



Retailer Bulletin

Maximize your growers' wheat productivity – watch for copper deficiencies!

Over a third of Great Plains wheat area needs monitoring for copper. New study shows Wolf Trax Copper DDP delivers it better.

Given rising wheat prices, it's important that producers pay close attention to micronutrient nutrition so that this often-overlooked input doesn't get in the way of capitalizing on a very profitable opportunity.

Low copper levels have been found in about 35 percent of samples taken from indicator species grown on soils throughout a broad geographic band extending from North Dakota/Montana all the way south to Texas. Cereals grown in the coastal areas extending from North Carolina, South Carolina through to Georgia also are in general "need" areas¹. Deficiencies have also been noted in Alberta, Canada.

In wheat – no copper, no seed

What is particularly worrying about copper deficiency is that it doesn't always show up in vegetative growth of a producer's wheat, but it can devastate the reproductive structures to the point where otherwise healthy plants simply don't set seed – or set a reduced amount of seed. Wheat needs copper in order to "build" the pollen structures that are essential in setting seed. If a crop is deficient or moderately deficient in copper, the pollination process will be impaired and yield will suffer.

Why you should recommend Wolf Trax Copper DDP as an effective copper source, compared to granular copper products

#1 - Uneven granular blends = spotty field application In the past, producers have tried to take care of their copper deficiencies by applying

¹Kubota, 1983 Copper Status of US Soils and Forage Plants, Agron J: 75: p 913.

How do you know when wheat may need copper?

Here are some rules of thumb that can be used to determine whether fields are at risk of a copper deficiency and if you should be recommending copper to your grower customers:

1. If a soil test reads **less than 0.2 ppm DTPA** extractable copper, you may have a moderate to severe deficiency and you should look at copper in your fertility recommendation.
2. If, in the past, **tissues tests** have shown up as copper deficient as defined by your chosen testing lab, you likely need to start using copper in your fertility program
3. If you have **seen copper deficiencies** in the past in a field, you likely need to begin a copper program.

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“chunks” of granular copper – usually 12 to 20 percent oxysulphate formulations – with the chunks blended into the overall NPK blend. There are two problems with this approach. Firstly, many granular copper products are HEAVIER than N, P and K and so they can sink to the bottom of the blend as it is handled or travels. This results in uneven blends, and uneven application across the field. In contrast, Wolf Trax Copper DDP coats each N, P or K fertilizer prill in the blend, leading to an even “blanket-like” distribution across the field.

#2 – Granular copper available only immediately adjacent to granule On top of spotty distribution, the granules don’t deliver copper to the soil except in a small region right around the chunk. To illustrate this, a replicated trial carried out in soil columns that were fertilized and then “sliced” in order to monitor nutrient availability was performed.

In the experiment, copper movement off a 12 percent copper oxysulphate was “tracked” by measuring DTPA-extractable copper at various distances from the granule over time. The results were disappointing. As little as four inches away from the point where the granular copper had fallen, no copper was available. The bulk of the DTPA extractable copper stayed right adjacent to the granule.

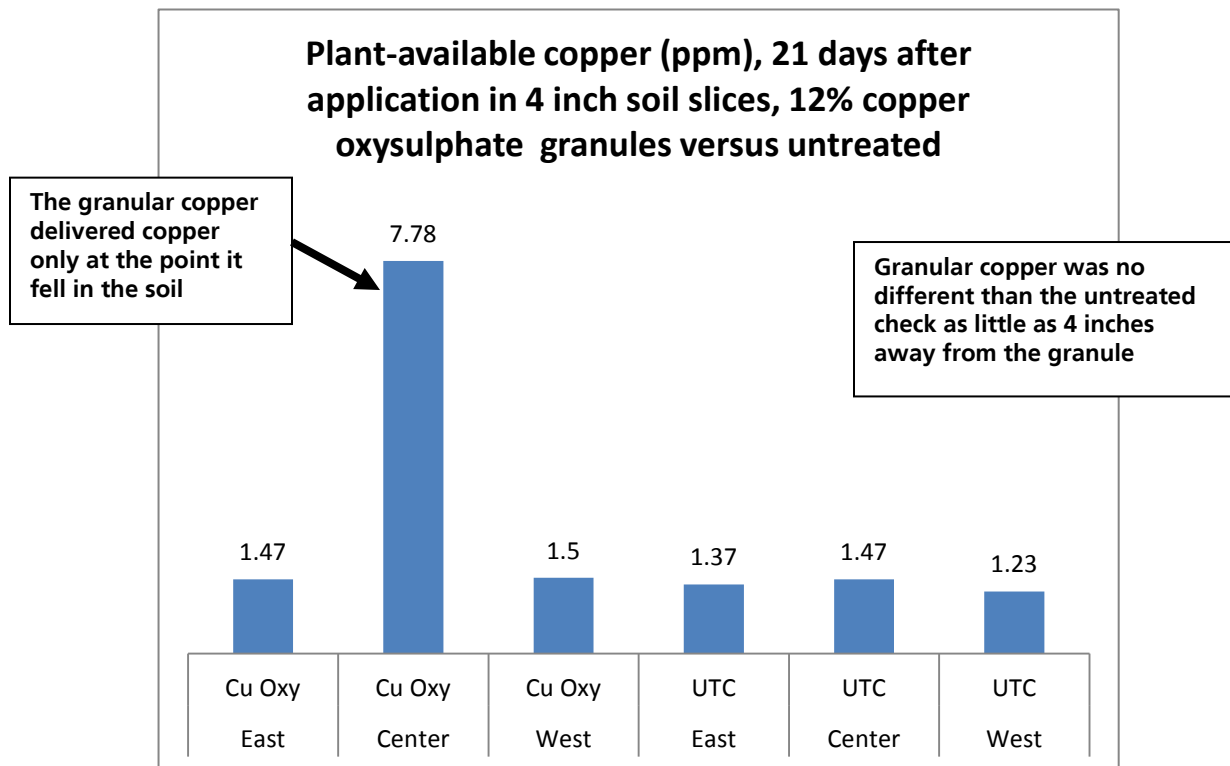


Figure 1 Tracking the movement of plant-available (DTPA-extractable) copper 21 days after application of 5 lb/ac twelve percent copper oxysulphate in four-inch soil slices.

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#3 – Wolf Trax Copper DDP delivers copper throughout soil zone In the trial using Copper DDP coated on fertilizer, the plant available copper (DTPA extractable-Cu) was nice and even through the whole soil space. Copper levels from the Copper DDP treatment were 89 percent higher than untreated checks, and this scale of increase is exactly what growers who have copper deficiency would need.

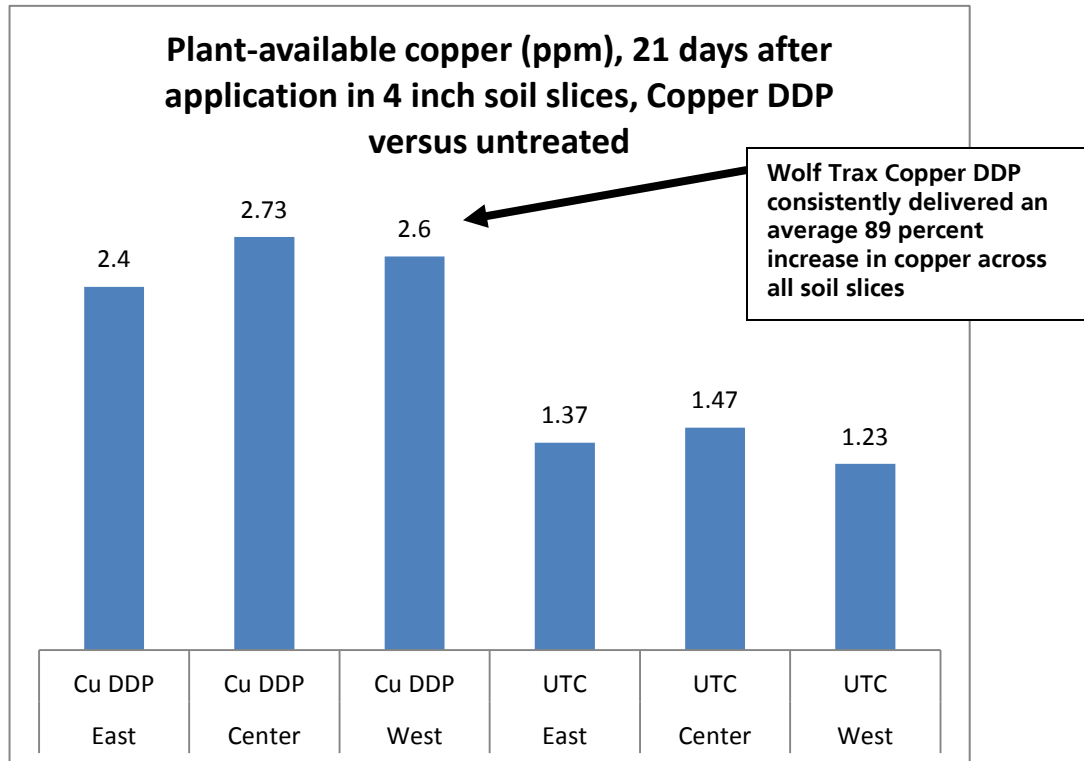


Figure 2 Tracking the movement of plant-available (DTPA-extractable) copper 21 days after application of 0.95 lb/ac Copper DDP in four-inch soil slices

Conclusion: If your farmer customers need copper to maximize their wheat profits this year, Wolf Trax Copper DDP is the best recommendation for your fertilizer blends:

- Even, blanket-like coverage across the field
- Plant available copper, delivered in the right amounts throughout the field
- High quality, low heavy metals
- Guaranteed uptake

You and Wolf Trax....Growing Forward® together.

For more information on the Wolf Trax DDP family of Innovative Nutrients, please call 204-237-9653, or visit us at www.wolftrax.com.