

## **Agricultural Irrigation Tools**

Fill in the blanks with the correct answer; then locate the words in the word search.

	This tool can be used to estimate crop water use					
•	These tools monitor soil moisture and aid in determining when to trigger the first and last irrigation					
	Three variables in addition to air temperature that aid in the determination of crop water use.					
	An ETgauge reading provides a change (in inches) on a weekly basis. This reading is called the ET and should be multiplied by the crop in order to					
	determine the accurate crop water use determined by crop stage of growth.  Once the net irrigation requirements are determined, producers should take into account the gross irrigation requirement based on the of the irrigation system.					
	The Kc or crop coefficient of soybeans at the node is .40.					
	Corn crop coefficients are 1.10 during these three reproductive stages,					
	Irrigation requires knowledge of when and how much water to apply to optimize crop production.					
	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.					
	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.  Soil types & will determine how to manage watermark sensors.					
	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.  Soil types & will determine how to manage watermark sensors.  Watermark sensors should be installed in locations with soil and crop conditions.					
	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.  Soil types & will determine how to manage watermark sensors.  Watermark sensors should be installed in locations with soil and crop conditions.  Watermark sensors should be installed in the of the crops.					
).	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.  Soil types & will determine how to manage watermark sensors.  Watermark sensors should be installed in locations with soil and crop conditions.  Watermark sensors should be installed in the of the crops.  A 7/8 inch diameter soil is the best to make a sensor access hole to the depths desired					
). L. 2. 3. 4.	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.  Soil types & will determine how to manage watermark sensors.  Watermark sensors should be installed in locations with soil and crop conditions.  Watermark sensors should be installed in the of the crops.  A 7/8 inch diameter soil is the best to make a sensor access hole to the depths desired.  Three sensors are usually installed at the 1, 2, and 3 depth.					
). 2. 3. 4.	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.  Soil types & will determine how to manage watermark sensors.  Watermark sensors should be installed in locations with soil and crop conditions.  Watermark sensors should be installed in the of the crops.  A 7/8 inch diameter soil is the best to make a sensor access hole to the depths desired.  Three sensors are usually installed at the 1, 2, and 3 depth.					
0. 11. 22. 33. 44. 55.	crop production.  Soil water content is an indication of the amount of water present in the soil  When soil water is extracted by plants the most readily water is removed first.  Soil types & will determine how to manage watermark sensors.  Watermark sensors should be installed in locations with soil and crop conditions.  Watermark sensors should be installed in the of the crops.  A 7/8 inch diameter soil is the best to make a sensor access hole to the depths desired.  Three sensors are usually installed at the 1, 2, and 3 depth.  Before installing sensors, they should be in a bucket of water and went through a wetting					



Extension is a Division of the Institute of Agriculture and Natural Resources at the University of Nebraska—Lincoln cooperating with the Counties and the United States Department of Agriculture.

Nebraska Extension educational programs abide with the nondiscrimination policies of the University of Nebraska–Lincoln and the United States Department of Agriculture.

## Agricultural Irrigation Tools Word Search

E T  $\mathbf{N}$  $\mathbf{E}$ М EGANAMSC  $\mathbf{E}$ C V G A V F L Y X  $\mathbf{R}$  $\mathbf{E}$ B W D o H N P Y Ν  $\mathbb{R}$ A F Z  $\mathbf{T}$ D  $\mathbf{L}$ Ι 0  $\mathbf{E}$ S E C  $\mathbf{E}$ I G I G I N S K J R R 0 I F M A L E C R D T S D N A T F L F S D P P I Ι E T  $\mathbf{E}$  $\mathbf{E}$ 0 H C M K I  $\mathbf{E}$ E E F S S X V 0 A M E P E 0 I N C R 0 N G U U Ν K E T 0 F  $\mathbf{B}$ N I M H G В Ι R Т M R D N  $\mathbf{E}$ P G  $\mathbf{F}$ Y  $\mathbf{P}$ K  $\mathbf{H}$ H A G Ν  $\mathbf{B}$ A T P U C L I N N M U H П Т R P K Y G C Q  $\mathbf{B}$ T T Ι Ι S L A R  $\mathbb{R}$ A D A T 0 Ν A W X 0  $\mathbf{z}$  $\mathbf{B}$ 0  $\mathbf{E}$  $\mathbf{E}$ L I F R E G L K P V J E T N N E T Y Ι A Т I E 0 Ι E A o 0 Ħ Ι Ν A P N W V W Q  $\mathbf{E}$ A A J G W X X  $\mathbb{R}$ E S V G T E Т U 0 T D Z  $\mathbf{E}$ L H V G  $\mathbf{H}$ X R 0 R LAT

## **Agricultural Irrigation Tools**

Fill in the blanks with the correct answer; then locate the words in the word search.

ΔΝ	۷S۱	٨/	FR	K	F۷
$\rightarrow$ 1	<b>u</b> . ) i	<i>,</i> v			

_			
$\boldsymbol{\cap}$	uest	ŀ۱۰	
u	uesi	uo	115.

1.	This tool can be used to estimate crop water use ETgauge or Atmometer				
2.	These tools monitor soil moisture and aid in determining when to trigger the first and last irrigations  Watermark Sensors				
3.	Three variables in addition to air temperature that aid in the determination of crop water use				
	Solar Radiation, Wind, Humidity				
4.	An ETgauge reading provides a change (in inches) on a weekly basis. This reading is called the				
	ET and should be multiplied by the crop in order to				
	determine the accurate crop water use determined by crop stage of growth. Reference, coefficient				
5.	Once the net irrigation requirements are determined, producers should take into account the gross				
	irrigation requirement based on the of the irrigation system. Efficiency				
6.	The Kc or crop coefficient of soybeans at the node is .40. Second				
7.	Corn crop coefficients are 1.10 during these three reproductive stages,				
	,, Silking, Blister, Dough				
8.	Irrigation requires knowledge of when and how much water to apply to optimize				
٠.	crop production. Management				
9.	Soil water content is an indication of the amount of water present in the soil Profile				
10.	When soil water is extracted by plants the most readily water is removed first.				
4.4	Available				
11.	Soil types &will determine how to manage watermark sensors. <i>Textures</i>				
12.	Watermark sensors should be installed in locations with soil and crop conditions. Representative				
13.	Watermark sensors should be installed in the of the crops. Row				
14.	A 7/8 inch diameter soil is the best to make a sensor access hole to the depths desired				
	Probe				
15.	Three sensors are usually installed at the 1, 2, and 3 depth. Foot				
16.	Before installing sensors, they should be in a bucket of water and went through a wetting and drying cycle. Soaked				
17.	Most silty clay loam soils have a water holding of 2.20 in/ft. Capacity				
18.	The suggested irrigation trigger point (kPa) for a silty clay loam soil is between and 110.  Ninety				

RJE $\mathbf{R}$  $\mathbf{E}$ TNE MEGANAM S D E H  $\mathbf{C}$  $\mathbf{v}$ G A v F L  $\mathbf{Y}$  $\mathbf{x}$  $\mathbf{B}$  $\mathbf{R}$ D  $\mathbf{O}$  $\mathbf{N}$ H  $\mathbf{P}$  $\mathbf{Y}$  $\mathbf{N}$  $\mathbf{R}$ A 100  $\mathbf{z}$ т  $\mathbf{D}$  $\mathbf{L}_{i}$ I H S  $\circ$ F  $\mathbf{C}$  $\mathbf{R}$  $\mathbf{E}$ I G I G S  $\mathbf{K}$ I  $\mathbf{O}$ J  $\mathbf{R}$ I  $\mathbf{N}$ O F S  $\mathbf{C}$ М A L H  $\mathbf{c}$  $\mathbf{R}$  $\mathbf{D}$ T D N A H L F  $\mathbf{E}$ D P P I S I H T E Е  $\circ$  $\mathbf{H}$  $\mathbf{C}$ M  $\mathbf{K}$ I S v  $\mathbf{O}$ 120 A M F. H H S S P H O X I C  $\mathbf{N}$ G  $\mathbf{N}$ U U  $\mathbf{C}$  $\mathbf{R}$  $\mathbf{N}$  $\mathbf{K}$ H  $\mathbf{T}$  $\mathbf{O}$  $\mathbf{O}$ F  $\mathbf{B}$ N I  $\mathbf{C}$ I M C  $\mathbf{H}$ G В  $\mathbf{R}$ T M  $\mathbf{R}$  $\mathbf{D}$ P  $\mathbf{N}$  $\mathbf{F}$ G  $\mathbf{E}$ Y P  $\mathbf{K}$  $\mathbf{N}$ В H A H A P U G  $\mathbf{C}$ L N  $\mathbf{D}$  $\mathbf{R}$  $\mathbf{N}$ P K м U  $\mathbf{H}$ Y G T  $\mathbf{T}$  $\mathbf{C}$ O  $\mathbf{B}$  $\mathbf{T}$ т S  $\mathbf{O}$ L  $\mathbf{R}$  $\mathbf{R}$ A D I  $\mathbf{T}$ I N A A  $\circ$ A W X  $\mathbf{z}$ В  $\mathbf{E}$ V G  $\mathbf{O}$  $\mathbf{F}_{i}$  $\mathbf{L}_{\mathbf{L}}$ I  $\mathbf{F}$  $\mathbf{O}$  $\mathbf{R}$  $\mathbf{P}$ F  $\mathbf{L}_{\mathbf{L}}$ J  $\mathbf{K}$  $\mathbf{T}$ F.  $\mathbf{T}$  $\mathbf{N}$ T  $\mathbf{N}$ F.  $\mathbf{T}$  $\mathbf{Y}$  ${f E}$ Q  $\circ$ Т  $\mathbf{E}$ I A A H W  $\mathbf{O}$ H A I  $\mathbf{N}$ A P  $\mathbf{N}$ W O V A A J G  $\mathbf{x}$  $\mathbf{T}$ E  $\mathbf{T}$  $\mathbf{F}$ S  $\mathbf{O}$ T W G X U R D V  $\mathbf{D}$  $\mathbf{z}$ М  $\circ$ G E L  $\mathbf{H}$ v G  $\mathbf{H}$  $\mathbf{x}$  $\mathbf{R}$  $\circ$  $\mathbf{R}$ L A T L

AVAILABLE BLISTER CAPACITY COEFFICIENT DOUGH EFFICIENCY ETGAGE FOOT HUMIDITY MANAGEMENT NINETY PROBE PROFILE REFERENCE REPRESENTATIVE ROW SECOND SILKING SOAKED SOLARRADIATION TEXTURES WATERMARKSENSORS WIND