



Corn crop trends
Key micronutrients needed



Getting it right with DDP
Our recommendation

micronutrients matter

KEY FERTILIZATION STRATEGIES FOR CORN PRODUCTION

CORN

Crop Trends

Over the past sixty years, corn yields, on average, have increased annually by over 2 bushels per acre. Micronutrient deficiencies are top of mind as crop removal from high yielding crops continues to deplete natural soil reserves.

This is particularly true for corn production, as improved hybrids tend to have greater requirements for micronutrients: rootworm resistant hybrids require as much as 27% more zinc than their non-resistant counterparts. It's important to keep in mind that your crop yield is determined by the most limiting nutrient – in order to achieve optimal yields, you need to make sure that you have a strong fertility program.

Key Micronutrients

Adequate levels of **zinc** are necessary in corn production to ensure proper growth, development and reproduction. Maintaining a sufficient level of zinc in the soil also enables corn seedlings to forage the soil for the water and nutrients they need.

Corn production also requires a considerable amount of **boron** in order to reach optimum yield. Boron is necessary for tassel and silk formation, sugar transport, pollination and seed production, enhanced water use efficiency and drought tolerance.

Factors Impacting Nutrient Availability

Zinc is an immobile nutrient and uptake may be limited:

- When planting earlier in cool, wet soils
- In coarse-textured soils
- In high pH or high phosphorous soils
- In soils with low organic matter

Visual zinc deficiency symptoms in corn are typically observed in new growth first and include chlorosis on either side of the leaf midrib, beginning at the base of the leaf, as well as stunted growth due to shortened internodes.

Boron deficiency is most common in coarse textured soils with:

- High soil pH
- Low soil organic matter
- High calcium levels
- Low soil moisture

Visual deficiency symptoms for boron in corn include stunted growth and reduced ear shoot and tassel development.

Important Considerations for Zinc and Boron

A balanced fertilizer program including zinc is necessary to get the crop off to a strong start early in the season, which ultimately sets the stage for maximum yield performance later on. In corn, the number of rows on the cob is determined as early as V5 and zinc is essential for early season root development and plant vigour.

While micronutrients are usually only required in small amounts, there is a small window between sufficiency and toxicity when it comes to boron, so it's especially important to consider the 4R's of Nutrient Stewardship: using the right source, at the right rate, ensuring the right placement and applying at the right time.



wolftrax™
INNOVATIVE NUTRIENTS

Introducing Wolf Trax DDP Nutrients

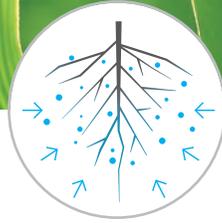
Wolf Trax DDP Nutrients are designed to evenly coat dry fertilizer blends, which results in improved field distribution of the nutrient and more points of interception compared to traditional granular micronutrients.

UNIQUE FEATURES OF WOLF TRAX DDP NUTRIENTS:



EvenCoat™ Technology

Wolf Trax DDP Nutrients thoroughly coat each and every granule of a fertilizer blend. This results in a blanket-like distribution of the nutrient across the field, close proximity to plant roots and early plant uptake. Once applied, the DDP Nutrient will not come off during transport or handling.



PlantActiv™ Formulation

Wolf Trax DDP Nutrients are chemically and physically designed for better, earlier availability to plants. The particle size is ideal for plant uptake, and the unique formulation helps nutrients avoid soil tie-up and remain plant-available.

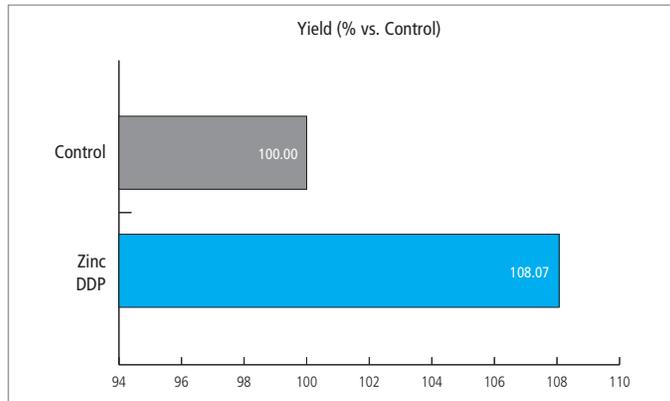


DUAL ACTION™ Availability

With Wolf Trax DDP Nutrients, plants get the nutrition they need, when it's needed most. DUAL ACTION Availability means each DDP Nutrient is formulated with at least two forms of the mineral, providing immediate nutrient uptake by the plants, as well as extended feeding over time.

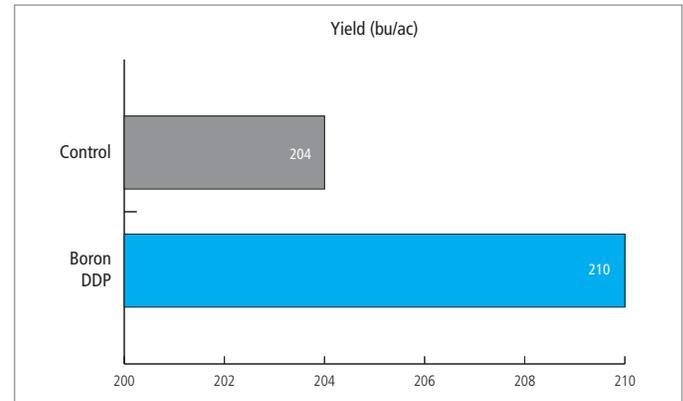
Wolf Trax DDP Nutrients are Field-Proven

Zinc DDP applied as a fertilizer coating increased corn yield by over 8% compared to the control treatment without Zinc DDP:



Results based on data collected from multiple sites over multiple years.

Foliar applications of Boron DDP at V4 and VT increased corn yield by 6 bu/ac compared to the control treatment without Boron DDP:



Results based on University of Illinois field study conducted in 2013.

Recommendations:

By the time nutrient deficiency symptoms are visible, corn yield has suffered. In many areas though, visual zinc deficiency symptoms are not obvious. Agronomists should be aware that recent results from corn tissue analyses collected over a large area of the US indicate a trend to lower than optimum zinc tissue levels; which may begin to negatively impact corn yields. Being proactive with a pre-plant soil application of Wolf Trax Zinc DDP coated onto granular fertilizer is recommended to address deficiencies before they impact the crop.

In-season foliar applications of Wolf Trax Boron DDP during the corn's reproductive (VT) stages can also positively impact kernel fill – key to sustaining high yields.

Dealer Comments:

Helping you make informed decisions on the positive returns from using micronutrients.

