

# TECHNOLOGY BEYOND the POINT of NUTRITION™

Active AgriScience Inc. supports the farming community by providing innovative, effective and economical products. A leader in plant nutrient and bioactive compound research and technology, Active AgriScience uses rigorous scientific methods to develop full cycle fertilizer and nitrogen management solutions to help enhance crop potential while being mindful of environmental impacts.

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2023

# ENHANCING FOLIAR NUTRIENT PENETRATION & ABSORPTION



Although micronutrients are needed in smaller quantities than primary nutrients, they are essential for strong, healthy growth and high yields. Insufficiency of micronutrients in the soil can limit growth, even when all other nutrients are present in adequate amounts. Active Zinc, Active Manganese, Active Boron, Active Iron, and Active Copper are foliar-applied micronutrients for fast correction of deficiencies.









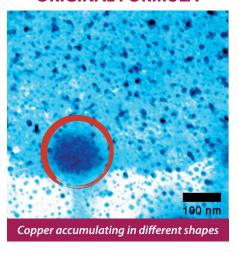


### **NEW FORMULA SHOWS ENHANCED MICRONUTRIENT EFFICIENCY**

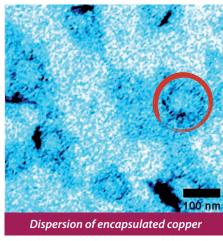
At Active AgriScience we are constantly reworking our formulas to deliver the highest quality product for growers. Recently we've tested a new formula that could significantly improve the efficacy of our micronutrient products. The new formula contains an ingredient that is 100% utilizable by the plant and helps disperse micronutrients so they are easier to absorb.

What does this mean for growers? With this formula change we are ensuring more of the applied micronutrients are utilized by the crop. Greater nutrient absorption leads to healthier plants that are better equipped to reach their yield potential.

# **ORIGINAL FORMULA**



# **NEW FORMULA**



Images were taken with the collaboration between Western College of Veterinary Medicine at the University of Saskatchewan, Li Yang, Ph.D., and Active Agriscience Inc., Maria Romero-Pena, Ph.D.



### **RESEARCH EXPLANATION**

A greenhouse trial was conducted at the Global Institute for Food Security (GIFS) to compare the absorption rate of the original Active AgriScience micronutrient products (Active Zinc, Active Manganese, Active Boron, Active Iron, and Active Copper) to the new and improved formula.

Micronutrient products were tested **individually** on canola and wheat plants. A **micronutrient mixture** (four products in one) was also tested on canola and wheat.

Overall, plants treated with the new micronutrient formulas showed a significantly higher nutrient composition compared to plants treated with the original formulas.

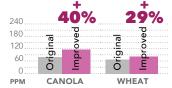
ACTIVE AGRISCIENCE DISCLAIMER: Presented Data and product attributes will not guarantee the future efficacy and product attributes as these vary greatly related to weather conditions soil types and genetics of crops. It is understood and agreed that Active AgriScience Inc. ("Active") does not guarantee that use of its Products will yield any specific result. Active's legal liability, and that of its employees or agents, arising from use of its products shall be limited to the cost paid for the product regardless of whether any loss arose from Actives own negligence, breach of contract, or any other cause. Under no circumstance shall Active be liable, beyond the cost paid for the product, for direct consequential, incidental, or special damages, including, but not limited to, damage or destruction of a crop, or contamination of any property.



### INDIVIDUAL MICRONUTRIENT ABSORPTION IN CANOLA AND WHEAT



PRODUCT	CANOLA (ppm)	WHEAT (ppm)
Original	83	65
New & Improved	116	84
% Increase	39.8%	29.2%



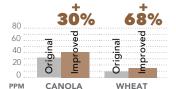


PRODUCT	CANOLA (ppm)	WHEAT (ppm)
Original	220	161
New & Improved	221	166
% Increase	0.5%	3.1%

240		.5%	•		3%	•
180 120 60	Original	Improved		Original	Improved	
PPM	CAN	IOLA		WH	IEAT	

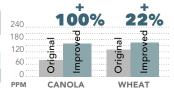


PRODUCT	CANOLA (ppm)	WHEAT (ppm)	
Original	32.63	9.36	
New & Improved	42.41	15.71	
% Increase	30.0%	67.8%	



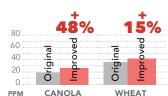


PRODUCT	CANOLA (ppm)	WHEAT (ppm)	
Original	80	134	
New & Improved	160	163	
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PRODUCT	CANOLA (ppm)	WHEAT (ppm)
Original	18.75	37.62
New & Improved	27.66	43.13
% Increase	47.5%	14.6%

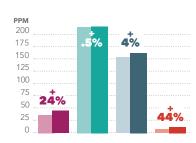


# **MICRONUTRIENT MIXTURE ABSORPTION IN CANOLA AND WHEAT**



WHEAT

MICRO NUTRIENT	ORIGINAL (ppm)	NEW & IMPROVED (ppm)	% INCREASE
Zinc	34	42	23.5%
Manganese	216	217	0.5%
Iron	154	160	3.9%
Copper	8	11.55	44.4%





**CANOLA** 

MICRO NUTRIENT	ORIGINAL (ppm)	NEW & IMPROVED (ppm)	% INCREASE	
Zinc	77	83	7.8%	
Manganese	84	96	14.3%	
Iron	93	128	37.6%	
Copper	9.06	15.41	70.1%	

