Irrigation Management Tools for the Arkansas Valley

Troy Bauder
Departments of Soil and Crop Sciences
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
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

Corn Soil Moisture 2007, Drip Irrigation

Soil Moisture (cb)

5/18 6/7 6/27 7/17 8/6 8/26 9/15 10/5

0 20 40 60 80 100 120

S6
S18
S30
Soil WaterMark Sensor Example

2007 Corn Soil Moisture Surface Irrigation

Soil Moisture (cb)

W6
W18
W30
Colorado Agricultural Meteorological 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
Current CoAgMet ET Output

CoAgMet Crop Water Use (ET) Results

CSU Expt Stn Rocky Ford: 06-05-2006

<table>
<thead>
<tr>
<th>Crops</th>
<th>Alfalfa</th>
<th>Corn</th>
<th>Onion</th>
<th>Ref. ET*</th>
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<tbody>
<tr>
<td></td>
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<tr>
<td>Yesterday's Daily ET</td>
<td>0.35</td>
<td>0.19</td>
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<tr>
<td>Last 3 Days Avg Daily ET</td>
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<tr>
<td>Last 7 Days Avg Daily ET</td>
<td>0.31</td>
<td>0.15</td>
<td>0.22</td>
<td>0.31</td>
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</table>

*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 9/5/2003.

Return to CoAgMet Crop Water Use (ET) Access Form
Seasonal ET Curve Corn

Daily ET Corn
AVRC CoAgMet Station

- Date: 5/23, 6/7, 6/22, 7/7, 7/22, 8/6, 8/21, 9/5, 9/20
- Daily ET (inches): 0.0, 0.05, 0.1, 0.15, 0.2, 0.25, 0.3, 0.35, 0.4
Seasonal ET Curve Alfalfa

Alfalfa ET
Fowler CoAgMet Station

Cutting Cutting Cutting

Daily ET Inches

Date

Alfalfa vs. Corn ET

Corn vs. Alfalfa ET
Fowler CoAgMet Station

Daily ET Inches

Date

3/9 4/8 5/8 6/7 7/7 8/6 9/5 10/5 11/4
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.

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

Select Crops and Planting Date:

- Alfalfa (Green Up Date) m 03 d 25
- Corn (Green Up Date) m 04 d 20
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<thead>
<tr>
<th>Date</th>
<th>Alfalfa</th>
<th>Corn</th>
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<tr>
<td>Average</td>
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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.

Contact: troy.bauder@colostate.edu
         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?