

Wheat Management – Stem Elongation Phase

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Wheat is ending its tillering phase and entering stem elongation. The beginning mark of stem elongation is called jointing, described as Feekes 6. Jointing is when the first node of the stem is visible above ground. Jointing also is the cutoff for

many wheat herbicides, so always be sure to read and follow herbicide label directions and visually inspect your field before making an application. This stage is when the growing point is above ground so grazing animals should be taken before this point, also. With the growing point exposed above ground, wheat becomes more sensitive to freezing temperatures. Jointing wheat will incur damage if temperatures fall to 24 degrees Fahrenheit or lower. Stem elongation also indicates the increased demand for nitrogen fertilizer. It is critical to have adequate nitrogen in an available form for wheat during this phase of growth. It is critical to monitor wheat for nitrogen stress, especially if nitrogen was applied early in the year and/or soils are prone to leaching or denitrification. Wheat may

respond to nitrogen applied up to the second node, described as Feekes 7. If possible, avoid nitrogen applications after these stages because typically by the time nitrogen is available to the plant it is a cosmetic response and there is risk of burning the upper leaves, in particular the flag leaf, described as Feekes 8 to 9.

Monitor plants closely following Feekes 8 for disease and insect pests. The end of stem elongation after flag leaf (Feekes 9) will be the boot stage, described as Feekes 10. Flag leaf health is critical, since it is the primary leaf for photosynthate production during the third phase, heading. Pay close attention to environmental conditions and any potential disease development, a fungicide application may be warranted during this timing. Also, monitor fields for insects, in particular true armyworm since this pest can rapidly defoliate flag leaves and clip heads.

For more information on wheat management during stem elongation contact your local MU Extension office and ask for IPM 1022 “Management of Soft Winter Wheat” or find it on the web at <http://extension.missouri.edu/>. Δ

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