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Winter Wheat Staging and Management Guide

	**Feekes 1 - emergence, single shoot, typically occurs in fall	Check for uniform emergence, dig plants to check for uniform seed depth, conduct stand counts to verify emergence
 Feekes 2	**Feekes 2 - tillering (producing axillary or side shoots), crown forms between seed and soil surface, the crown is where nodal roots will form	Fall herbicide application can begin if enough weed growth is present
	Feekes 3 - tillering is completed, can occur in fall or spring	Dig a few plants and bring them inside to check viability/winterkill, count plants in 3 ft of row to determine stand count, target is at least 18-22 live plants per square foot
	Feekes 4 - beginning of erect growth, upright appearance, pseudo stem forms	Scout for weeds, insects, and winter injury, make herbicide applications if necessary
	Feekes 5 - leaf sheaths strongly erect, growth point still below the surface, potential head size (spikelets per head) determined	Herbicide applications if necessary, make 1st nitrogen application (if split applied), scout for foliar diseases
	**Feekes 6 - Jointing, first node is visible, stem elongation is beginning, developing head moves up stem and sits atop uppermost node	Herbicide application decisions as many have a Feekes 6 restriction on them, rapid uptake of nitrogen begins, make sure the 1st application has been made if doing split application, finish application at or before this stage if single application, frost becomes a concern at this stage

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	Feekes 7 - 2 nd node is visible	Final stage at which you may want to make 2 nd spring nitrogen application
 Feekes 8 and Feekes 9	Feekes 8 - flag leaf visible but still rolled up	Foliar disease scouting, consider fungicide application if threatening flag leaf
	**Feekes 9 - The flag leaf (upper most leaf) has fully emerged with the ligule visible	Consider fungicide application if significant foliar disease is present on the flag leaf or one below. Scout for insects (armyworm damage to flag leaf can impair yield)
 Feekes 10.1	Feekes 10 - Boot Stage, the head is fully developed and can easily be seen in the sheath below flag leaf	If significant foliar disease is present on the leaf below flag or flag leaf, consider fungicide application.
	Feekes 10.1-10.5 - Heading 10.1 awns visible head starting to emerge, 10.2 head ¼ out, 10.3 head ½ out, 10.4 head ¾ out, 10.5 head fully emerged	
	**Feekes 10.5.1 – This is the beginning of flowering (anthers appear mid head), 50% of field has flowers is day 0	Apply fungicide to protect from fusarium head blight (disease that causes vomitoxin) and to protect flag leaf from disease, optimum fungicide timing for best vomitoxin reduction is day 4-6 after start of flowering
 Feekes 10.5.3	Feekes 10.5.2 – Flowering complete at top of head Feekes 10.5.3 – Flowering complete to base of head Feekes 10.5.4 – Clear fluid can be squeezed out	Last chance for a flowering fungicide application is at 10.5.3 depending on fungicide
	Feekes 11.1 – Milky fluid in kernels Feekes 11.2 – Soft dough	
	**Feekes 11.3 – Physiological maturity, stem right under the head turns yellow, kernel hard but dividable by thumb, kernel moisture around 30%	Grain yield is determined at this stage
	Feekes 11.4 – Ready for harvest, kernel is hard and not easily split	Scout for head scab, pre-harvest sprout

**Important growth stage for scouting

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