

## **Role of Copper**

- Stimulates protein formulation and enhances N utilization
- Activates several enzymes
- Critical in the role of photosynthesis, protein and carbohydrate metabolism, and respiration
- Copper assists in the binding of free oxygen radicals which makes them harmless
- Copper is important for lignification of cell walls
- Copper is important for rhizobia production associated with legumes

### **Deficiency Symptoms**

- Young leaves become wilted with chlorosis and twisting, eventually they wither and die
- Heads may become deformed and fill poorly
- Higher incidence of stem melanosis and ergot in self-pollinating crops like wheat and barley
- In cereals, the youngest leaves turn white due to damaged chloroplasts

#### **Copper Deficiency in Soybeans**



#### **Copper Deficiency in Wheat**



### **Copper Deficiency in Wheat**

CELLBURST Technology



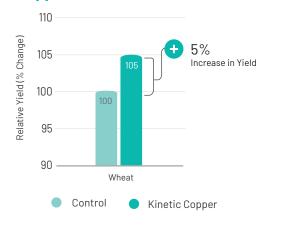
Copper Deficiency in Wheat (left) vs. Copper Sufficiency in Wheat (right)

# **Proven Agronomic Performance**

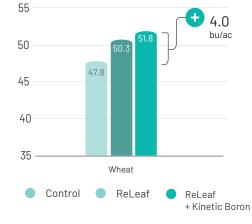
- Summary data collected by independent researchers in Canada demonstrated the benefits of supplemental essential nutrition. The addition of Kinetic Copper increased productivity in Wheat by an average of 5%.
- The addition of Kinetic Copper with ReLeaf™ improved

consistency in performance and enhanced productivity by an average 4.0 bu/ac in Wheat, reiterating the benefits of Chemtrition.

• To review the complete Kinetic Copper data package, please contact your ATP Technical expert today.



#### **Copper + ReLeaf in Wheat**



Summary Data of research trial, DCH Inc. (2016)

Yield (bu/ac)

Summary Data of research trial, DCH Inc. (2016)

**Copper in Wheat** 



The addition of Kinetic Copper with ReLeaf improved consistency in performance and enhanced productivity by an average of 4.0 bu/ac in wheat, reiterating the benefits of Chemtrition.

## **Product Recommendations**

- Kinetic products can be applied throughout the growing season. For efficiency, Kinetic products can be added with the herbicide and/or fungicide application.
- Use proper water volume (minimum 10 gallons) to ensure uniform coverage and optimum uptake.
- Do not spray in the heat of the day or when plants are under moisture stress. Spray in the late evening or early morning.
- Tank mix compatibility is impacted by water quality which may vary by location, so conduct a jar test prior to combining Kinetic with a crop protection product or visit www.atpnutrition.ca for product compatibility information.
- To view the Kinetic Line's SDS and Product Labels please visit www.atpag.com

Product	Analysis	Rate (L/ac)	Timing	Form
Kinetic Copper	5.0Cu-2.5S + Transit-S + Cellburst	0.5-1.0	Foliar	Liquid



At ATP, we believe a proactive, science-based approach to restore the balance between plant and soil health is the single most effective way to deliver the genetic potential of the crop. We challenge the status quo by utilizing agtech to monitor and drive productivity.



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