

# How to Use the Small Grain Advisories for Timing of Management Operations

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The small grain advisories can be used as an aid in planning management operations based on crop growth stage. The growth stage estimated by the small grain advisories should always be verified for the fields in question.

**Stand evaluation.** Stands and soil conditions should be evaluated between emergence and the 2-leaf stage. If soil crusting is hindering emergence, a light irrigation may be warranted. An adequate stand is approximately 20 plants per square foot, but yields may not suffer greatly if stands are much less if the plants are uniformly distributed. The yield difference associated with a later planting should be considered before replanting.

**Weed control.** Weed control failures are often associated with applying a herbicide too late. Therefore, scout for weeds early, and apply a herbicide at the proper developmental stage of the crop and weed.

**Insect control.** The only insect that normally needs to be controlled on small grains is aphids on barley. These insects usually do not appear until jointing, and if they appear after heading, control is not necessary. Natural enemies are often effective in reducing aphid populations.

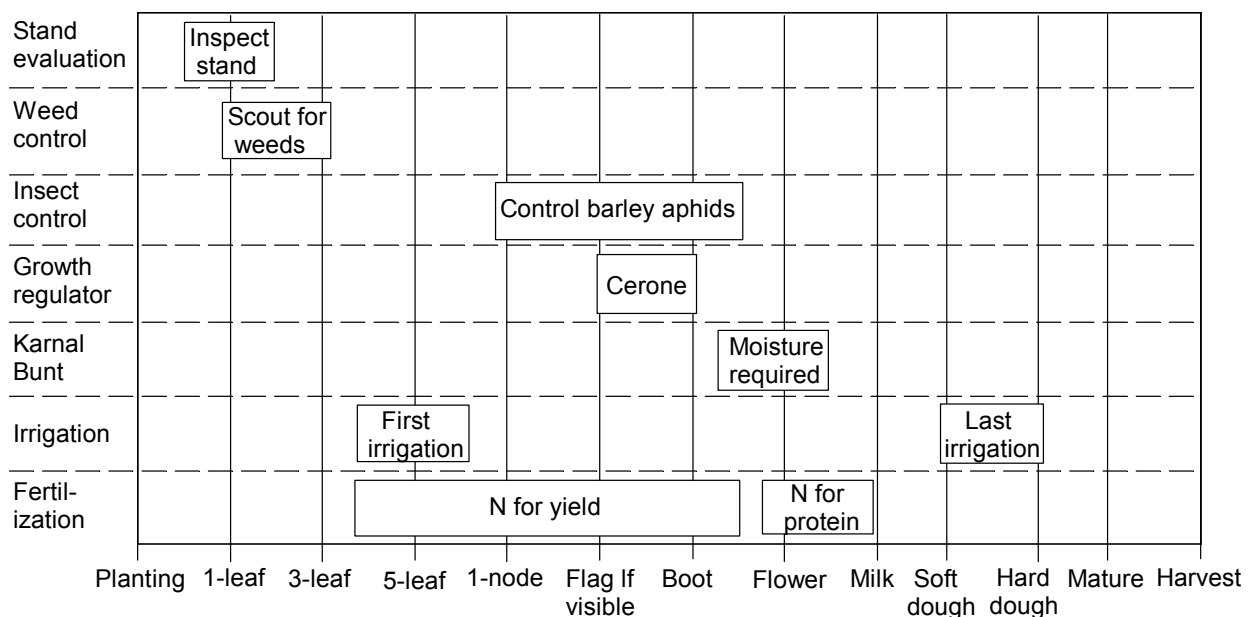
**Cerone.** Cerone is a plant growth regulator used to control height and reduce lodging in small grains. This chemical should be applied between the flag leaf visible stage and boot to be most effective.

**Karnal bunt.** Wet conditions between awn emergence and the end of flowering are critical for the development of this disease.

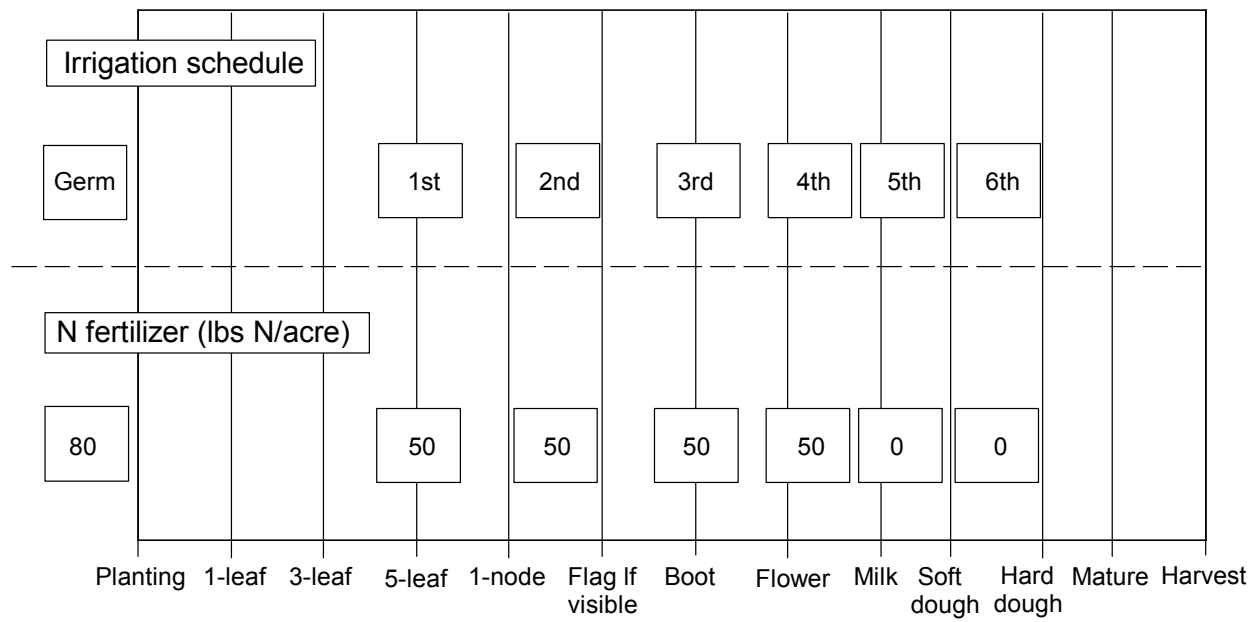
**Irrigation.** The first irrigation is usually not needed until about the 5-leaf stage. The soonest the last irrigation can be applied on most soils is the soft dough stage, and in practice the last irrigation may be applied between soft dough and hard dough depending on the irrigation cycle.

**Nitrogen fertilizer.** Nitrogen fertilizer applied before heading affects yield primarily, and that applied between heading and about 2 weeks after flowering is most effective in increasing grain protein content. Nitrogen fertilizer may be applied at planting time, and in each irrigation until heading for barley or until the milk stage in wheat.

Timing of management operations using crop developmental stage



### Example irrigation and N fertilizer schedule for durum on a sandy clay loam soil



### Small grain herbicide timing based on crop developmental stage

