

Water Conservation Management Program

NEWSLETTER

December 2024

WHEAT

Historical Consumptive Use

Water management directly impacts the success of any crop but especially wheat and other small grains. Scheduling irrigation events to occur when the crop and soil require it is key to maximizing irrigation efficiency and crop production. There are approximately six critical crop growth stages when the crop should not be under any water related stress to maximize crop production and quality: the 5 leaf stage, 2 nodes, pre-boot, heading/flowering, milk, and soft dough. Although these are good rules of thumb, there are several other factors that influence when an irrigation event should occur to maximize crop production, quality, and irrigation efficiency. Determining the active root zone, the soil moisture content within the active root zone, crop growth stage, and weather conditions should be considered when making irrigation scheduling decisions.

To the right, is a "Mean Consumptive Use Chart" from the University of Arizona that estimates the water requirements for Wheat produced in Arizona. The estimated crop water use is broken down into the first and last half of each month. Divide one of those halves, for a given month, by 15 to determine an estimated daily water requirement. Once a daily requirement has been established, take half of the water holding capacity of a field and divide it by the daily water requirement. The result is a rough estimation of how many days you have between irrigation events to avoid water related crop stress. Again, *this is a rough estimate*. It does not take into consideration weather or soil conditions.

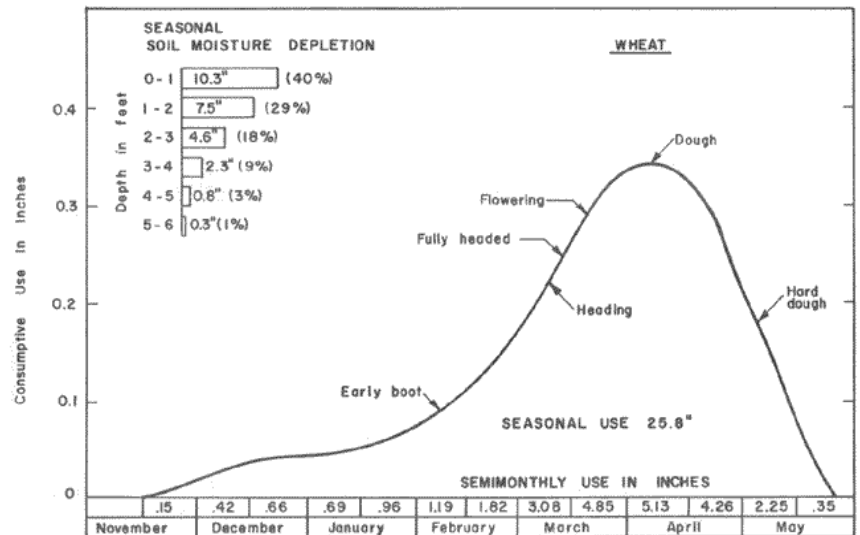


Figure 14.—Mean consumptive use for high-yielding wheats at Mesa, Ariz., 1969-70.

The WCMP is available to assist with irrigation scheduling, interpreting consumptive use charts, determining water holding capacities, and many other technical irrigation services to help you become as efficient as possible. Call the WCMP today!!

WCMP SERVICES

- ❖ Irrigation System Performance Evaluations
- ❖ Flow Rate Measurement
- ❖ Ag BMP Enrollment
- ❖ Irrigation Scheduling Assistance
- ❖ Topographic Survey
- ❖ Soil Texture & Water Holding Capacity Identification
- ❖ Root Depth Determination
- ❖ Field & Set Size Measurement

The WCMP provides irrigation services that help improve irrigation efficiency and save you money. Through a cooperative effort between the Buckeye Valley Natural Resource Conservation District and the Arizona Department of Water Resources, the WCMP is a free irrigation management services program helping to sustain production agriculture in the Phoenix AMA. The WCMP provides water measurement, slope determination, irrigation scheduling assistance, irrigation system evaluations, pump, and practical recommendations to help improve irrigation efficiency.

Call today to experience the value of the WCMP 480.466.2968

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