes (two options), almonds (two options), citrus, olives, kiwis, pistachios, apples/pears/persimmons, plums/apricots, low chilling stone fruits, later variety stone fruits/cherries, and walnuts (two options). Field and Row crops covered include alfalfa, beans (three planting windows), corn, cotton (three windows), grain, melons (three windows), pasture grass, safflower, and tomatoes (two windows).

AgLine reports data for actual usage for the previous seven days as well as predicting usage for the next seven days. Actual crop usage is based upon the water usage of a known reference crop (well-watered grass) multiplied by the appropriate crop coefficient. A California Irrigation Management Information System (CIMIS) station located in Parlier measures its usage.

The predicted values generated by the AgLine system are based on the average climate values for the previous three years for the date range specified, so that recent trends in climate can be reflected within the report.

AgLine data is presented to the growers in two ways. First, seven different phone recordings are made to bring to the grower the reference data, and the past, present, and year to date water usage for the two major crop categories, Trees and Vines and Field Crops. Current software limitations only allow for single message to be accessed per call, but this should be corrected sometime during August 2006. AgLine messages are available at (559) 237-4800 and are generally updated by 12 noon on Fridays.

The data is also available at www.krcd.org under the AgLine section. Here, the current and previous three weeks data is present for each of the covered crops. Questions regarding AgLine data or any other irrigation related question should be directed to Eric Athorp at (559) 237-5567, ext 117.

Pump Testing & Irrigation Evaluation Services

Growers with the Kings River Conservation District service area may call Eric Athorp at (559) 237-5567, extension 117 to schedule a performance evaluation for their irrigation pump or system. There is no charge to the grower for either service.

IRRIGATION
NEWS
KRCD

Reprint freely with credit to: *Irrigation News*, a bimonthly publication of the Kings River Conservation District

For more information, contact Eric Athorp at (559) 237-5567, ext. 117
www.krcd.org

Kings River Conservation District
4886 E. Jensen Avenue
Fresno, CA 93725-1899

NON-PROFIT ORG.
U.S. Postage
PAID
PERMIT NO. 1687

RETURN SERVICE REQUESTED