

Spring Nitrogen for Wheat

The most efficient fertilizer response is normally from spring applied N. Nitrogen should be applied during the tillering stage (Feekes G.S. 2-4). Recommended N rates are 90 pounds per acre for well drained sandy and loamy soils and 100 pounds per acre for poorly drained silt loams and clays (Table 3). The normal spring N rate should be increased by 40 pounds per acre on a clay soil (Ca > 4500) if the wheat yield potential is greater than 55 bushels per acre. Apply 75 pounds N per acre at early tillering and the remainder before jointing (G.S. 5).

Spring N Recommendations for Wheat*		
Soil Type and Drainage	Lbs N/A	Time of Application
Sandy loams and silt loams which do not waterlog readily	90	All at mid to late tillering or half at mid tillering and half before jointing (G.S. 5)
Clays and silt loams which waterlog readily	100	55-60 at mid tillering and 40-45 before jointing (G.S. 5) or all at mid to late tillering
Silty clays and clays (Ca > 4500) with yield potential > 55 bu/A	140	75 at early tillering and 65 before jointing (G.S. 5)
*Second application may be adjusted based on weather and/or plant analysis.		

The 90 pound rate for well drained loamy type soils can be applied efficiently as a single application at the mid-tillering stage (usually between mid-February and mid-March). The 100 pound rate should be split into two applications (55 to 60 pounds at early tillering, usually mid- to late-February, and 40 to 45 pounds at late tillering, usually mid- to late-March). The split application of N may improve N fertilizer efficiency on poorly drained soils. Nitrogen sources low in nitrates are desirable for highly leachable soils and should also be applied as a two-way split.

An additional 20 to 40 pounds of N per acre may be needed prior to heading if denitrification conditions or leaching losses occur after the recommended N has been applied.