Agricultural Irrigation Tools

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

Questions:

1. This tool can be used to estimate crop water use. _____
2. These tools monitor soil moisture and aid in determining when to trigger the first and last irrigations. _____
3. Three variables in addition to air temperature that aid in the determination of crop water use. _____, _____, & _____.
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.
5. Once the net irrigation requirements are determined, producers should take into account the gross irrigation requirement based on the _____ of the irrigation system.
6. The Kc or crop coefficient of soybeans at the _____ node is .40.
7. Corn crop coefficients are 1.10 during these three reproductive stages. _____, _____, _____
8. Irrigation _____ requires knowledge of when and how much water to apply to optimize crop production.
9. Soil water content is an indication of the amount of water present in the soil _____.
10. When soil water is extracted by plants the most readily _____ water is removed first.
11. Soil types & _____will determine how to manage watermark sensors.
12. Watermark sensors should be installed in locations with _____ soil and crop conditions.
13. Watermark sensors should be installed in the _____ of the crops.
14. A 7/8 inch diameter soil _____is the best to make a sensor access hole to the depths desired.
15. Three sensors are usually installed at the 1, 2, and 3 _____ depth.
16. Before installing sensors, they should be _____ in a bucket of water and went through a wetting and drying cycle.
17. Most silty clay loam soils have a water holding _____ of 2.20 in/ft.
18. The suggested irrigation trigger point (kPa) for a silty clay loam soil is between _____ and 110.

Agricultural Irrigation Tools
Word Search

R J E R E T N E M E G A N A M S C
D E E C V G A V F L Y X B W R D O
N H P Y N R A F Z T D L I O E S E
O C J R R E I G I G I N S K O I F
C M A L E C R D T S D N A T F L F
E D P P I S I E T E E O H C M K I
S V O E A M E E F S S P E O X I C
N G N U U C R N K E T O O F B N I
M C C H G B I R T M R D P N E G E
Y P K N B H A T H A P U G C L I N
D R N P K M U H Y G T T C Q B T T
S O L A R R A D I A T I O N A W X
Z B O E E L I F O R P E V G L J K
T E T N I N E T Y E Q Q I E I A A
H A I N A P N W O V W Q E A A J G
W X G T E X T U R E S O T D V D Z
M Q G E L H V G H X R Q R L A T L

Agricultural Irrigation Tools

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

ANSWER KEY

Questions:

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 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. *Available*
11. Soil types & _____will determine how to manage watermark sensors. *Textures*
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*

R J E R E T N E M E G A N A M S C
D E E C V G A V F L Y X B W R D O
N H P Y N R A F Z T D L I O E S E
O C J R R E I G I G I N S K O I F
C M A L E C R D T S D N A T F L F
E D P P I S I E T E E O H C M K I
S V O E A M E E F S S P E O X I C
N G N U U C R N K E T O O F B N I
M C C H G B I R T M R D P N E G E
Y P K N B H A T H A P U G C L I N
D R N P K M U H Y G T T C Q B T T
S O L A R R A D I A T I O N A W X
Z B O E E L I F O R P E V G L J K
T E T N I N E T Y E Q Q I E I A A
H A I N A P N W O V W Q E A A J G
W X G T E X T U R E S O T D V D Z
M Q G E L H V G H X R Q 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