The availability of N at key times during the growing season is important as the total amount of N available in reaching hard wheat yield and protein goals. Most of the N required by wheat is absorbed before flowering and used to establish the yield potential (the number of heads per area and kernels per head). Vegetative N is later transported to the kernels to form protein during grain filling. Early season N availability is therefore critical to establish yield and protein. Nitrogen absorbed by wheat after flowering is used primarily to increase grain protein content. Therefore, ensuring that some N is available to increase absorption moisture is thought to be necessary to reach the final protein goal of 14 percent for hard red spring wheat.

- Fall fertilization of ground is planted with hard red spring wheat is one way to achieve the desired profile of distribution of N for late season absorption. The exact timing of fall fertilization for spring wheat will vary by rainfall zone. In general, fall fertilization should occur earlier in lower rainfall zones to allow sufficient time for ammonium/ammonia forms of N to convert to nitrate and move down the profile during winter. Fall fertilization may not be necessary in high rainfall zones, or should be delayed until soil temperatures are below 50°F to reduce the risk of overwinter N loss. Fall fertilization is not necessary if significant residual N already exists in the profile.

Dryland Hard Red Winter Wheat Nitrogen Needs

N Supply needed by the crop to meet yield and quality goals

N Supply needed by the crop to meet yield and quality goals is a common practice for hard winter wheat. N Supply is usually applied before or during the seedling stage (Zadoks 32). This is the time when the plant is most vulnerable to N stress and when the plant is most sensitive to N supply. N Supply is usually applied at a rate of 150-200 lb N/acre to ensure optimal growth and yield. N Supply is usually applied in two or three split applications, with the higher rate applied at the beginning of the growing season and the lower rate applied later in the season. N Supply is usually applied using fertigation, with the rate adjusted to meet the specific needs of the crop during the growing season. N Supply is usually applied to ensure optimal growth and yield, with the rate adjusted to meet the specific needs of the crop during the growing season. N Supply is usually applied using fertigation, with the rate adjusted to meet the specific needs of the crop during the growing season. N Supply is usually applied to ensure optimal growth and yield, with the rate adjusted to meet the specific needs of the crop during the growing season. N Supply is usually applied using fertigation, with the rate adjusted to meet the specific needs of the crop during the growing season. N Supply is usually applied to ensure optimal growth and yield, with the rate adjusted to meet the specific needs of the crop during the growing season. N Supply is usually applied using fertigation, with the rate adjusted to meet the specific needs of the crop during the growing season.