



## How DDP Micronutrients help you recommend the Right SOURCE to your growers

The 4R nutrient system, based on the best management principles of the Right RATE, Right SOURCE, Right TIME and Right PLACE is designed to “help every farmer execute an optimal strategy to preserve his land and create greater yields in an environmentally sensitive manner” (Fertilizer Institute). You can help your customers engage these best use practices by recommending Wolf Trax DDP Micronutrients.

The “4R Stewardship System” is a program of best management practices from the Fertilizer Institute that stresses the need to apply fertilizers in a way that delivers efficient production and protects the environment.

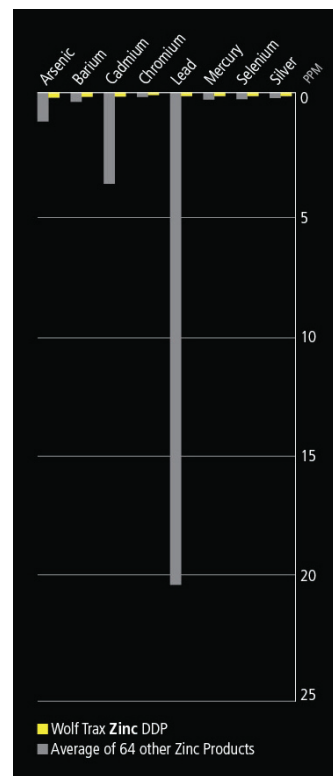
Today, we’re going to talk about the 3<sup>rd</sup> “R” – Right SOURCE. What does Right SOURCE, represent? This comes down to what your grower customers are trying to achieve in their fields with micronutrient applications—do they need a soil applied micronutrient? Foliar applied? Are they trying to soil build? Are they trying to increase fertilizer use efficiency? Are they concerned with quality and environmental load? Do they need a blend of micronutrients? Do they plan on sequential applications?

### Why Wolf Trax DDP Micronutrients are often the right SOURCE

#### 1. Quality and Environmental benefit

One key thing to recognize is that unlike the nitrogen, potassium and phosphorus industries, many micronutrient formulators rely on industrial waste as an ingredient to produce micronutrient. They purchase foundry waste, tire ash or copper waste and then (try to) clean it up. Many do a good job of getting heavy metals like cadmium, or arsenic down to acceptable levels.

Wolf Trax does NOT use industrial waste products as feedstocks. We use pharmaceutical or feed quality ingredients so that we start with formulations that are clean. The chart shows a comparison of micronutrients registered in the state of Washington, where heavy metals are heartily regulated. The chart shows that Wolf Trax DDP Micronutrients have much lower levels of heavy metals compared to other (already clean) products.



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So what do lower heavy metal levels mean to you? First, you can rest assured that the people working in your fertilizer sheds and your customers are not being exposed to high levels of contaminants. Second, your growers are not spreading these poisons onto their soils, and as they are producing crops that will make their way into the human food system, they can rest easy that these products are safe.

In addition, the superior placement of Wolf Trax DDP Fertilizer Coating Micronutrients allow for low application rates. This reduces the environmental load and the amount of heavy metals and other contaminants being applied per acre.

## **2. Flexibility in Application**

DDP Micronutrients can be used in foliar or soil applied applications. This is an obvious benefit to the retailer who is looking for inventory efficiencies. However, it is also a benefit to the grower who may wish to invest in a program approach where a soil applied application is followed by sequential foliar applications. This can be beneficial in those areas suffering severe deficiencies. Research conducted at the University of Purdue showed yield benefits of Manganese DDP in a soil application followed by a foliar program approach on glyphosate-tolerant soybeans.

## **3. DDP Micronutrients have been specially formulated for enhanced uptake**

One thing that often gets overlooked is the fact that Wolf Trax DDP Micronutrients are patented, **formulated** products, in the same manner as many crop protection products. Both our physical and chemical formulations were designed to enhance availability to the plant. The following table shows the way in which Wolf Trax DDP products are formulated differently from other micronutrients and how this impacts plant availability.

<b>Formulation Type</b>	<b>Formulation Attribute</b>	<b>Key Difference between Wolf Trax DDP Micronutrients and other products</b>
<b>Physical</b>	Particle Size	The particle size of DDP Micronutrients is selected for fertilizer coating and to ensure plant availability in the soil or on the leaf
<b>Chemical</b>	pH	The pH of Wolf Trax DDP Micronutrients is optimal for plant uptake
<b>Chemical</b>	Formulants	Several chemical ingredients in the patented DDP formulation are included to help avoid soil tie-up and enhance availability
<b>Chemical</b>	Patented Dual Action™ Formulation	Different sources of micronutrients are used when formulating DDP Micronutrients to allow for early <b>and</b> continual availability
<b>Chemical</b>	H2O Solubility	Wolf Trax DDP Micronutrients are soluble: Solubility of Zinc DDP is over 80%
<b>Chemical and Physical</b>	Purity and Analysis	Most DDP Micronutrients are formulated as high analysis powders, meaning higher purity, and fewer containments

## **4. DDP Micronutrients are efficient**

DDP Technology has been assessed at universities such as Purdue, University of Arizona and the University of Kentucky, in many independent trials, and in hundreds of Wolf Trax trials and have proven to be efficient, efficacious sources of micronutrients. You can view over 800 research results at [www.wolftrax.com](http://www.wolftrax.com) All of these results speak to the fact that Wolf Trax DDP Micronutrients are a tried and true answer to the Right SOURCE question.

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

For more information on the Wolf Trax DDP family of Innovative Micronutrients, please call 204-237-9653 or visit us at [www.wolftrax.com](http://www.wolftrax.com).