# C-Irrig User Notes

C-Irrig provides daily irrigation run times for each irrigation zone established by the user under the user's account. C-Irrig runs each day at a user-selected time polling weather data from the past 24-hour period. Output can be viewed on the home page or can be automatically downloaded via a software application for use by an automated irrigation system (e.g. PLC).

## Automation

Automatic control of irrigation provides the best opportunity to utilize C-Irrig to implement ET-based irrigation. Irrigation output from C-Irrig changes daily and manually changing run times in the nursery on a daily basis would be difficult. A software program is available to acquire the zone output data to feed a computer-controlled irrigation system such as one controlled with a Programmable Logic Controller (PLC).

Please contact Jeff Million for further information on available software programs to upload weather and download output to and from C-Irrig.

## 2 Zone Types

1) **ET** – Irrigation based on estimating daily ET from plant production conditions.

ET Zone inputs plant size, percent plant cover, container size, container spacing, irrigation capturing ability

How it works Container ET is estimated based on plant inputs and weather using functions developed by UF through research. The amount of irrigation water required to resupply ET is based on irrigation rate and the estimated capture factor (CF) that depends upon the plant's irrigation-capturing ability, plant size, and container size and spacing.

2) **LF** – Irrigation based on routine LF testing

LF Zone inputs LF date/time, LF run time, LF, Target LF

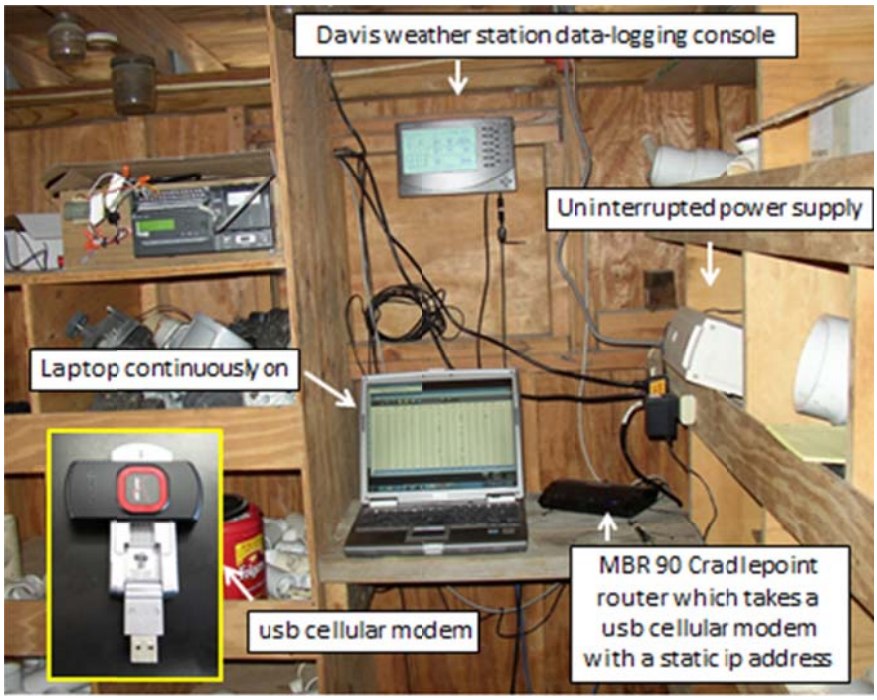
How it works Based on LF test inputs, C-Irrig determines an adjusted run time that would provide the target LF value. Each day C-Irrig compares the past 24-hr ET with the 24-hr ET affecting the LF test and increases or decreases the irrigation run time accordingly.

## Weather Station

A weather station situated on-site is needed to use C-Irrig. A suitable station is the Vantage Pro2 Plus, which has a solar radiation sensor and a fan-aspirated radiation shield for accurate temperature readings. The weather station has a data-logging console which needs to be housed within communication distance of the weather station (wireless or hard-wired). A computer connected to the internet via a static ip address needs to be adjacent to the data-logging weather console. The computer is needed to run the Weatherlink software which manages the automatic downloading of data from the logger to the computer on an hourly

basis. The computer also needs to run a JAVA program that manages the uploading of weather from the computer to the C-Irrig server. Please contact Jeff Million for details/support.

Davis Vantage Pro2 Plus weather station with a hardwired connection to a Davis data-logging console housed in an adjacent building.




Example setup for managing weather data from Davis weather station

# C-Irrig Pages

## Home

Displays daily output for all zones in the account. ET and LF zone types are displayed separately because supportive information is different for the two types.

## Zone Calculator

Use this page to rerun zones at different times of the day (different weather) or you can rerun by editing the weather.

## Manage My Zones

Use this page to display all zones, create zones, edit zones or access zone histories. Also has a Global Zone Settings feature to edit more than one zone at a time

## Edit Zone

Click the zone number on the home page or click <edit> on the Manage My Zones page.

### Irrigation inputs:

**Zone Type**
Choose ET or LF (See C-Irrig concepts)
**External reference**
Value that can be output in a *.csv file for automatic irrigation applications
**Irrigation schedule**
For schedules which skip days, the deficit carryover is output on the home page
**Number of cycles**
Divides the output into shorter cycles for cyclic irrigation

### Fixed inputs:

**Production area**
If under shade or plastic, enter the % light exclusion. If under plastic, rain is excluded.
**Irrigation capture ability**
If ET zone type, select the irrigation capture ability that best describes the species being grow; select “nil” if unsure.

### Infrequently changing inputs:

These are inputs that are monitored during production and input as conditions change. Inputs are plant-related for ET zone type and LF test related for LF zone type.

## Zone History page

Displays the history of a selected zone. Access zone history by clicking <history> in Manage My Zones page.

## My Weather Stations page

View a list of all weather stations in the account or create a new one. Access hourly or daily weather history by clicking <view>