

## News Column

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### **Topdressing wheat, timing is key**

Having adequate N available to support spring tillering when it breaks dormancy will be important. Also, the potential number of meshes per head is determined after spring green-up and prior to jointing; thus, having **available N in the root zone** early enough can help ensure good yield potential.

The typical sources of N used for topdressing wheat are UAN solution and dry urea. Numerous trials by K-State over the years have shown that both are equally effective. In no-till situations, there may be a slight advantage to applying dry urea since some of it will fall to the soil surface and be less affected by immobilization than broadcast liquid UAN, which tends to get hung up on surface residues.

Dribble (surface band) UAN applications would also avoid some of this tie-up on surface crop residues as well. But if producers plan to tank-mix with an herbicide, they'll have to use liquid UAN and broadcast it. Keep in mind too that kochia (fire weed) emerges in early spring February and March, and research has shown that applying an herbicide preemerge that is effective in controlling kochia is by far the best means to control it.

Controlled-release products such as polyurethane coated urea (ESN) might be considered on very sandy soils prone to leaching, or poorly drained soils prone to denitrification. Generally, a 50:50 blend of standard urea and the coated urea will provide some N immediately to support tillering and head development, and also continue to release some N in later stages of development. This would work best in settings with high loss potential.

Producers should have started the season with a certain N recommendation in hand, ideally based on a profile N soil test done before the crop is planted and before any N has been applied. If a soil sample was taken at sowing, profile Nitrate-N can help determine the rate to be applied based on the yield goal. K-State recommends 2.4 lbs. of N per bushel per acre of yield goal, from which credits for profile N, previous crop, tillage system, and organic matter are provided.

However, it is not too late to use the profile N soil test if taken in late winter/very early spring before the wheat greens up. While it won't be as accurate as when sampled in the fall, it can still point out fields or areas in fields with high levels of available nitrate N. Unfortunately, it is not reliable in measuring recently applied N. So if a high rate of N has already been applied, a late winter profile sample probably shouldn't be taken. Remember that topdressing should complement or supplement the N applied in the fall and the residual soil N present in the soil. The total N application, planting and topdressing, should equal the target recommended rate.

If you were fortunate enough to have wheat that grew enough in the fall to graze, you should add an additional 30-40 lbs. of N per acre for every 100 lbs. of beef weight gain removed from the field. If conditions are favorable for heavy fall and/or spring grazing, additional N maybe necessary, especially for a grain crop.

Low grain prices again this year may also play a role for N rate decisions this spring. However, it is important to keep in mind that N is the most limiting nutrient for wheat, and the optimum agronomic N application rate will likely result in economic returns. In general, producers may consider a later topdress application (around jointing) with a better idea of the overall crop condition and expectations for the rest of the season; rather than cutting back on N rates now and potentially limiting yields even further. But this comes with risks as well, will you get the needed moisture in time to get the N activated for the wheat to be able to utilize it?

Some fields may also benefit from an application of sulfur and chloride. Like N, these nutrients are mobile in the soil, and a topdress application before jointing is considered an effective application time. Sulfur and chloride topdress applications should be made based on soil test and history of response.

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