

Instructions

Irrigation Water Management Record NE-ENG-79A **Sheet Scheduling for Corn**

Instructions for use of NE-ENG-79A

The NE-ENG-79A has a place to record all of the information that is shown on the NE-ENG-80. In addition, NE-ENG-79A is set up so that a side by side comparison can be made of actual ET and actual cumulative irrigation and rainfall. The planner can have the producer record irrigation information on this form or it can be used for follow-up analysis of irrigation for the past year. The shaded blanks should be filled out by the irrigator and the planner prior to the first irrigation.

IRRIGATION WATER MANAGEMENT RECORD SHEET FOR SCHEDULING INSTRUCTIONS

- (1) The maximum amount of water that can be stored in a soil profile that a plant can use.
- (2) The minimum amount of water remaining in the soil profile when plants will start to stress. Will usually be assumed to be 50% of (1.).
- (3) Amount of water in the soil profile at the start of the irrigation season.
- (4) Number of days the seed has been in the ground.
- (5) Average daily consumptive use of the plant at this stage of growth.
- (6) Actual consumptive use based on temperature, wind velocity and humidity. (Should be taken from the closest weather station that has Et data).
- (7) Average total moisture that has been consumed by the plants at this stage of growth.
- (8) The TOTAL amount of water utilized by the plant up to the specified time.
- (9) Actual date of ET measurement, rainfall measurement, irrigation measurement or soil moisture deficit. (Be sure to record the planting date opposite 0 in column (4)).
- (10) Recorded rainfall at the site.
- (11) Item (G) on the back.
- (12) Calculated or measured moisture deficit in the root zone of the plant. ((1) - inches of water in the profile at the time.)
- (13) Average amount of moisture needed to finish the crops growth at this time of the growing season.

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EXAMPLE:

(4)	(5)	(6)	(7)	(8)
(Days) From Planting	Pred. Crop Consum Use (in/day)	Actual Crop Consum Use (in/day)	Pred. Crop Accum Consum Use (in)	Actual Total Crop Accum Consum Use (in)
0	0.08		0.0	
3	0.08	0.07	0.2	0.21 (A)
6	0.08		0.5	
9	0.08		0.7	
12	0.08	0.1	1.0	1.11 (B)
15	0.08	0.1	1.2	1.41 (C)

To Calculate:

A: (4) Total Days in this period = 3
 (6) Actual Crop Consum Use = 0.07

$$(8)A = (4)A \times (6)A$$

$$(8)A = 3 \times 0.07$$

$$(8)A = 0.21$$

B: (4) Total Days in this period = 9
 (6) Actual Crop Consum use = 0.1

$$(8)B = (8)A + [(4)B \times (6)B]$$

$$(8)B = 0.21 + [9 \times 0.1]$$

$$(8)B = 1.11$$

C: (4) Total Days in this period = 3
 (6) Actual Crop Consum Use = 0.1

$$(8)C = (8)A + (8)B + [(4)C \times (6)C]$$

$$(8)C = 0.21 + 1.11 + [3 \times 0.1]$$

$$(8)C = 1.41$$

Conclusion: In the 15 days since planting, the plant has used a total of 1.41 inches.

BACK SIDE

- (A) The date the irrigation cycle started.
- (B) How long did you run irrigation water through each set of gates?
- (C) *How many gates are open for a set.
- (D) Meter reading at the start of the irrigation cycle.
- (E) Meter reading at the end of the irrigation cycle.
- (G) Use ((E) - (D)) and the chart at the bottom or the formula to determine gross application of irrigation.
- (H) *The average time it takes for water to reach the end of one half of the rows.

* If the irrigation system isn't Furrow, C and H don't need to be filled in.