



Using C-Irrig

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).

Inputs

- **Weather** - Accurate hourly data from an on-site weather station is uploaded to the user's account via a software application.
- **Zone parameters**
 - **Zone identification info** - zone id #, zone name, plant description, priority, external reference
 - **Fixed parameters** - weather station, container diameter, irrigation uniformity and application rate, plant irrigation capture ability
 - **Variable parameters updated periodically** - percent plant cover, plant height and width, container spacing, and container arrangement

Outputs

- **Irrigation** – irrigation depth and run time for each zone
- **Supportive information** – past day's weather, past day's estimated container ET, CF, rainfall effectiveness (percent used to offset irrigation)
- **History**
 - **Weather** <My Weather Stations> – hourly and daily
 - **Zone** <My Zones> – daily record of inputs and outputs for each zone

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.

C-Irrig Pages (**screen shot and associate notes**)

Home Page



Irrigation for Apr 30, 2013

- [Create a new zone](#)
- [Manage My Zones](#)

Select a weather station: SWN

Use weather from: 5:00 AM

Past day's weather for SWN

Solar radiation: 200.50 $\text{W/m}^2/\text{hr}$ 17.323 MJ/m^2
Min temperature: 65.700 F 18.722 C
Max temperature: 84.800 F 29.333 C
Rainfall: 0.000 inches 0.000 cm

[Update Weather](#) [Reset](#)



[Save All Histories](#)

Zone	NAME	PLANT	LOCATION	TIME	IRRIG (INCH)	RDI TIME (MIN)	ETC (INCH)	CF	IU (%)	IRRIG RATE (INCH/HR)	PRI	HISTORY
11	Test6	Vib_od#3	SWN	5:00:00	0.10	13	0.10	1.0	100	0.48	0	Save
13	A	Podo	SWN	5:00:00	0.15	23	0.35	2.2	100	0.40	1	Save
14	E	Silverthorn	SWN	5:00:00	0.19	29	0.35	1.7	100	0.40	2	Save
15	C	Ligust lrg	SWN	5:00:00	0.11	17	0.38	3.3	100	0.40	3	Save
16	D	Ligust small	SWN	5:00:00	0.19	28	0.31	1.6	100	0.40	4	Save
17	E	Yaupon	SWN	5:00:00	0.30	45	0.30	1.0	100	0.40	5	Save
18	F	Burfor	SWN	5:00:00	0.33	50	0.33	1.0	100	0.40	6	Save

Notes:

1. Only zones for the selected weather station will be displayed
2. Default time when C-Irrig ran (choosing another time will automatically recalculate)
3. Weather data from past day used in C-Irrig calculations
4. Output is shown for each zone created for a given weather station. Double-clicking zone no. will go to zone edit page
5. Zone output includes depth of irrigation and irrigation run time (highlighted) as well as supportive information
6. Daily history from default program run is automatically saved. Click the save button only if you want to save history from a different program run time.

Edit Zone Page

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Edit zone

1

Zone Name: C

Zone Number: 15

2

Plant Name: Ligus Irr

Priority: 3

3

2

External Reference:

4

Fixed Inputs

Location: SWN

Shade (% light reduction): 0.000 %

Container top diameter: 10.000 inch 254 cm

Irrigation system uniformity: 100.00 %

Irrigation application rate: 0.400 inch/hr 1.016 cm/hr

Plant irrigation capture ability: high

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Infrequently or Slowly-Changing Inputs

Last changed: 2013-04-22 09:00:03

Percent plant cover: 34.000 %

Plant height: 24.000 inch 6096 cm

Plant width: 29.000 inch 7366 cm

Container spacing: 10.500 inch 2667 cm

Spacing arrangement: offset

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[Edit Zone](#)
[Reset](#)

Notes:

1. Enter identification information – not directly used in C-Irrig calculations.
2. External reference is an optional label that will be associated with the output when an automated software program is used to download output.
3. Priority is an optional means of sorting the zones for display
4. Fixed inputs: location=weather station; Shade=if shade or plastic reduces light; irrigation uniformity=select a value <100% if you want to increase the irrigation rate to compensate for areas getting less irrigation than the application rate indicates; plant irrigation capture ability=select 'shed', 'nil', 'low', 'med', or 'high'
5. Inputs monitored during the growing season: percent plant cover=% of ground covered in dense foliage; plant height and width= dimensions of the main canopy; container spacing=average distance between containers; spacing arrangement=square or offset
6. Clicking edit zone will apply any edits made on the page.

Manage My Zones Page



My Account

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1 Manage My Zones

[Create a new zone](#)

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Zone	NAME	PLANT	WEATHER STATION	PRI	EXT REF	AUTOMATE	HISTORY	EDIT	DELETE
10	Pad5	Yaupon#1 loose	UF	1	Pad5	<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
12	pad5 tight	yaupon#1	UF	2	pad5 tight	<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
11	Test6	Vib_od#3	SWN	0	Test6	<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
13	A	Podo	SWN	1	A	<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
14	B	Silverthorn	SWN	2	B	<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
15	C	Ligust lrg	SWN	3		<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
16	D	Ligust small	SWN	4		<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
17	E	Yaspon	SWN	5		<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]
18	F	Bufor	SWN	6		<input checked="" type="checkbox"/> 5 : 00 am	[history]	[edt]	[del]

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Notes:

1. Displays all zones created under the account.
2. Automate is an option that enables the zone to be recognized by the Univ. of Florida's PLC irrigation program. Please contact Jeff Million if you wish more information on that system.
3. Submit applies any changes made on the page.

Zone History Page





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Zone history for: Test6 - Vib_od#3

Start Date: 2013-4-25 1 Submit
End Date: 2013-04-30 select

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Timestamp	PLT HT (IN)	PIT WD (IN)	% COV	CON SPC	SPAC ARGHT	IRR (IN)	RUN TIME (MIN)	ETC (IN)	CT	IU (%)	IRR RATE (IN/HR)	SOLAR RAD	MAX TEMP (F)	MIN TEMP (F)	RAIN (IN)
2013-04-25 05:00:01	6.0	6.0	10.0	0.0	offset	0.12	15	0.12	1.0	100	0.48	299	86	52	0.00
2013-04-26 05:00:01	6.0	6.0	10.0	0.0	offset	0.11	14	0.11	1.0	100	0.48	275	86	58	0.00
2013-04-27 05:00:01	6.0	6.0	10.0	0.0	offset	0.12	15	0.12	1.0	100	0.48	284	87	61	0.00
2013-04-28 05:00:01	6.0	6.0	10.0	0.0	offset	0.11	14	0.11	1.0	100	0.48	255	85	61	0.00
2013-04-29 05:00:01	6.0	6.0	10.0	0.0	offset	0.11	14	0.11	1.0	100	0.48	253	85	60	0.00
2013-04-30 05:00:01	6.0	6.0	10.0	0.0	offset	0.10	13	0.10	1.0	100	0.48	200	84	65	0.00

4 Submit Reset

Notes:

1. Default range of dates is the past week. Other start and end dates can be selected.
2. Timestamp is the time the C-Irrig program was run that generated the output shown.
3. All output is associated with a particular C-Irrig run so that weather is for the 24-hr period prior to the timestamp (i.e., not the weather for that particular day).
4. Submit button is to apply any changes made to the start and end dates

My Weather Station Page

**BMP Toolbox**

Home

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My Account

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ID	NAME/LOCATION	ELEV (FT)	LATT	LONG	DEFAULT CIRRIG	VIEW	EDIT	DELETE
2	UF	150.00	29.600	82.300	5:00 AM	[view]	[edit]	[x]
7	SWN	80.00	29.000	82.500	5:00 AM	[view]	[edit]	[x]
					Live	New Station		

Notes:

1. One or more stations can be established for each account. ID is only significant for C-Irrig program use.
2. Default time when C-Irrig is to run daily . The closer to the expected time of starting irrigation, the better the program will account for rain.
3. Weather data can be viewed in hourly or daily (calendar day) formats . The default for hourly data is the past week while the default for daily is the past 4 weeks. Other ranges of dates and times can be selected.