

## Irrigation Scheduling

### **Terminology**

Evapotranspiration – the combination of evaporation from the soil surface and transpiration by a plant used to measure the total water requirements of plants and crops

Reference Evapotranspiration (ET<sub>o</sub>) – the potential evapotranspiration of a cool season reference grass growing 4-inches (102 mm) tall under well-watered conditions

Crop Coefficient (K<sub>c</sub>) – a percentage (%) of ET<sub>o</sub> based upon the type of crop and it's growth stage

Effective Rainfall (Re) – the percentage of rainfall that does not runoff but becomes available for plant water use. This is estimated for each location based upon best professional judgement.

### **Formulas**

1. Equation One – Plant Water Requirement (ET<sub>c</sub>)

$$ET_c = ET_o \times K_c$$

Where:

ET<sub>c</sub> = Plant Water Requirement

ET<sub>o</sub> = Reference Evapotranspiration

K<sub>c</sub> = Crop Coefficient

2. Equation Two – Irrigation Water Requirement

$$WR = ET_c - Re$$

Where:

WR = Irrigation Water Requirement

ET<sub>c</sub> = Plant Water Requirement

Re = Effective Rainfall

### **Nasho ET<sub>o</sub> Data**

<http://TexasET.tamu.edu>