# WHEAT CROP DATA SHEET

Wheat Water Management
PLANT: November 15 - January 15

SOIL: Coarse and Fine Textured
HARVEST: June

EFFECTIVE PRECIPITATION: The portion of the rain that satisfies a part of the crop water use will depend primarily on the amount of plant cover. The rain during December and January is only 35-50 percent effective because it can evaporate freely from the exposed soil surface. However, after mid-February, more than 75 percent of the rainfall may be effective. Historical data indicates approximately 1.4" (0.11) of the rainfall is effective before mid-February and approximately 2.2" (0.2') during the remainder of the season.

ROOT ZONE: During the first two months of plant growth, the effective root zone is limited to the top one foot of soil profile. The maximum effective root zone on coarser textured soil is about 4-5 feet and about 4 feet on fine textured soils.

ALLOWABLE DEPLETION: For coarser textured soils the maximum allowed depletion should be limited to 60-70 percent during the growing season and can be extended to 90 percent at harvest. For fine textured soils the maximum allowed depletion should be limited to 50-60 percent during the growing season and can be extended to 80-90 percent at harvest.

STRESS SENSITIVE PERIODS: The primary stress sensitive periods are during boot and heading, but stress during tillering (shoots growing from the base of the stem) can reduce the number of heads.

IRRIGATION: First: Rainfall can normally carry a crop into March without an irrigation if the crop has been irrigated up or preirrigated, but if the lower portion of the soil profile is too dry to permit root extension, the maximum root zone can be restricted.

The first irrigation should normally begin in early March for coarser textured soils or in mid-March for fine textured soils to prevent stress during the last irrigation set if March happens to be dry. The March irrigation could be skipped if the effective rainfall in early March is greater than 2" but the next irrigation must be started early to allow time to get across the field.

Final: The date of the final irrigation depends on the amount of available soil moisture in the root zone, the amount of water that can be placed in the root zone by the irrigation, and the remaining water use between the date of the last irrigation and crop maturity. As an example, during average years, an irrigation that refills the crop root zone on May 3 will provide the 6.0" of water the crop normally consumes between the final irrigation and crop maturity.

WATER BUDGETING:

| | |
|---|---|
| Average Seasonal ET (N/C/S) | 1.3/1.4/1.2' |
| Average Effective Precipitation | 0.4' |
| Average Salinity Control | 0.2' |

| Water Use-in.* | Jan | Feb | Mar | Apr | May | Jun | Jul | Aug | Sep | Oct | Nov | Dec | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Northern | 0.1 | 0.8 | 3.2 | 5.2 | 5.8 | | | | | | | 0.1 | 15.3 |
| Central | 0.3 | 1.1 | 3.6 | 5.5 | 4.8 | | | | | | | 0.2 | 16.3 |
| Southern | 0.2 | 1.0 | 3.4 | 5.2 | 4.5 | | | | | | | | 14.5 |
| Deliveries-% | | | 20 | 25 | 20 | | | | | | | 35 | 100 |
| * Note: Assumed a mid-December plant date. | | | | | | | | | | | | | |