Irrigation Management Tools for the Arkansas Valley

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PROJECT OBJECTIVES

- Increase crop producers' awareness of CoAgMet weather data for irrigation and pest management
- Update and improve the delivery of web-based ET and disease forecasting information delivered on www.coagmet.com, www.colostate.edu/Orgs/VegNet/Resources and www.secowaterwise.org
- Validate onion disease (Xanthomonas Leaf Blight) forecast models

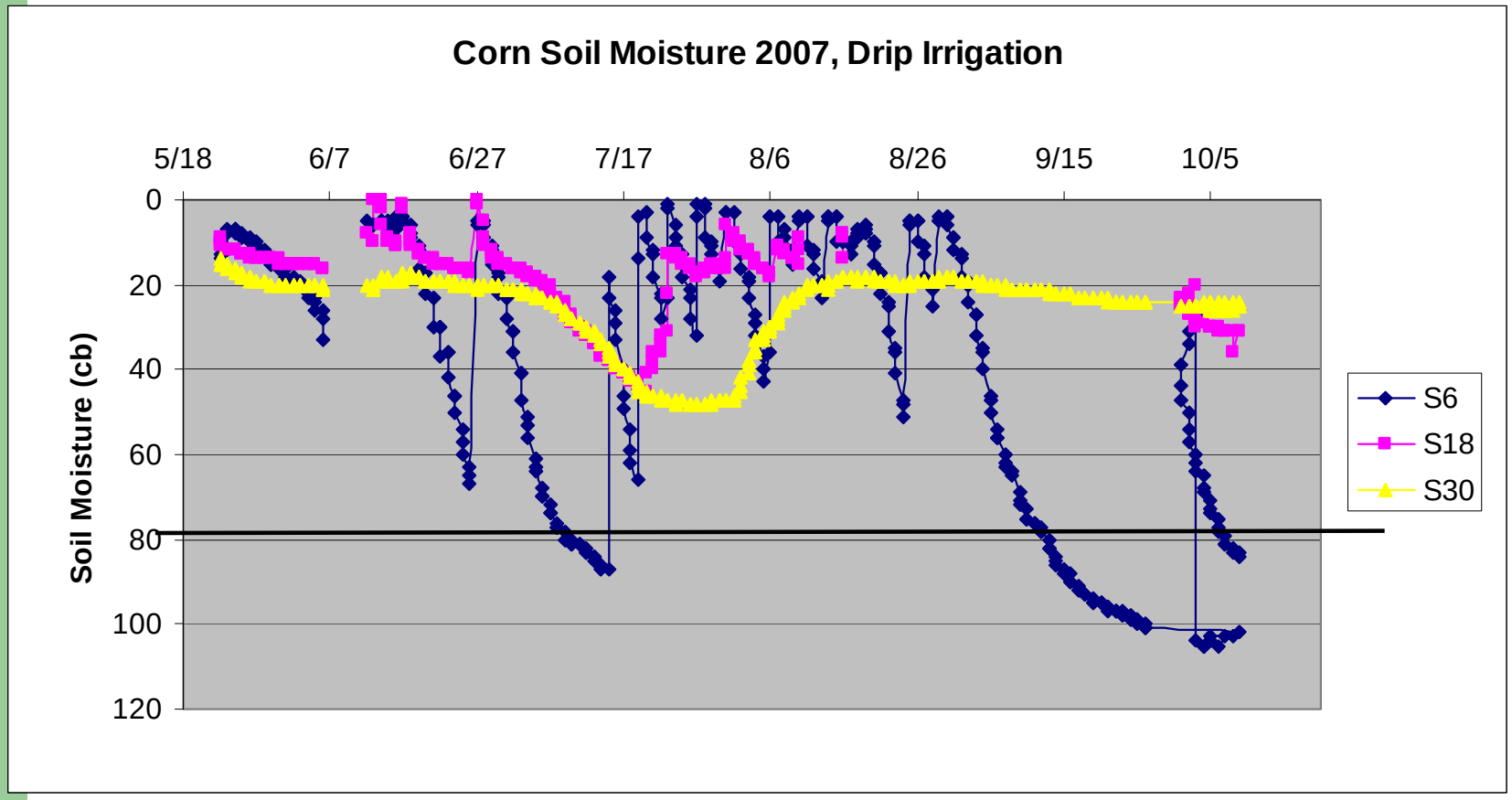
PROJECT BACKGROUND

- NRCS Conservation Innovation Grant (CIG)

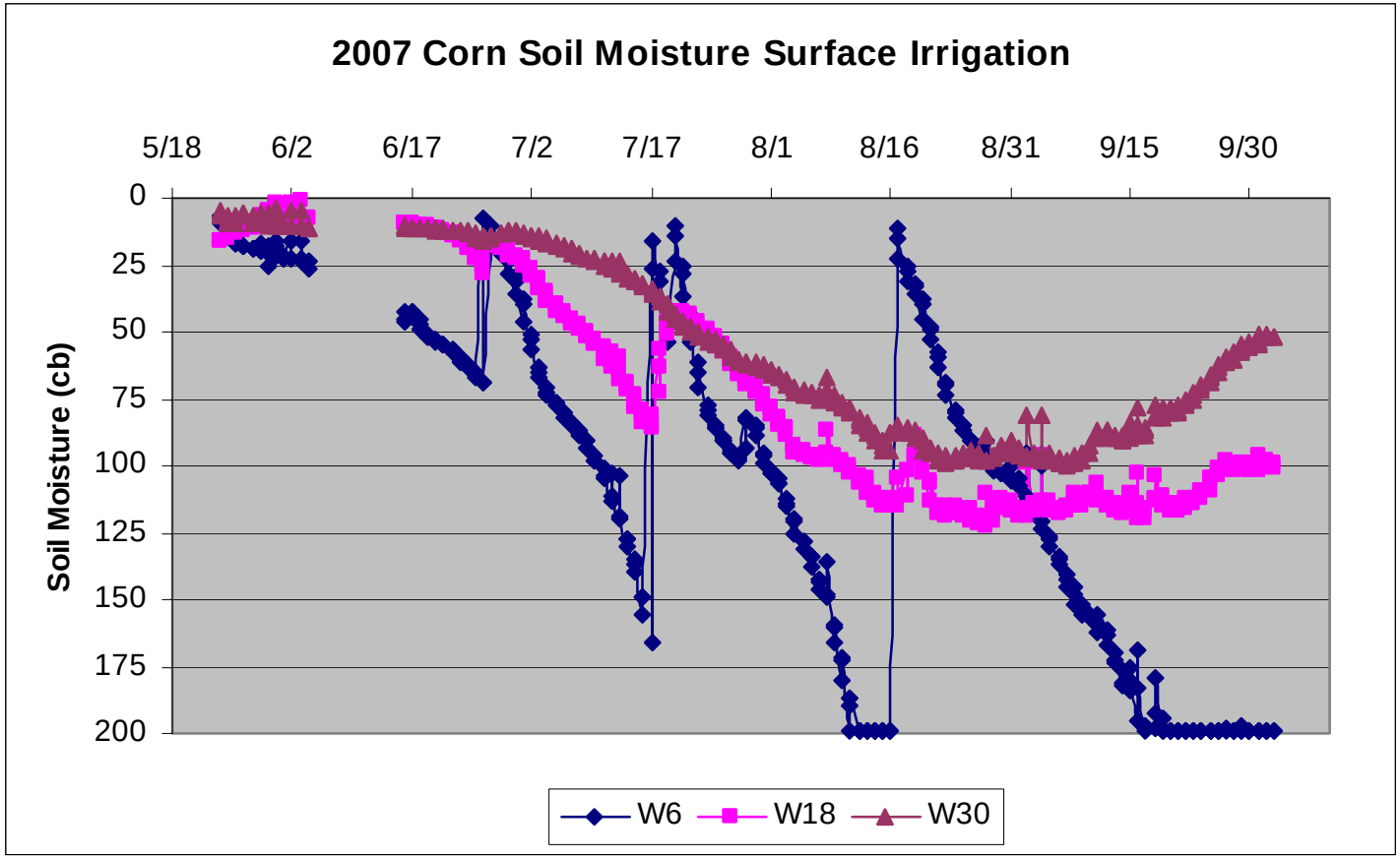
Partners:

  - Dept. Soil and Crop Sciences
  - Dept. Bioagsciences and Pest Management
  - Colorado Climate Center
  - AVRC
  - Southeast Colo. Water Conservancy District
  - NRCS

Soil WaterMark Sensor Example



Soil WaterMark Sensor Example



Colorado Agricultural Meteorlogical Network - CoAgMet

- Network of automated weather stations
- Partners:
  - Colorado Climate Center
  - Bio. Ag. Sciences
  - USDA/ARS/NRCS
  - NCWCD
  - Div. Water Resources

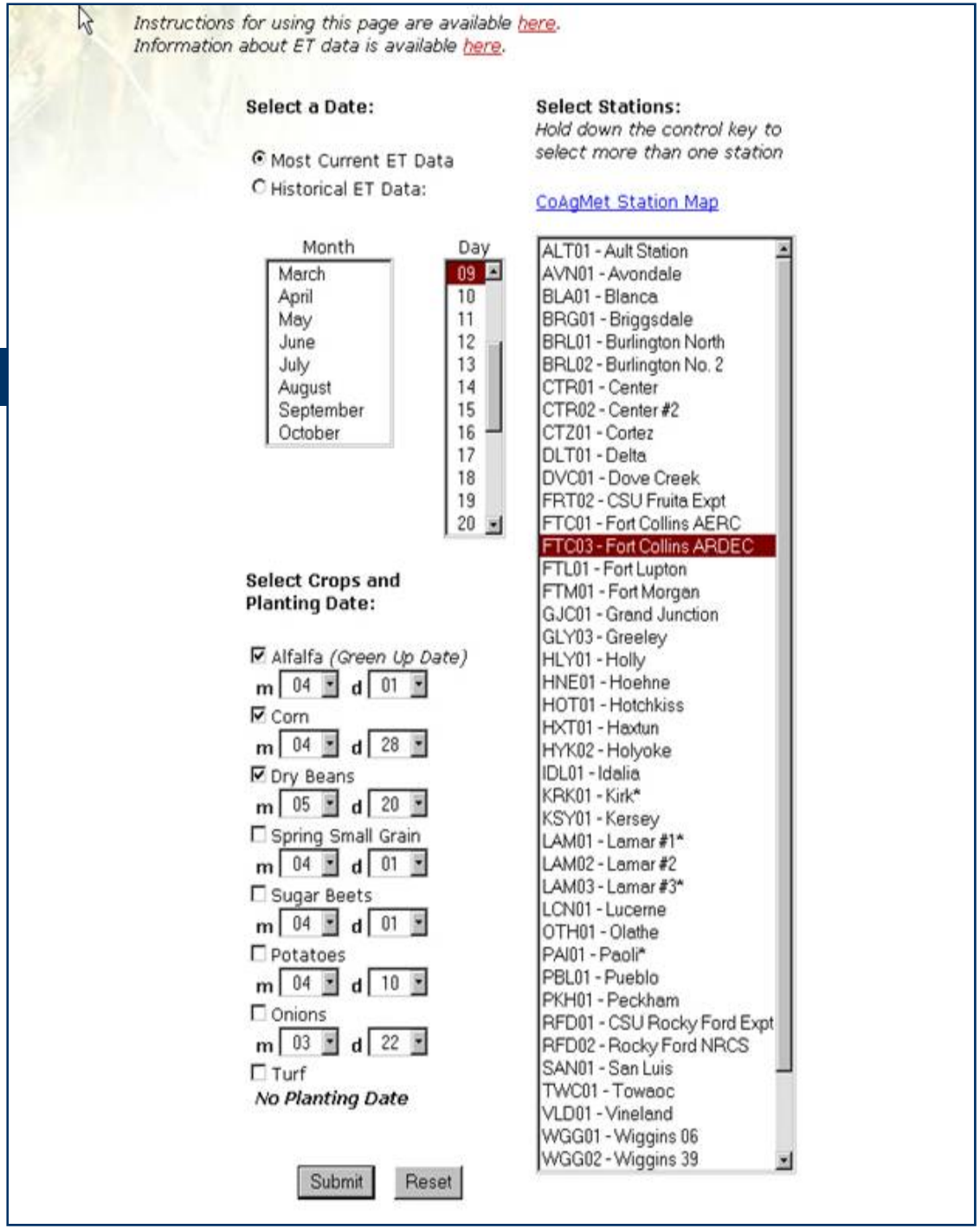
CoAgMet in the Arkansas Valley

- Significant resources put into network in area (>$50 K / year)
- New (5) and relocated stations (2)
- Increased maintenance and support
- Effectively doubled network

CoAgMet Station Locations

www.secowaterwise.org

CoAgMet ET Reports



Current CoAgMet ET Output

e (ET) Results - Microsoft Internet Explorer

Tools Help

Search Favorites

ostate.edu/~coagmet/extended_etr_results.php?year=2006&month=06&day=05&station_arr%5B%5D=RFD01&crop_input%5B%5D=Alfalfa&Alfalfa_pldate_mon=04&Alfalfa_pldate_day=

Go Bookmarks 2 blocked Check AutoLink AutoFill Send to

CoAgMet Crop Water Use (ET) Results

Colorado State University

CSU Expt Stn Rocky Ford: 06-05-2006

	Crops			
	Alfalfa	Corn	Onion	Ref. ET*
	Inches / Day			
Yesterday's Daily ET	0.35	0.19	0.25	0.35
Last 3 Days Avg Daily ET	0.35	0.18	0.26	0.35
Last 7 Days Avg Daily ET	0.31	0.15	0.22	0.31

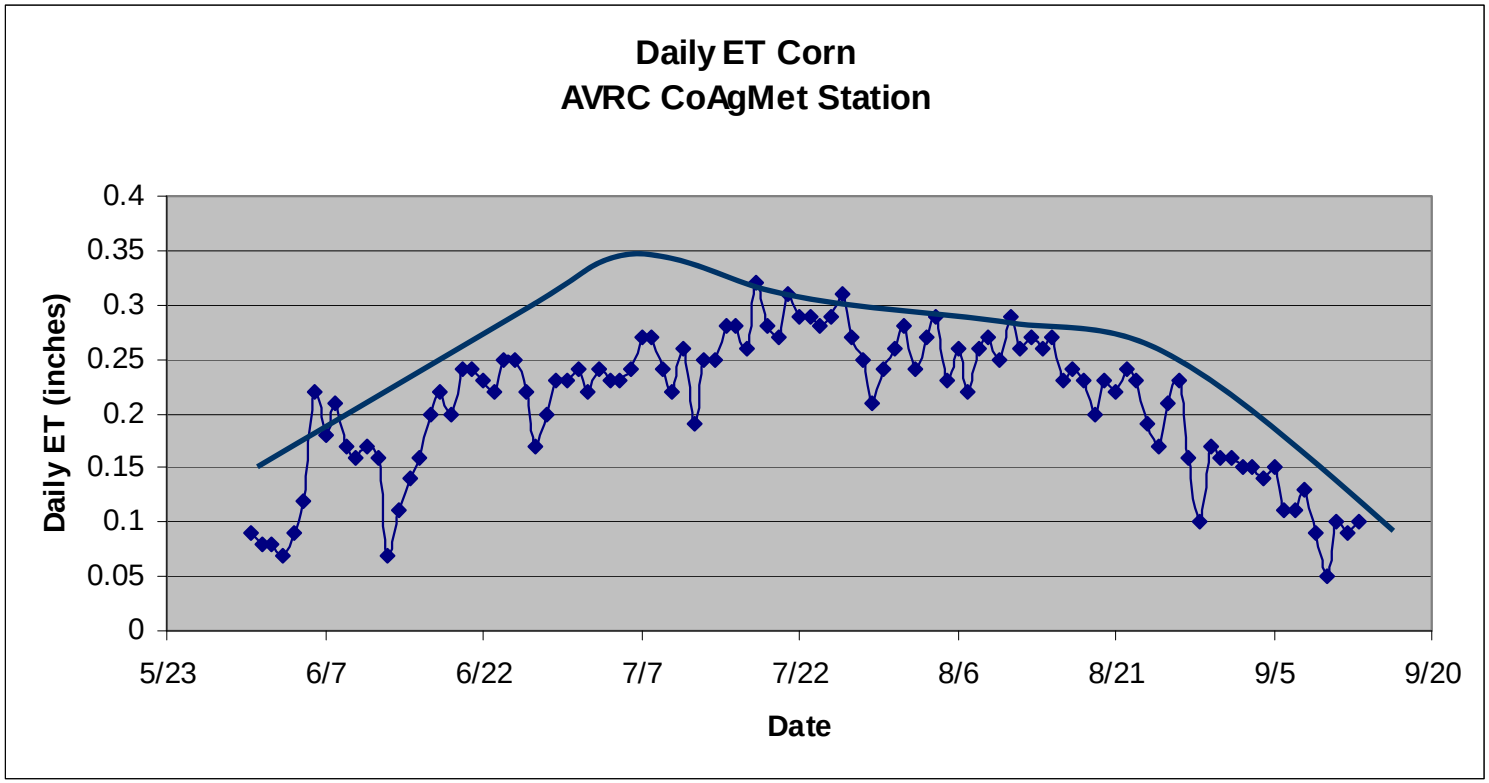
**Reference ET is the calculated ET of a well-watered alfalfa field at full canopy*

Note: You can now bookmark your ET output to avoid having to re-enter your preferred crop(s), station(s) and planting dates.

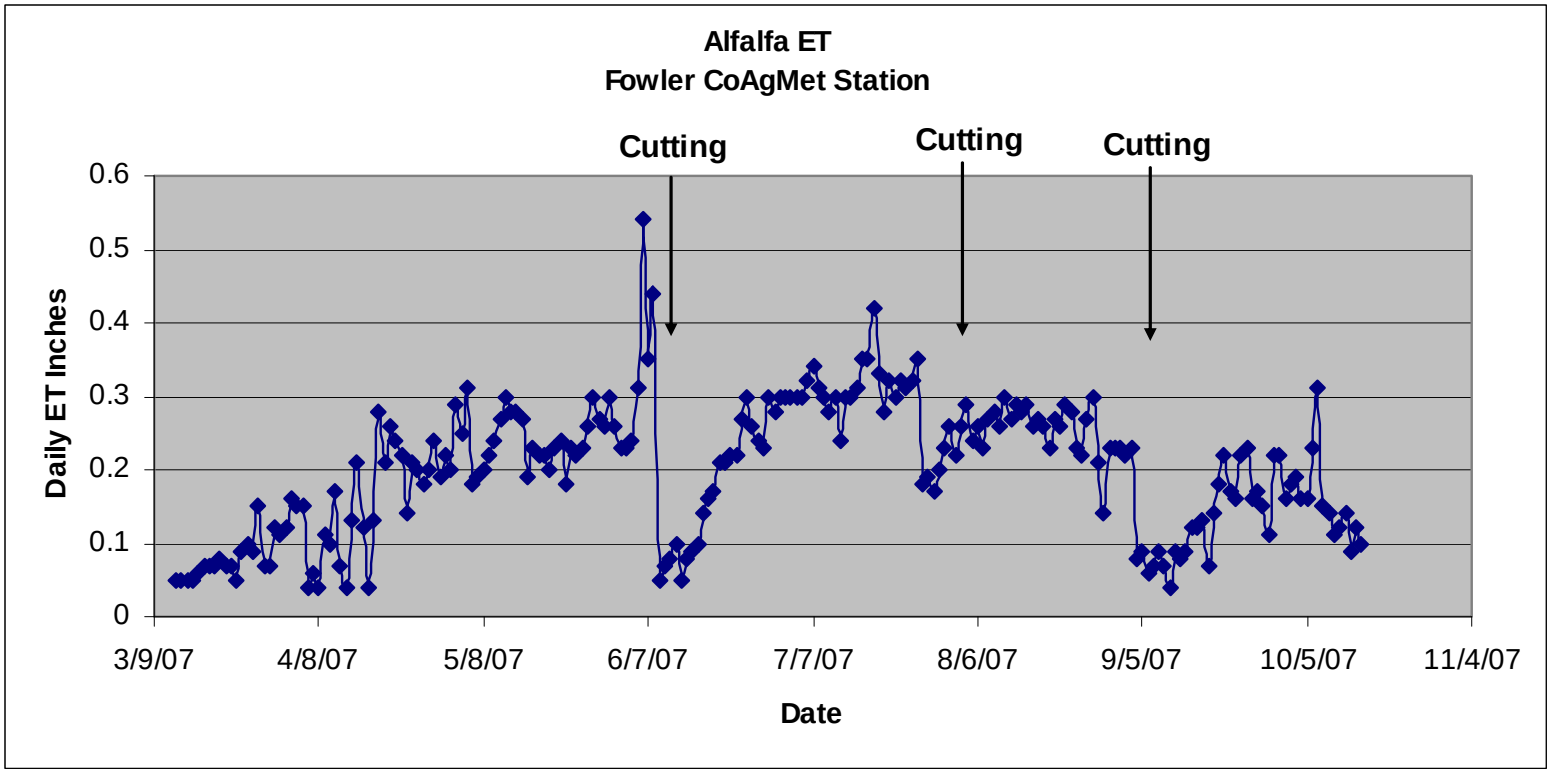
You are visitor Number 2708 since 9/6/2003.

Return to CoAgMet Crop Water Use (ET) Access Form

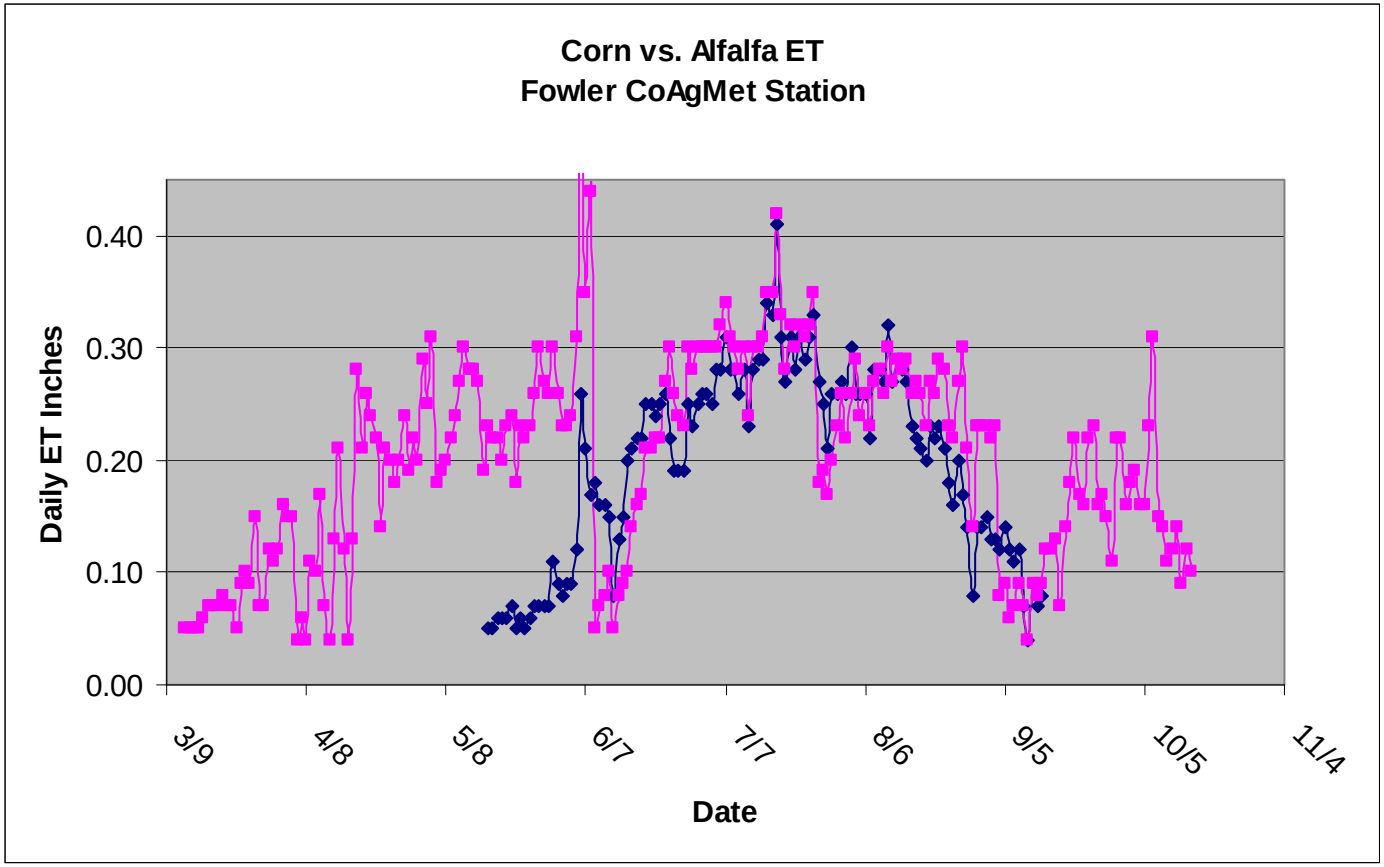
Seasonal ET Curve Corn



Seasonal ET Curve Alfalfa



Alfalfa vs. Corn ET



New ET Options

CoAgMet ETR Summary Access

Instructions for using this page are available here.
Information about ET data is available here.
CoAgMet Station Map here.

Select a Date:

Defaults to current date if left unselected.

Year	Month	Day
1997	January	08
1998	February	09
1999	March	10
2000	April	11
2001	May	12
2002	June	13
2003	July	14
2004	August	15
2005	September	16
2006	October	17
2007	November	18
2008	December	19

Select Days

to

07
08
09
10
11
12
13
14
15
20
30
do 60

Select Stations:
Hold down the control key to select more than one station

Station

orm01 - Orchard Mesa
oth01 - Olathe
pai01 - Paoli
pkh01 - Peckham
rfd01 - CSU Expt Stn Rocky Ford
san01 - San Luis
stg01 - Sterling
stn01 - Stratton
stt01 - Stonington
twc01 - Towaoc
vld01 - Vineland
wfd01 - Wolford Mtn Reservoir

Select Crops and Planting Date:

☑ Alfalfa *(Green Up Date)* **m** 03 **d** 25

☑ Corn *(Green Up Date)* **m** 04 **d** 20

New Output

CoAgMet Extended Crop Evapotranspiration

CSU Expt Stn Rocky Ford

Date	Alfalfa	2.5 mi SE Rocky Ford Corn
05/27/2007	0.31	0.15
05/28/2007	0.31	0.16
05/29/2007	0.30	0.16
05/30/2007	0.27	0.15
05/31/2007	0.45	0.26
06/01/2007	0.26	0.15
06/02/2007	0.26	0.16
06/03/2007	0.24	0.15
06/04/2007	0.25	0.15
06/05/2007	0.36	0.23
06/06/2007	0.67	0.46
06/07/2007	0.44	0.31
06/08/2007	0.35	0.25
06/09/2007	0.40	0.29
06/10/2007	0.35	0.26
Sum	5.23	3.27
Average	0.35	0.22

New for 2008 Growing Season

- Sign up list for email/texted reports
- Radio?
- Changes to web pull down reports
- Penman Monteith option
- New crops?:
  - Melons
  - Onion transplants
  - Sunflowers
  - Forage sorghum?

Summary

- What is the best scheduling method for Ark Valley producers?
  - The one that you are most comfortable with
  - The one that is used.

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970-491-4923

Group Discussions

- Is this topic an important issue on your farm/ditch system?
- What are some of the challenges around this topic for your operation?
- What are some of the strategies you use to deal with the issue/problem?
- What impediments/barriers keep you from addressing the issue/problem or using particular practices/technologies on your farm?
- What information, advice, or other resources do you need to from CSU, NRCS, water districts, etc to help you better deal with this issue/problem in your operation?