



## Trial Details:

Grandview, Manitoba - August 2017	
Treatment applied at R1 Stage	
Product Application	Application Rate
UTC	Grower Standard
Black Label®	2 L/ac
Katalyst®	2 L/ac

## Trial Results:

Application	Yield Increase	ROI*
UTC	N/A	N/A
Black Label @ 2L/ac	2.35 bu/ac	\$16.88/ac
Katalyst @ 2L/ac	3.41 bu/ac	\$29.03/ac

\*ROI based on crop market value at time of harvest

## Trial Highlights:

Katalyst vs Untreated	
Protein Increase	1.1%
Oil Content Increase	0.5%



Katalyst® (0-0-25 with 5% Actagro Organic Acids®) is a highly available form of potassium that is complexed with Actagro Organic Acids® and intended to stimulate early growth. It fuels the plant's carbohydrate translocation process and improves the efficiency of water use for healthy, balanced and significantly more productive crops. Katalyst® is chloride free, liquid potassium, making it easy to incorporate into any nutritional program as it can be applied directly to soil, foliar or through an irrigation system. Katalyst® blends well with UAN and can be mixed 1:1 with Black Label® or with other macronutrients.

### Maximize Nutrient Availability By:

- Increasing CEC in the application zone
- Increasing mineralization and solubility of nutrients
- Reducing the negative effect of variable pH

### Moderate Toxicity of Salts By:

- Complexing fertilizer salts reducing root and leaf burn
- Buffering the negative effects of soil and water salts

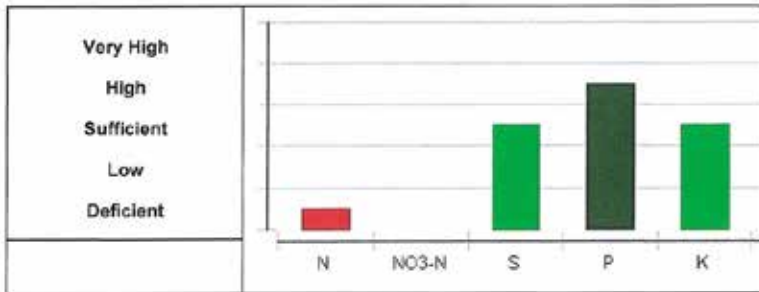
### Improve Plant and Microbial Activity By:

- Providing food sources for beneficial microbes
- Encouraging greater root mass and plant vigor

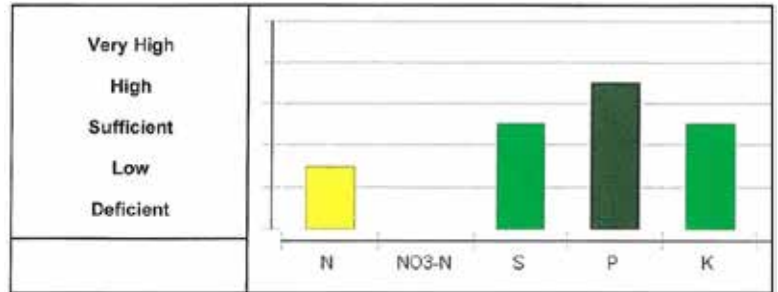


The nutrient sufficiency of the soil was tested ten days after the application of Katalyst. Below you will notice that the addition of the highly available potassium had an immediate effect on the soils nitrogen levels in comparison to an untreated soil. The added potassium helps the plant easily take up these additional nutrients from the soil.

*Untreated - Nutrient Sufficiency Ratings*



*Katalyst - Nutrient Sufficiency Ratings*



Across a broad range of soil types, crops and soils treated with Actagro Organic Acids® are highly valued for their ability produce high yields. Actagro is committed to the delivery of new agronomic tools and programs for production agriculture which restore soil health and maximize plant productivity. Actagro products provide an optimized nutrition delivery system via the Actagro Organic Acids Technology Platform™ and are proven to replenish the soil via multiple mechanisms, resulting in higher yields and improved crop quality.

In essence, the Actagro Organic Acids in Actagro products are a unique, high carbon content material derived from a humate-based technology that utilizes active ingredients extracted from Leonardite in a proprietary process. As a science-based, technology provider, we deliver a broad range of highly effective solutions for current agricultural challenges. The power and legitimacy of our science is what makes our products so valuable to growers and farmers worldwide.