



moving water in new directions

IRRIGATION TRAINING AND RESEARCH CENTER

California Polytechnic State University

San Luis Obispo, CA 93407

Phone: (805) 756-5359

www.itrc.org Contact: Dr. Gaudi fgaudi@calpoly.edu

Summer Irrigation Evaluation Program

Drip/Micro Irrigation Systems

INVITATION TO PARTICIPATE – First come, first served

Evaluations begin on June 26

Funded by the California Dept. of Water Resources (DWR)

Supported by local Irrigation/Water Districts

What the student team does:

- Spends about 1 day in the field taking measurements of pressures, flows, and make observations of the filtration, chemical injection, etc.
- Inputs data into the Cal Poly ITRC Irrigation Evaluation Programs, examines field data.
- Prints out the data, results, and recommendations
- Sets up an appointment with the farmer to review the information.

The type of information provided:

The Cal Poly ITRC Irrigation Evaluation Program results tell you:

- The Distribution Uniformity (DU) of the irrigation system. The DU is a measure of how evenly the irrigation water is applied to plants throughout a field.
- The causes of non-uniformity. For example, the program will tell a farmer what percentage of the non-uniformity is due to plugging, what percentage is due to pressure differences, etc.
- Recommendations on how to improve that specific system's performance.

Who gets the information:

- The farmer
- The irrigation district
- The Calif. DWR (but without any farmer's name or address)
- Cal Poly ITRC (we have a database of results, but without contact information)

The obligation by the farmer:

- There is no fee; it is completely funded by the Calif. DWR
- The farmer must agree to have someone show the students the field, explain the layout, and start and stop the pump on the agreed-upon date and at the agreed-upon time. It is VERY helpful to provide a map of the irrigation system.
- If the system is a subsurface drip system, the farmer must provide workers with shovels to uncover tape in 3 locations, about 30' per location.
- The farmer must be willing to take the time to sit down and go over the results (about 30 minutes).

Why participate?

- Irrigation systems cost money to operate, and their performance has a huge impact on yield and yield quality. Older systems need to be checked out just as automobiles do. Sometimes they need a tune-up; sometimes they don't. This evaluation lets a farmer know if a tune-up is needed, and what types of things can be done.
- On the average, we find that the DU of drip/micro systems is about 0.76 (out of a perfect 1.00), whereas reasonably attainable values are about 0.92 for drip/micro systems. If you can shift from a DU of 0.76 to a DU of about 0.92, the ratio of (maximum/minimum) water applied to different plants throughout a field will shift from about (2/1) to about (1.2/1).
- Farmers should expect a high DU from a new irrigation system. This program allows farmers to verify the quality of a new system that might have been recently purchased.