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Our recommendation

micronutrients matter

KEY FERTILIZATION STRATEGIES FOR RICE PRODUCTION

RICE

Crop Trends

Average rice yields in the United States have steadily increased since the 1980's due to higher-yielding varieties, improved disease management, and better fertility programs. Micronutrient deficiencies can have a dramatic impact on crop yield, so in order to give your crop the best chance of reaching maximum economic yield potential, it's important to consider including micronutrients in your fertility program.

Key Micronutrients

Adequate levels of **zinc** are necessary in rice production to ensure proper growth, development and reproduction. Zinc deficiencies in rice production in the United States have been well documented; with yield losses of between 10% and 60% having been reported. Using the average U.S. yield/ac, the grain crop removes 0.3 lb/ac of zinc. Zinc deficiency is the most common micronutrient deficiency in crops throughout the world, so it's important to keep this nutrient in mind when designing a balanced fertility program.

Factors Impacting Zinc Availability

Zinc deficiency is most commonly found in soils with:

- Coarse texture
- High pH
- High phosphate levels
- Low organic matter

Due to the unique conditions required for growing rice, this crop is particularly vulnerable to zinc deficiency. Sufficient zinc nutrition can be obtained from the seed after emergence so zinc deficiency symptoms rarely appear early. Zinc deficiency in rice typically occurs between early vegetative stages and mid-tillering. Zinc deficiency, P deficiency and salinity injury symptoms can appear similar. Zinc deficiency symptoms usually occur after flushing or flooding. Visual deficiency symptoms usually begin as general chlorosis in older growth and progresses to bronzing and eventually necrosis of leaf tissue.

Important Considerations for Zinc

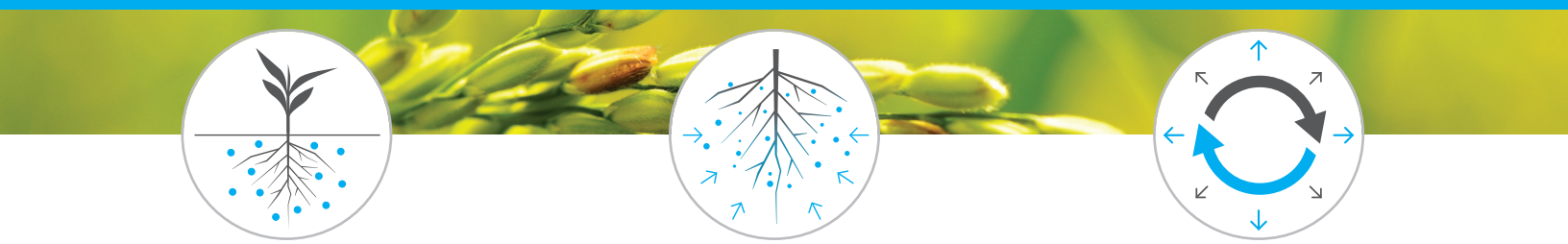
Flood irrigation in rice production results in changes in pH, alters biochemical reactions and can reduce the availability of micronutrients such as zinc. Flooding of rice fields reduces zinc availability to the crop. A zinc deficiency due to low soil concentration or reduced availability due to environmental conditions can reduce yields considerably, so it is important to take pre-season soil samples and analyze for zinc. While it's important to take note of deficiency symptoms in your rice crop, keep in mind that yield potential has already been lost by the time visual deficiency symptoms appear in the field.

wolftrax®
INNOVATIVE NUTRIENTS

Introducing Wolf Trax DDP Nutrients

Wolf Trax DDPs (Dry Dispersible Powders) are designed to evenly coat granular fertilizer blends, which results in improved field distribution of the nutrient as 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 Wolf Trax DDP Nutrient will not come off during transport or handling.

PlantActiv™ Formulation

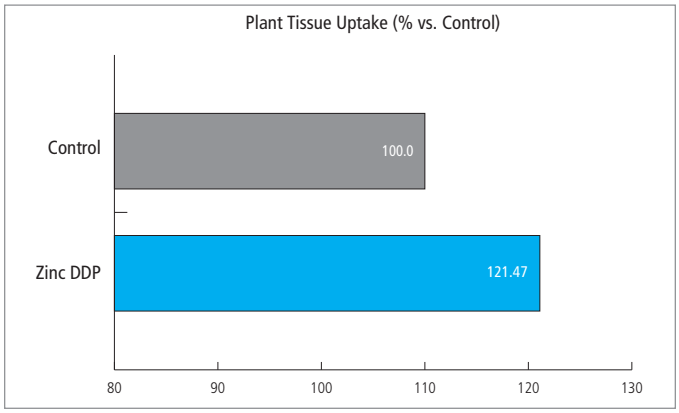
Wolf Trax DDP Nutrients are chemically and physically designed for better, earlier availability to plants. The particle size is ideal for plant uptake, and the unique formulation helps nutrients avoid soil tie-up and remain plant-available.

DUAL ACTION™ Availability

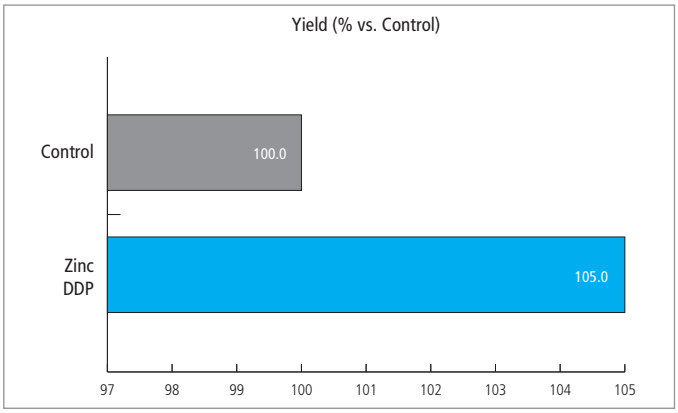
With Wolf Trax DDP Nutrients, plants get the nutrition they need, when it's needed most. The DUAL ACTION Availability means each DDP Nutrient is formulated with at least two forms of the mineral, providing immediate nutrient uptake by the plants, as well as continuous feeding over time. This ensures nutrients are available to the plant at the right time, and deficiencies are corrected during critical growth stages.

Wolf Trax DDP Nutrients are Field-Proven

Plant tissue uptake of zinc increased by 121% in rice treated with a soil-application of Wolf Trax Zinc DDP.



Applications of Wolf Trax Zinc DDP have resulted in an average 5% increase in rice yield.



*Based on limited field data where Zinc DDP was applied as a fertilizer coating over multiple years and multiple locations.

Recommendations:

A pre-plant application of zinc can be the most economical and effective means of providing zinc nutrition. Since zinc deficiency is typically observed in the early vegetative stages, applying Wolf Trax Zinc DDP with your granular fertilizer at or prior to planting is a good way to minimize yield losses that have already been incurred by the time deficiency symptoms are visible. Flooding and high rates of phosphorus fertilizer can further aggravate zinc deficiencies. Some retailers have coated post-emergent nitrogen applications (AN, AMS, Urea) with Zinc DDP (and other DDP's) and applied with an airplane for further zinc fortification.

Dealer Comments:

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

Compass Minerals®