

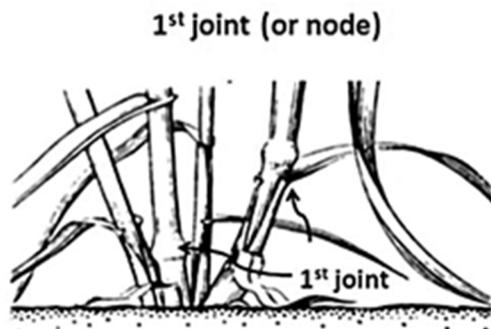
Wheat growth and development reaching first joint stage

The first joint stage is a game-changer in the development and management of wheat – the plants begin to invest in their reproductive phase and the timing is right for growers to gauge their progression of management practices.

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A critical stage of wheat development is when the first joint (or node) emerges above the soil line. This joint provides visual evidence that the plants have initiated their reproductive phase of development and, consequently, alters their response to conditions and management. This first joint stage usually occurs between late April and early May in Michigan. However, development is at least a week behind normal this spring because of abnormally cool temperatures.



This stage of development is also known as growth stage 6 based on the Feekes digital scale. It marks the time when the lower stem elongates to force the four uppermost nodes and the undeveloped spike above ground. What is called the first joint is actually a grouping of four nodes and an undeveloped spike. It is this collection of tissue that represents the base for all future above ground development. As development progresses, the first node remains approximately an inch above the soil surface while nodes 2, 3 and 4 are collectively carried upward defining growth stage 7 (second joint stage).

At this stage the developing head is above ground making it more vulnerable to mechanical damage be it from traffic, grazing, tissue burn, or freezing. In addition, the bulk of fertilizer nitrogen would ideally have been applied, though full rates should still be employed where applications have been delayed (preference should be given to using 28% UAN using streamers).

Lastly, this is the time to begin to scout for foliar diseases such as powdery mildew. Where growers have determined that an herbicide is necessary, products such as Affinity and Huskie can still be used, but it is too late for the phenoxy herbicides such as 2,4-D.