When to Irrigate

Irrigation should be scheduled when the amount of water depleted from the soil in the root zone approaches the allowable depletion level selected. As a rule of thumb, irrigation should begin as the allowable depletion reaches 50% except in cracking soils when irrigation should occur closer to 75% depletion.

One method for estimate the amount of water depleted form the soil is the "feel" method, using **Table 1**. The depletion level estimates can be made by taking soil samples with an auger, soil tube or shovel, at approximately six inch increments for the entire corp root zone. The total amount of moisture depleted is the sum of the one foot increments for the crop rooting depth. This is also the net amount to be replaced by the irrigation in order to refill the profile to its capacity. Additional allowances must be made for deep percolation, tail losses and distribution inefficiencies.

How Much To Apply

The gross amount of water to be applied is the net amount required to refill the crop root zone, plus losses due to deep percolation, runoff, and distribution inequalities.

Table 1: Guide for Judging How Much Moisture is Available for Crops

Dominant Texture	Fine Sand and Loamy Fine Sand	Fine Sandy Loam	Sandy Clay Loam, Silt Loam, and Loam	Clay, Clay Loam or Silty Clay Loam
Available Water per foot	**0.6"-1.2"**	**1.3"-1.7"**	**1.5"-2.1"**	**1.6" -2.4"**
Available Soil Moisture (as a Percent)				
0-25 percent	dry, loose, single grained; flows through fingers	dry, loose, flows through fingers	powdery dry; sometimes slightly crusted but easily broken down into powdery condition	hard, baked, cracked; sometimes has loose crumbs on surface
25-50 percent	appears to be dry; will not form a ball with pressure	appears to be dry; will not form a ball	somewhat crumbley but holds together from pressure	somewhat pliable; will ball under pressure
50-75 percent	tends to stick together slightly, but crumbles easily; will not form a ball	tends to ball under pressure but seldom holds together	forms a ball; somewhat plastic; will sometimes stick slightly with pressure	forms a ball; ribbons out between thumb and forefinger
75-100 percent	tends to stick together slightly, sometimes forms a very weak ball under pressure	forms weak ball;breaks easily;will not slick	forms a ball; somewhat pliable; slicks readily if relatively high in clay	easily ribbons out between fingers; has slick feeling
Field Capacity (100 %)	upon squeezing, no free water appears on soil--wet outline of ball is left on hand	upon squeezing, no free water appears on soil--wet outline of ball is left on hand	upon squeezing, no free water appears on soil--wet outline of ball is left on hand	upon squeezing, no free water appears on soil--wet outline of ball is left on hand

Date	Location	Estimated Flowrate (gpm)	Application Duration (hrs)	Set size (ac)	Gross Amount Applied (in)