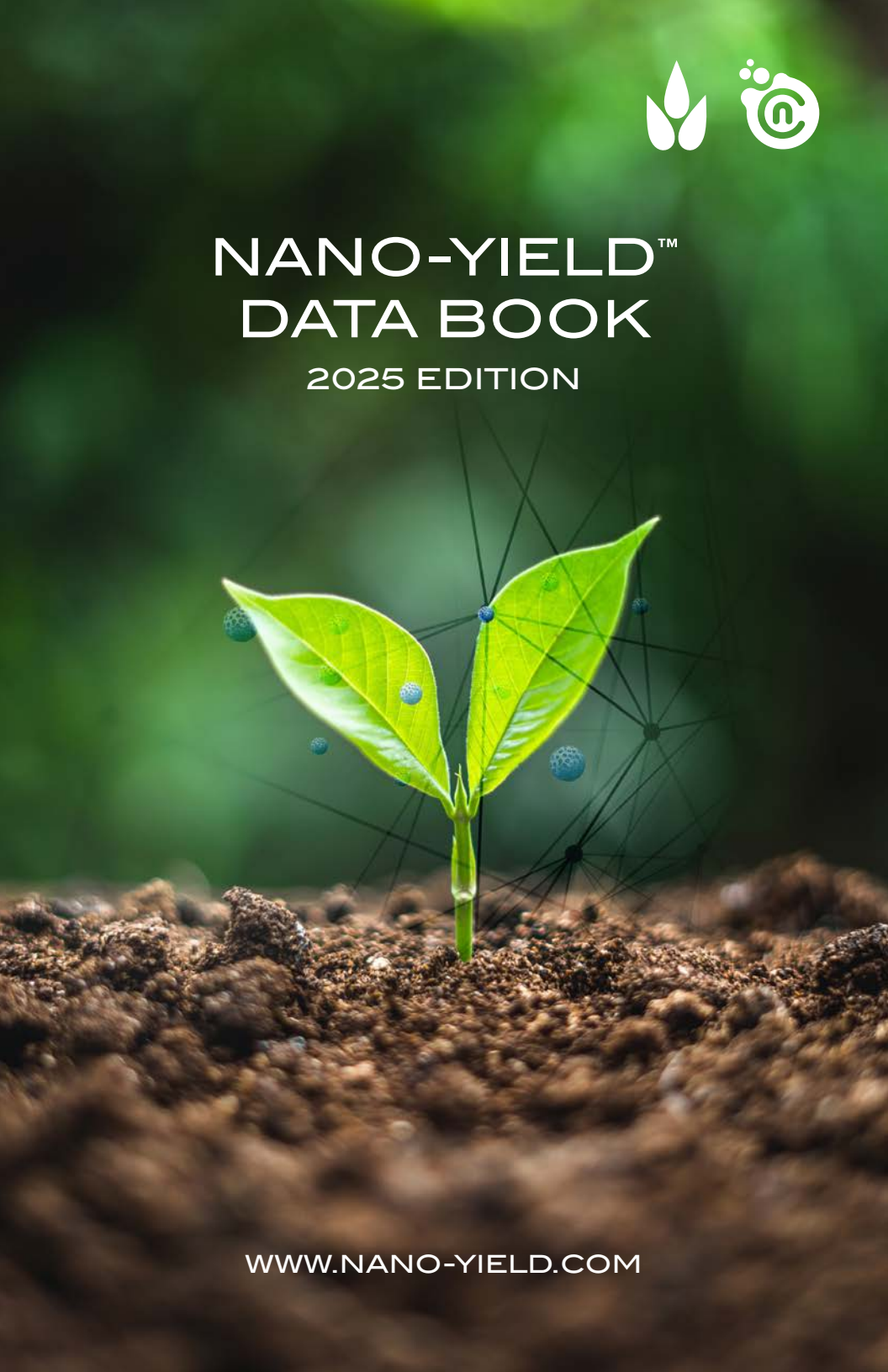
NANO-YIELD™ DATA BOOK

2025 EDITION



WWW.NANO-YIELD.COM

OUR CORE PRODUCTS

NanoPro®

NanoPro® carrier adjuvant increases uptake of herbicides, insecticides, fungicides, and PGR products using a unique mode of action.

NanoN+®

NanoN+® is designed to protect and carry nutrients in liquid solution to improve efficiency and reduce waste. NanoN+® enhances plant nutrient uptake and availability for liquid nutrient formulations including macro and micronutrient products.

nanoCOTE™ CORE

NanoCote™ Core can be applied to your nitrogen, phosphorus, or dry potash fertilizer blends to improve nutrient uptake and efficiency.

OUR NUTRITIONAL PRODUCTS

Looking to add an additional boost of macro or micronutrients? These products come preloaded with additional nutrition to drive directly into the plant!

NANOLIQUID MACRONUTRIENTS

NanoCS® // 1-2-1-3Zn
The nanoliquid crop starter enhancer

NanoPhos® // 0-47-0
Nanoliquid technology for improved phosphorus efficiency

NanoK® // 0-0-21
Nanoliquid technology for improved potassium efficiency

NanoStress® // 0-17-21
Nanoliquid delivery of phosphorus and potassium at critical growth stages

NANOLIQUID MICRONUTRIENTS

NanoCalSi® // 6Ca
Nanoliquid technology for improved calcium use efficiency

NanoPack® // 0.5Cu-2Fe-1Mn-1Zn
Nanoliquid technology delivering a blend of essential micronutrients

NanoZn® // 9Zn EDTA
Nanoliquid technology for improved zinc use efficiency

EASY MIXING GUIDELINES

1. Add water and water conditioners
2. Add crop input
3. Add nanoliquid product
4. Add surfactant (if needed)

Table of Contents

NANOLIQUID® TECHNOLOGY **PAGES 6-97**

ROW CROPS

Alfalfa 7-9
Corn 10-30
- In-furrow 10-13
- Banded 15-20
- Sidedress 21-25
- Foliar 26-30
- Precision Planting 11, 18, 19, 26-29
- Beck's PFR 16-17

Corn Silage 31
Cotton 32-34
Grass Seed 35
Peanut 36-38
Potato 40-43
Soybean 44-52
- Beck's PFR 44-45, 48-49
- Precision Planting 50

Sugar Beet 53
Sugar Cane 54-55
Wheat 56-59

VEGETABLES

Onion 61
Tomato 62-65

CITRUS & AVOCADO

Avocado 66-67
Citrus 68-71

FRUIT & NUT

Almond 72
Apple 74-80
Grape 82-85
Peach 86
Pear 87-88
Pecan 89
Walnut 90

NURSERY 92-93

HERBICIDES 94-97

NANO-COATING TECHNOLOGY **PAGES 98-115**

Nitrogen Volatility Trial 99, 104
Phosphorous Availability Trial 100
Alfalfa 101
Corn 102-108
- Beck's PFR 102
- Precision Planting 103

Potato 109-111
Sod 112
Soybean 113-115

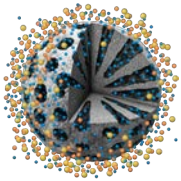
DELIVER MORE

with nanotechnology by Nano-Yield™

Nanoliquid® technology is a cutting edge technology that brings efficient delivery of nutrients or crop protection into the plant either through root or foliar uptake. Nano-Yield offers specific types of patented nanoparticle technology engineered for driving chemistry and nutrition.

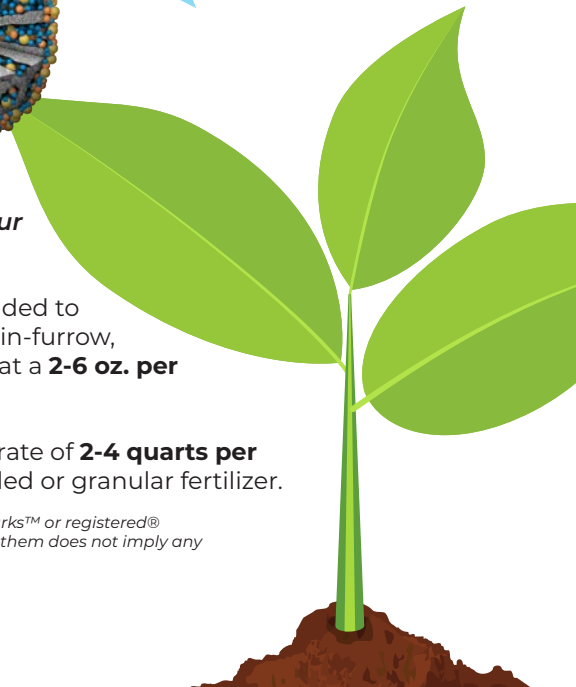
SCAN THE CODE TO WATCH A BRIEF OVERVIEW OF OUR TECHNOLOGY

MIX



LOAD

DELIVER



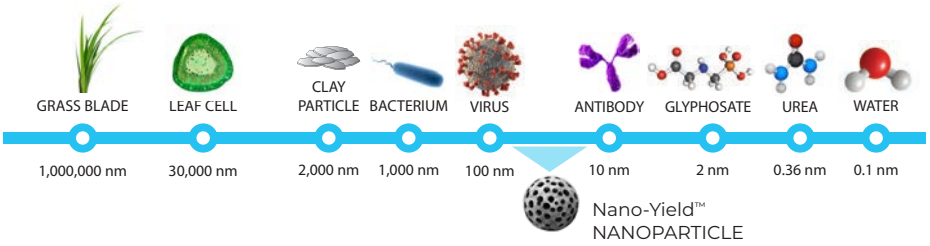
Nano-Yield products are easy to use and incorporate into your crop programs.

Aqua-Yield® products can be added to any boom spray, drip irrigation, in-furrow, fertigation or aerial application at a **2-6 oz. per acre rate.**

NanoCote™ can be applied at a rate of **2-4 quarts per ton** of macro/micronutrient prilled or granular fertilizer.

What is a nanoparticle?

A nanoparticle is usually defined as a particle that is between 1 and 100 nanometers in diameter. Nano-Yield™ nanoliquid® particles are between **10 and 100 nanometers**.

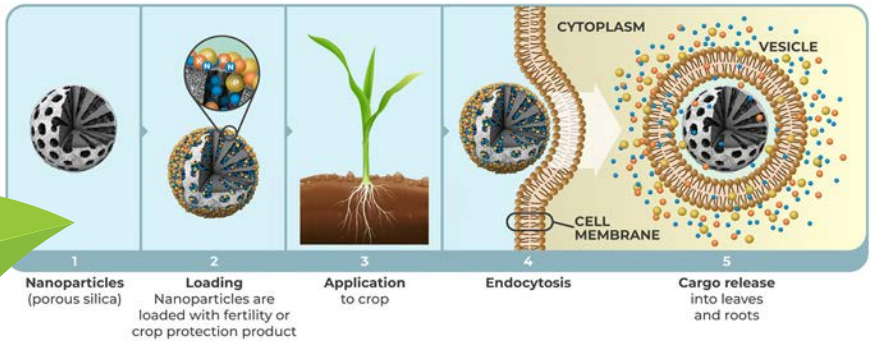


Why are nanoliquid particles special?

Each Nano-Yield nanoparticle carries thousands of fertilizer ions or active ingredient molecules rapidly into the plant cell by a plant mechanism called endocytosis. While conventional products are only absorbed through diffusion and active transport, **only nanoparticles are taken up via endocytosis.**

Loading and unloading nanoparticles

Nano-Yield nanoparticles are designed to be loaded with any common fertilizer ion or active ingredient. The particles carry these materials into the plant and release them once inside.



Improves foliar and soil applications

When soil applied, Nano-Yield nanoparticles stay in solution or loosely cling to soil colloids making them able to deliver more nutrients to the plant. When applied by foliar application, Nano-Yield nanoparticles adhere to plant surfaces enhancing penetration through the cuticle. Both root and foliar applications will benefit from endocytosis.

NanoPro® Increases Active Ingredient Uptake for Herbicides, Fungicides, and Insecticides

NEW!

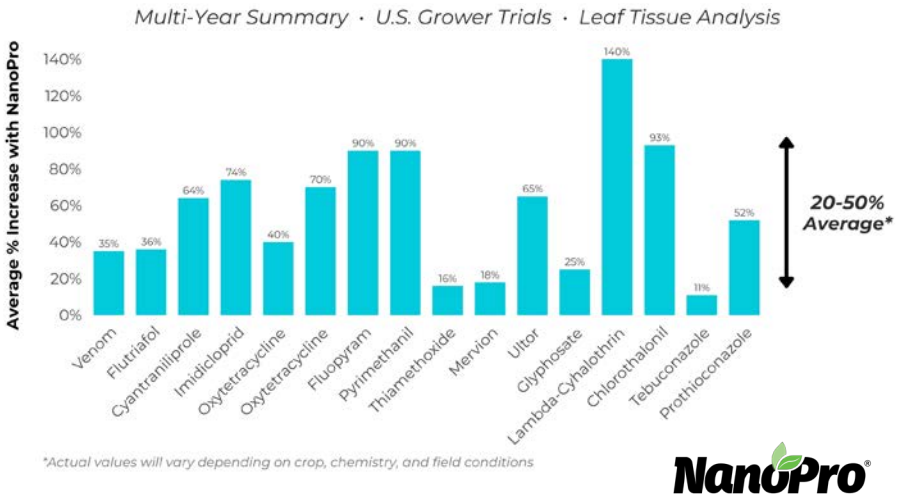
Year:	2018-2024
Collaborator:	US Grower Trials
Location:	United States

Application Type:	Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoPro®

Summary:

With NanoPro, every application works harder for you! This game-changing technology boosts active ingredient uptake for herbicides, fungicides, and insecticides by an average of 20-50%.

These multi-year U.S. grower trials prove that NanoPro maximizes efficiency, ensuring you get the most out of every tank and every pass.



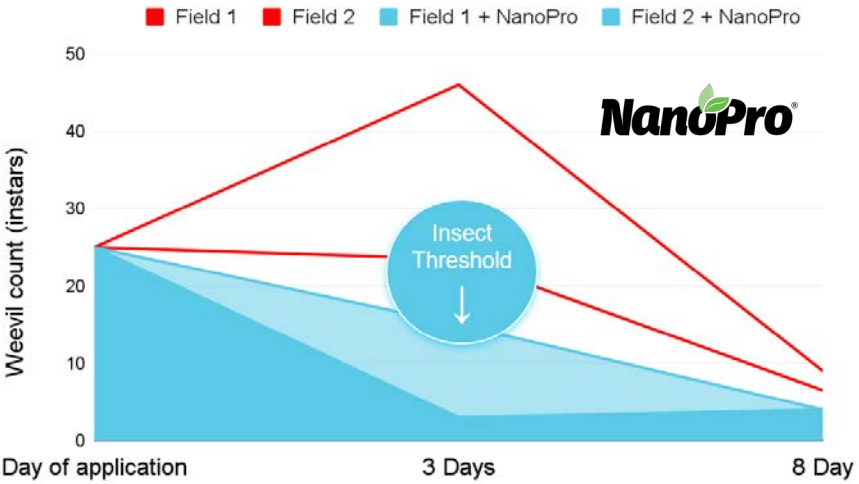
NanoPro® Speeds Up Insecticide Activity for Steward® EC Insecticide

Year:	2023
Collaborator:	Grower
Location:	Washington

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Steward® EC (Indoxacarb)

Summary:

The addition of NanoPro to Steward insecticide sped up the kill of alfalfa weevil below threshold levels in under one week.



ALFALFA

NanoStress® Improves Alfalfa Yield and Relative Feed Value (RFV)

ROI 7:1

Year:	2018
Collaborator:	Utah State University
Location:	Utah

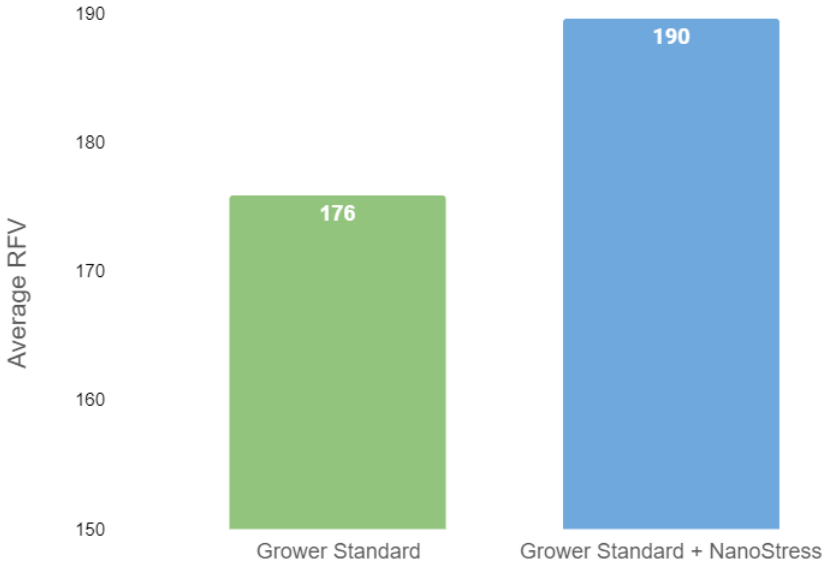
Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoStress®

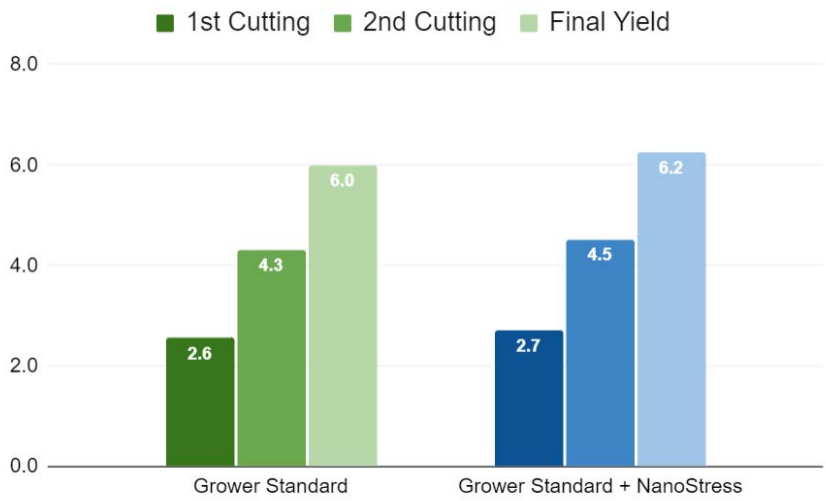
Summary:

Applying NanoStress three times per season (one application per cutting) increased alfalfa yield 0.2 tons/ac, and increased relative feed value by 8%.

NanoStress®

Average Relative Feed Value (RFV) for 3 Alfalfa Cuttings





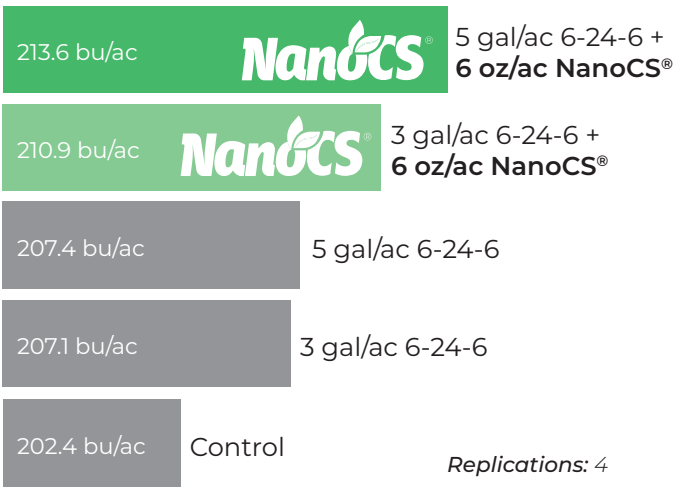
NanoCS® Increases Corn Starter Efficiency

Year:	2021
Collaborator:	Agri-Tech Consulting
Location:	Whitewater, Wisconsin

Application Type:	In-furrow, Crop Nutrition
Nano-Yield Product:	6 oz/ac NanoCS®
Additional Product:	6-24-6

Summary:

In this trial by Agri-Tech Consulting, various rates of 6-24-6 and NanoCS were trialed in-furrow. Adding NanoCS helped increase the bushels per acre at both the half (3.8 bu/ac) and full rates (6.2 bu/ac) of 6-24-6.



Replications: 4

NanoCS® Improves Corn Yield with NACHURS imPulse® at a 50% Reduced Rate

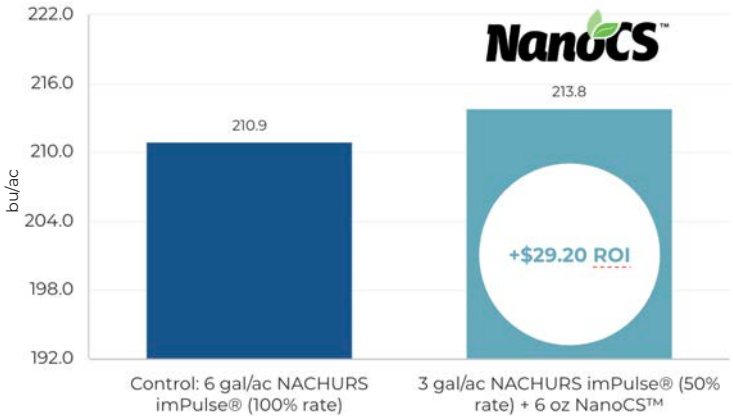
ROI: $29.20 per acre

Year:	2022
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

Application Type:	In-furrow, Crop Nutrition
Nano-Yield Product:	6 oz/ac NanoCS®
Additional Products:	NACHURS imPulse® (10-18-4) FurrowJet®

Summary:

Adding NanoCS to a reduced rate of NACHURS imPulse resulted in a 2.9 bu/a increase in corn yield, and a $29.20 ROI per acre.



PURPOSE: To evaluate yield and the economics of NanoCS® in tandem with NACHURS imPulse® 10-18-4, then compared to 50% rate reduction of NACHURS imPulse®. NanoCS® was applied in-furrow at planting in a FurrowJet® center only application. PAGE 94-95 of Precision Planting® 2022 PTI Results.

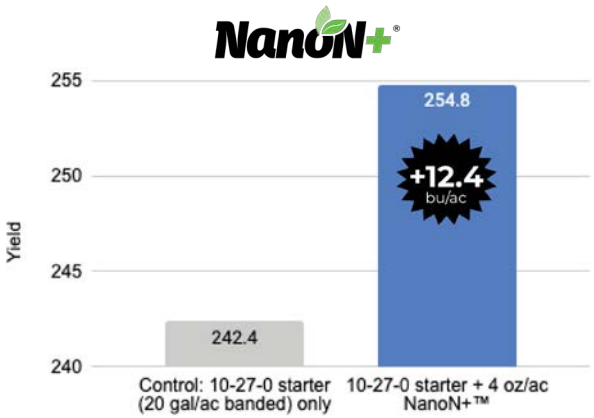
NC State Demonstrates How NanoN+® and NanoCS® Increase Corn Yield

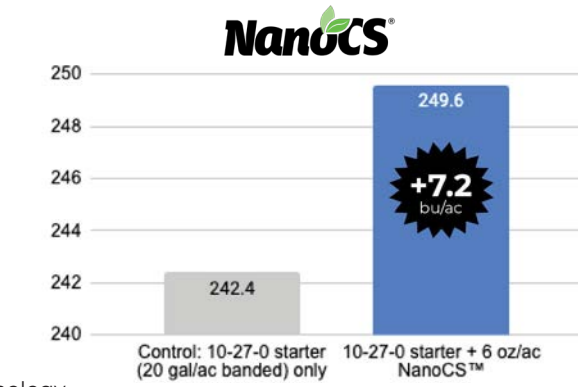
Year:	2023
Collaborator:	NC State University
Location:	Plymouth, North Carolina

Application Type:	In-furrow, Crop Nutrition
Nano-Yield Products:	4 oz/ac NanoN+® 6 oz/ac NanoCS®
Additional Product:	20 gal/ac 10-27-0

Summary:

Applying NanoCS and NanoN+ in-furrow alongside a standard starter product (10-27-0) both resulted in higher yield. Applying NanoN+ resulted in 12.4 more bu/ac and NanoCS 7.2 bu/ac.





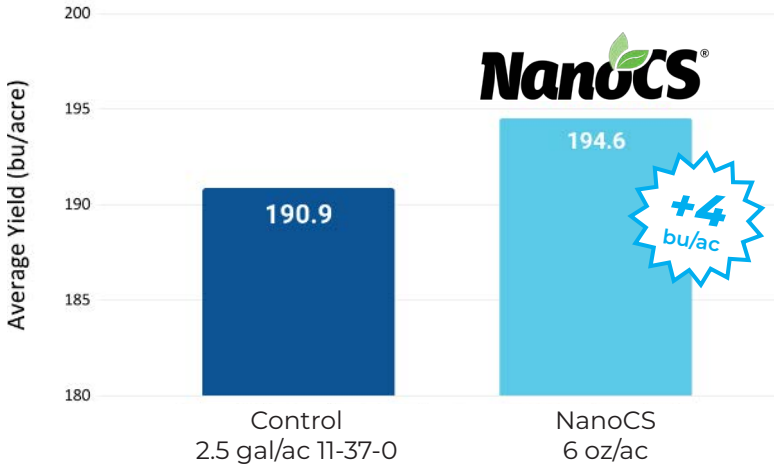
NanoCS® Improves Corn Yield More than Standard Starter

Year:	2022
Collaborator:	TSM Services
Location:	Catlin, Illinois

Application Type:	In-furrow, Crop Nutrition
Nano-Yield Product:	6 oz/ac NanoCS®
Additional Product:	2.5 gal/ac 11-37-0

Summary:

This study compared NanoCS to a standard in-furrow starter. 6 oz/acre of NanoCS resulted in 4 bu/ac higher corn yield than 2.5 gal/ac of 11-37-0.



University of Wisconsin: Nitrogen Leaching Trial

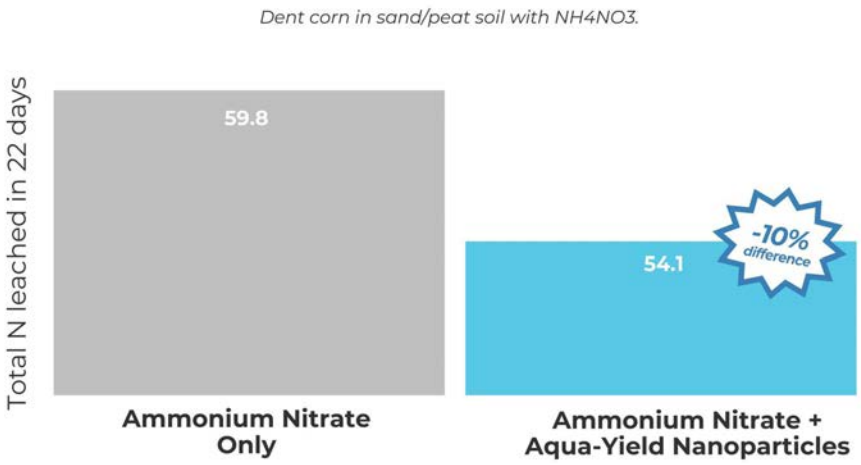
NEW!

Year:	2022
Collaborator:	University of Wisconsin
Location:	Wisconsin

Application Type:	Lab Trial
Nano-Yield Product:	Aqua-Yield® nanoliquid®
Additional Product:	NH_4NO_3

Summary:

In this University run replicated trial in Wisconsin, we looked at how nanoparticles affect nitrogen leaching. The study was done on dent corn in sandy/peat type soils. After 22 days there was a 10% decrease in leaching of ammonium nitrate where nanoliquid was added vs the check.



NanoN+ Improves Corn Yield with 2x2 Starter

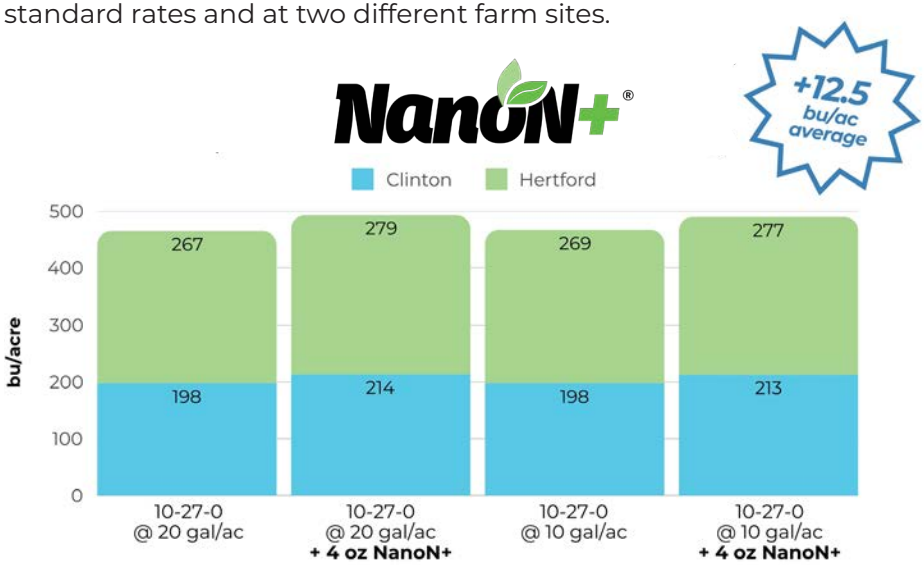
NEW!

Year:	2024
Collaborator:	NC State University
Location:	Plymouth, North Carolina

Application Type:	Starter, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	60 units UAN

Summary:

A second year trial with North Carolina State University showed starter treatments with NanoN+ added had 12.5 bu/acre higher yield on average. The starter (10-27-0) was applied 2x2 at two standard rates and at two different farm sites.



Beck's PFR Proven: NanoN+®
3-Year Replicated 2x2x2 Starter Trial

ROI: $17.54 per acre average

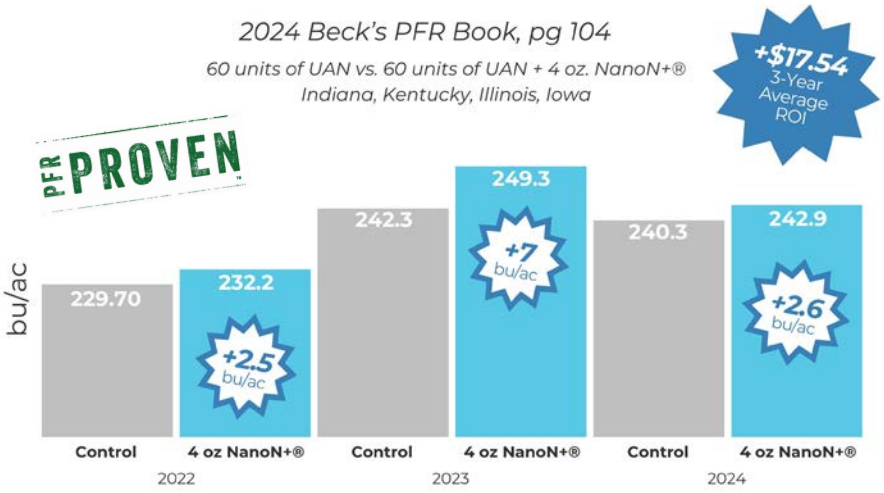
NEW!

Year:	2022-2024
Collaborator:	Beck's PFR
Location:	Indiana, Kentucky, Illinois, Iowa

Application Type:	Banded at Planting, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	60 units UAN

Summary:

For the third year in a row nanoliquid products increased corn yield for Beck's PFR trials. A single application of NanoN+ applied at planting with 60 units of UAN resulted in an average increase in 4 bu/acre and an average ROI of $17.54 per acre. This average was calculated with replicated third party data across multiple states. **NanoN+ is now PFR PROVEN!**



BECK'S

Beck's PFR Proven: NanoN+® 2024 Replicated 2x2x2 Starter Trial

ROI: $7.92 per acre

NEW!

Year:	2024
Collaborator:	Beck's PFR
Location:	Indiana, Kentucky, Illinois, Iowa

Application Type:	Banded at Planting, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	60 units UAN

Summary:

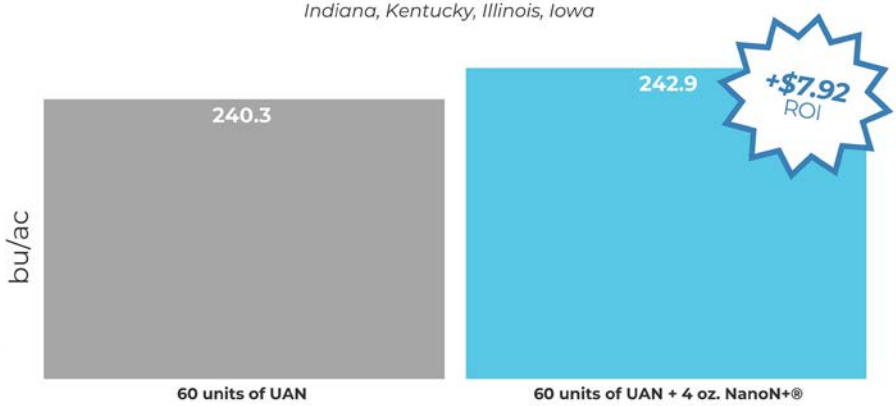
In this third year of adding NanoN+ with 60 units of UAN at planting, corn yield increased by 2.6 bu/ac and provided a $7.92 ROI per acre. **NanoN+ is now PFR PROVEN!**

NanoN+®

PFR PROVEN

2024 Beck's PFR Book, pg 104

Indiana, Kentucky, Illinois, Iowa



NanoN+® Increases Corn Yield with UAN Nitrogen

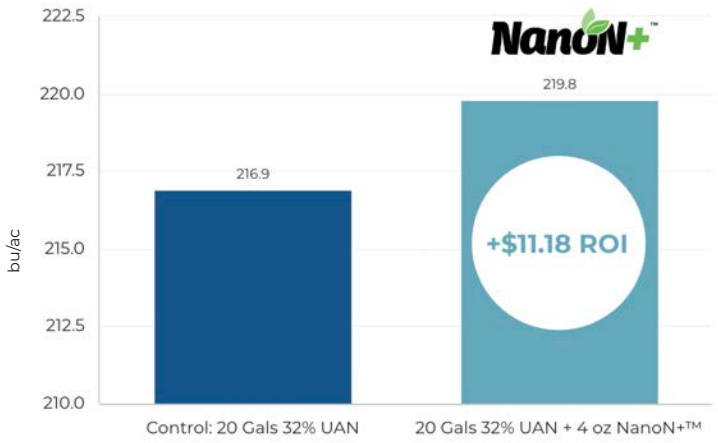
ROI: $11.18 per acre

Year:	2022
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

Application Type:	Banded at Planting, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Products:	20 gal/ac 32-0-0 UAN Conceal®

Summary:

Adding NanoN+ with UAN nitrogen fertilizer resulted in a 2.9 bu/a increase in corn yield, and an $11.18 ROI per acre.



PURPOSE: To evaluate yield and the economics of NanoN® in tandem with 32% UAN nitrogen fertilizer. NanoN+® was applied at planting in a dual band Conceal® application. PAGE 125-126 of Precision Planting® 2022 PTI Results.

Precision Planting®

NanoN+® Increases Corn Yield with Precision Planting

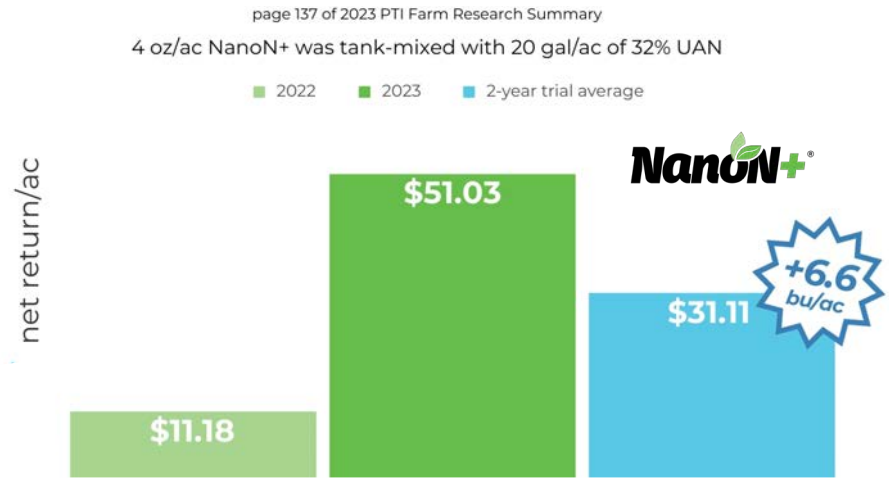
ROI: $53.01 per acre

Year:	2023
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

Application Type:	Banded at Planting, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	20 gal/ac 32-0-0 UAN Conceal®

Summary:

For the second year in a row nanoliquid product increased corn yield for Precision Planting trials. A single application of NanoN+ applied at planting with 20 gal/ac of UAN resulted in an increase of 10.4 bu/acre and a ROI of $51.03 per acre.



NanoN+ Boosts Yield in Corn Starter Trial

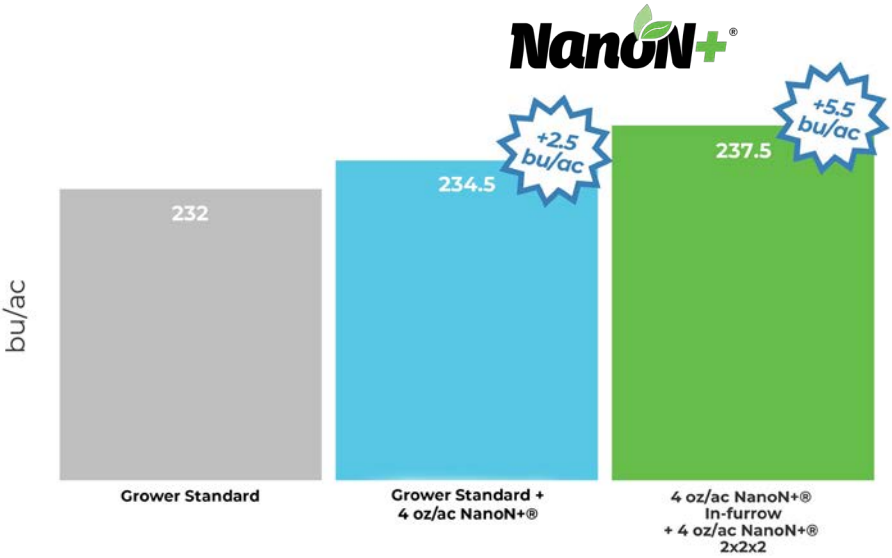
NEW!

Year:	2024
Collaborator:	Grower
Location:	LaPorte, Indiana

Application Type:	2x2x2, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®

Summary:

In this corn starter trial from Indiana, the grower added NanoN+ with the in-furrow and 2x2x2 applications and saw an increase of 5.5 bu/ac over the grower standard. When only applying NanoN+ with the 2x2x2 application he reported an increase of 2.5 bu/ac.



NanoN+ Boosts Yield in Corn Sidedress Trial

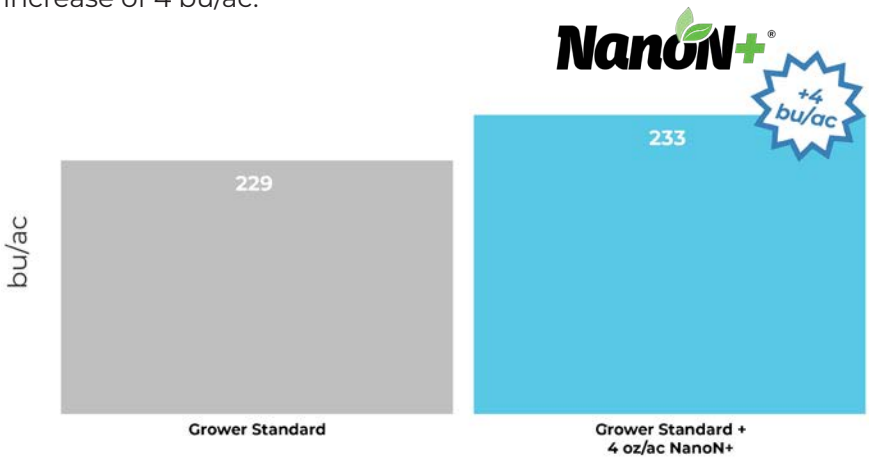
NEW!

Year:	2024
Collaborator:	Grower
Location:	LaPorte, Indiana

Application Type:	Sidedress, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®

Summary:

In this corn trial from La Porte, Indiana, the grower added 4 oz NanoN+ with the side dress application and reported an increase of 4 bu/ac.



NanoN+ Boosts Yield in Corn Sidedress Trial

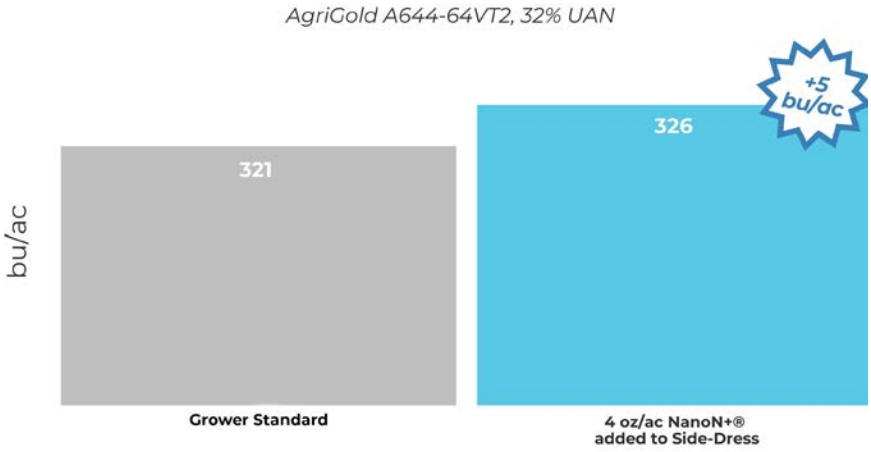
NEW!

Year:	2024
Collaborator:	Grower
Location:	Salem, Indiana

Application Type:	2x2x2, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	32% UAN

Summary:

In this corn trial from Salem, Indiana, the grower added 4 oz NanoN+ with the sidedress application and reported an increase of 5 bu/ac.



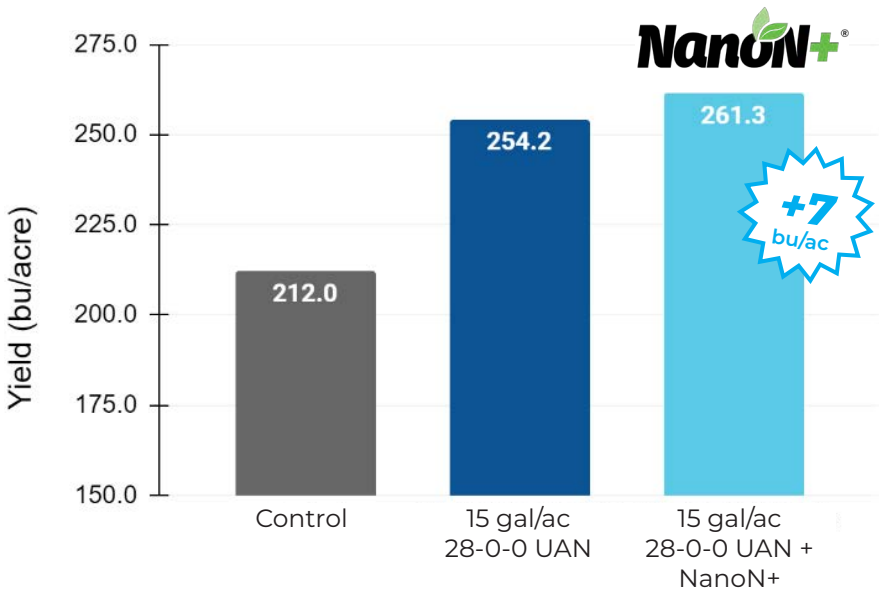
NanoN+® Boosts Corn Yield with 15 gal/ac Sidedress UAN

Year:	2020
Collaborator:	Agri-Tech
Location:	Garden City, Missouri

Application Type:	Sidedress, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	15 gal/ac 28-0-0 UAN

Summary:

Adding NanoN+ to UAN for sidedressing nitrogen on corn resulted in a 7 bu/ac increase compared to UAN alone.



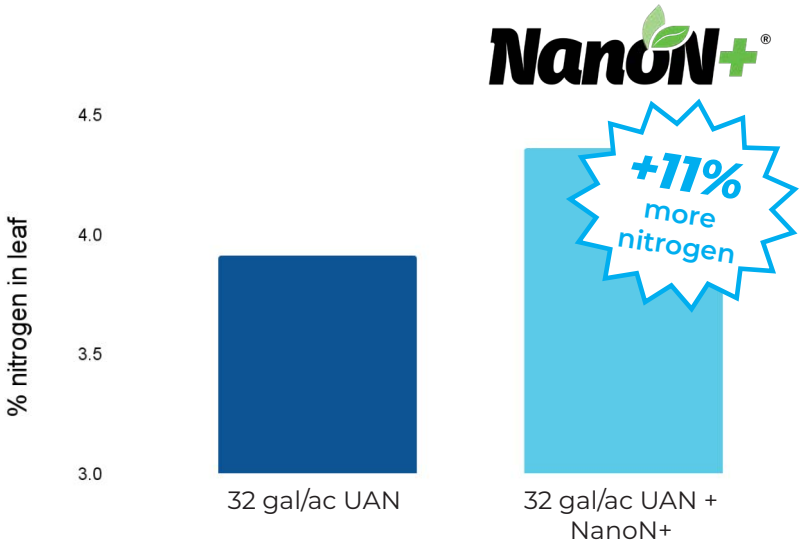
NanoN+® Improves Foliar Nitrogen Uptake on Corn

Year:	2023
Collaborator:	Sunbelt Expo
Location:	Moultrie, Georgia

Application Type:	Sidedress, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	32 gal/ac UAN

Summary:

In season tissue testing revealed that plots treated with NanoN+ had consistently higher nitrogen content (+11% average). Replicated data was produced by collecting 5 samples per field, taken 5 days post application.



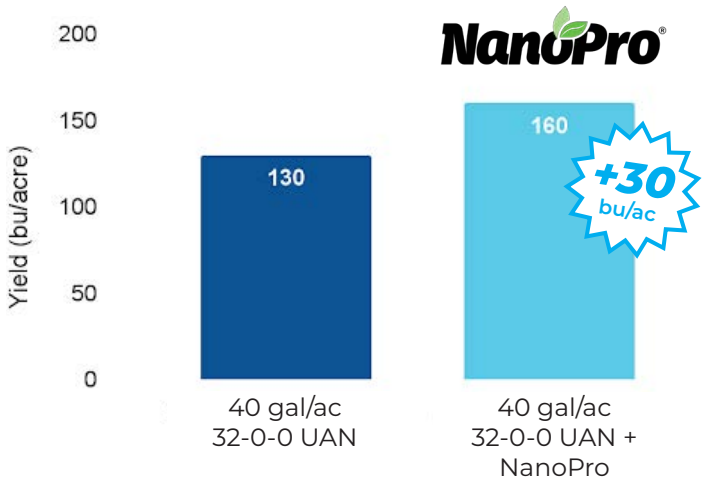
NanoPro® Boosts Corn Yield with 40 gal/ac Sidedress UAN

Year:	2023
Collaborator:	Grower
Location:	Beargrass, North Carolina

Application Type:	Sidedress, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	40 gal/ac 32-0-0 UAN

Summary:

Adding NanoPro to UAN for sidedressing nitrogen on corn resulted in a 23% yield increase (30 bu/ac) compared to UAN alone. Corn variety was Dekalb® 6744.



NanoK® Corn Foliar Potassium Study by Precision Planting

ROI: $19.74 per acre

NEW!

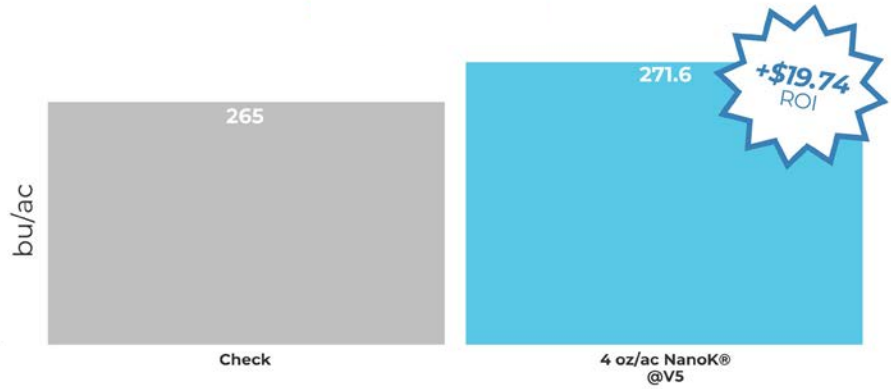
Year:	2024
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoK®

Summary:

NanoK increases corn yield when applied foliar to corn. A single application of NanoK applied at the V5 growth stage resulted in an increase of 6.6 bu/acre and a ROI of $19.74 per acre.

2024 PTI Results Book, pg 159-160



NanoK®

Precision Planting®

NanoK® Corn Foliar Potassium Study by Precision Planting 2022-2024

NEW!

Year:	2022-2024
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

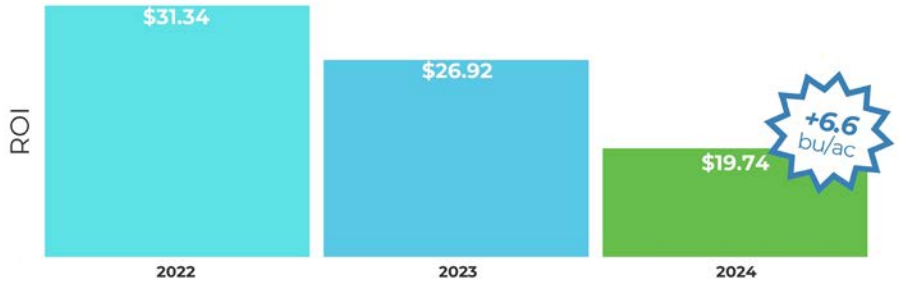
Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoK®

Summary:

For a third year in a row nanoliquid product increased corn yield for Precision Planting trials. A single application of NanoK applied at V5 resulted in an average ROI of $26.00.

2022 pg 157, 2023 pg 159, 2024 pg 159-160

4 oz/ac NanoK® @V5



NanoK®

NanoPro® Improves Activity of Miravis® Neo Fungicide on Corn

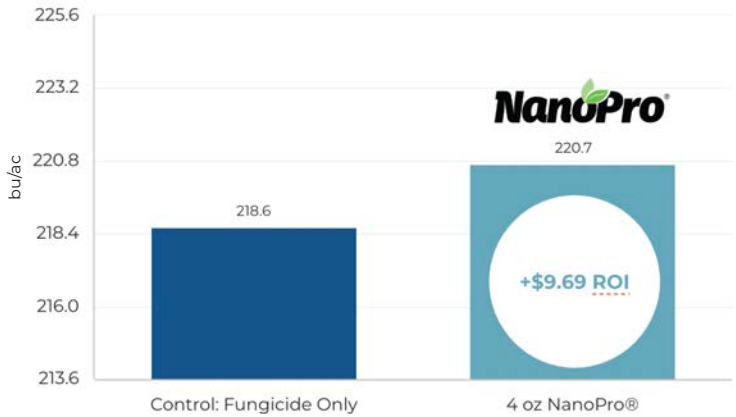
ROI: $9.69

Year:	2022
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	13.7 oz/ac Miravis® Neo

Summary:

Adding NanoPro increased the activity of Miravis Neo fungicide to provide higher corn yield (2.1 bu/ac) and a $9.69 ROI per acre.



PURPOSE: To evaluate yield and the economics of NanoPro® as a carrier adjuvant that enhances the uptake of crop protection products. NanoPro® was applied at 4 oz/ac at the VT growth stage with 13.7 oz/a Miravis® Neo. PAGE 158-159 of Precision Planting® 2022 PTI Results.

Precision Planting®

NanoPro® added with Fungicide Increases Corn Yield for Second Year

ROI: $8.24 per acre

Year:	2022-2023
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

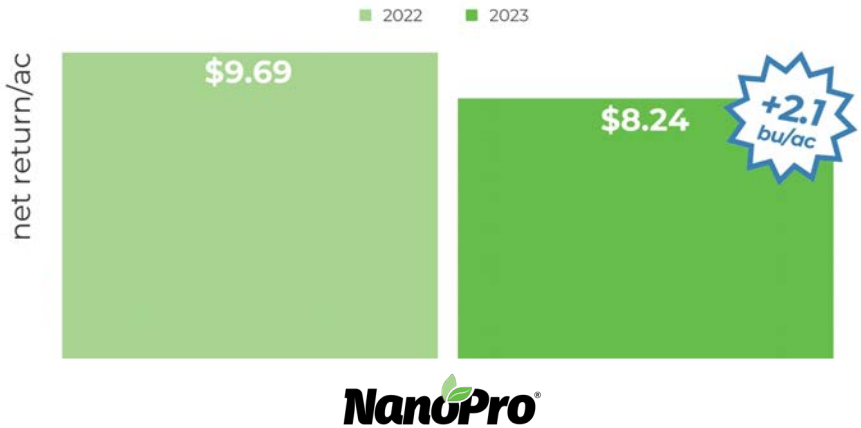
Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	13.7 oz/ac Miravis® Neo

Summary:

For a second, year nanoliquid product increased corn yield for Precision Planting trials. A single application of NanoPro applied with Miravis Neo fungicide at the VT stage resulted in an increase of 2.1 bu/acre and a ROI of $8.24 per acre.

page 158 of 2022 & page 137 of 2023, PTI Farm Research Summary

4 oz/ac of NanoPro® was tank-mixed with a corn fungicide applied at the VT growth stage (13.7 oz/ac Miravis® Neo).



Precision Planting®

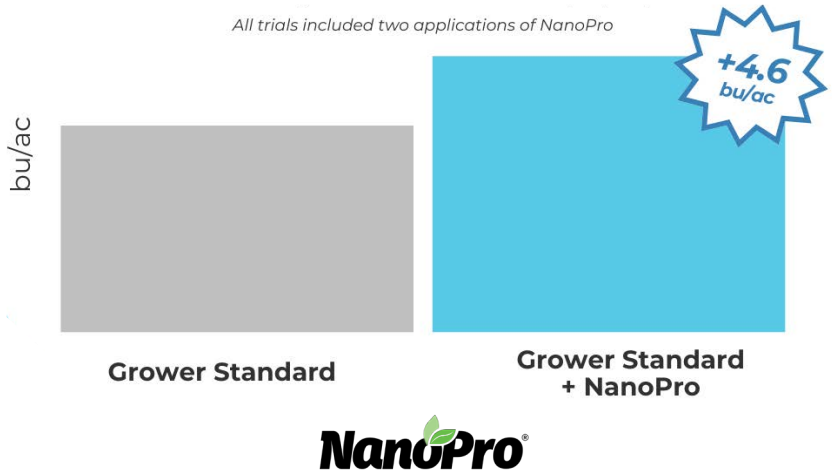
NanoPro® Increases Corn Yield with Both Nutrients and Crop Protection

Year:	2023
Collaborator:	Third Party
Location:	Indiana, Kansas, Minnesota, Iowa

Application Type:	Foliar, Crop Nutrition & Protection
Nano-Yield Product:	4 oz/ac NanoPro®

Summary:

NanoPro was evaluated as a flexible carrier adjuvant for tank mixes containing both nutrients and fungicide products. When NanoPro was added in two foliar applications to corn throughout the season, yield increased by 4.6 bu/acre on average. This average was calculated with replicated third party data across four states.



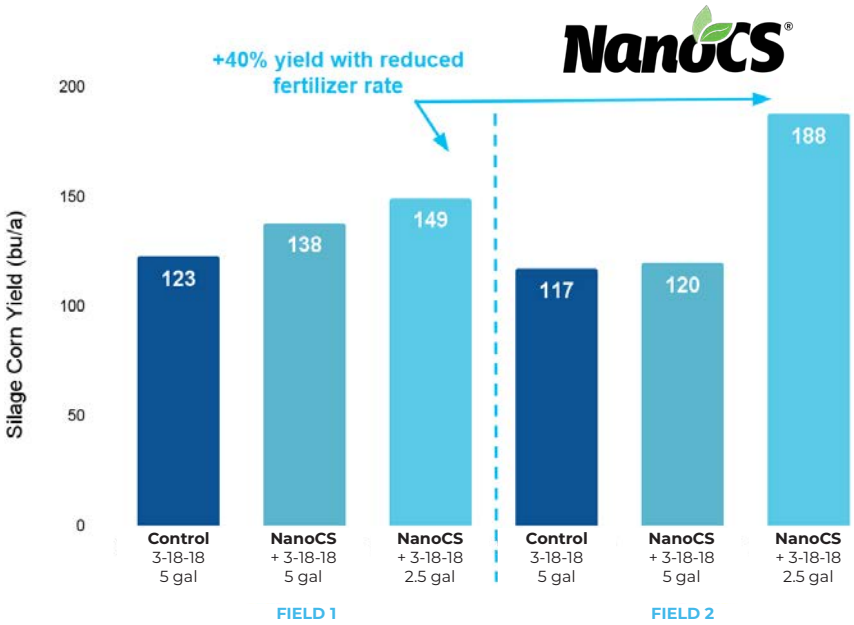
NanoCS® Improves Silage Yield During Drought Years

Year:	2020
Collaborator:	Agri-Tech
Location:	Garden City, Missouri

Application Type:	In-furrow, Crop Nutrition
Nano-Yield Product:	6 oz/ac NanoCS®
Additional Product:	3-18-18

Summary:

NanoCS provided improved corn growth and yield during extreme drought conditions. Two years of data were collected and plots treated with NanoCS had 9 bu/acre higher yield on average (8%).



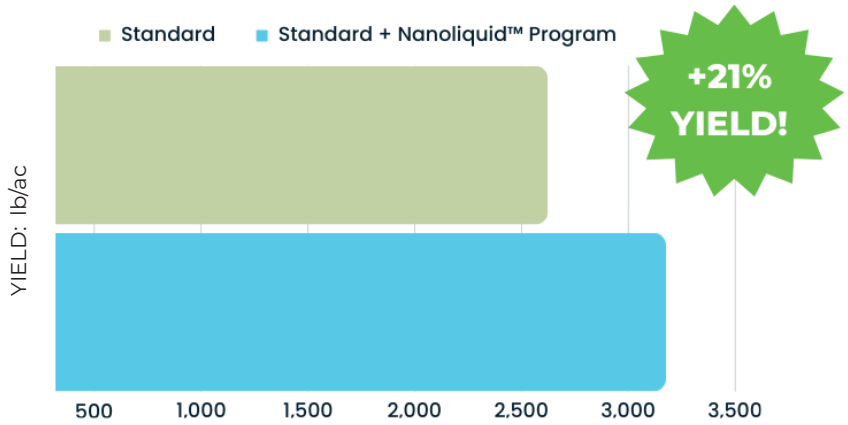
Incorporating Nanoliquid Products Improve Cotton Yield more than 20%

Year:	2023
Collaborator:	Sunbelt Expo
Location:	Moultrie, Georgia

Application Type:	Multiple, Crop Nutrition
Nano-Yield Product:	6 oz/ac NanoCS® 4 oz/ac NanoN+® 4 oz/ac NanoStress® 4 oz/ac NanoK®

Summary:

When nanoliquid products were added to a standard cotton program, yield was increased by 21% compared to the standard without nanoliquid products. The first application was NanoCS at planting, followed by NanoN+ mixed with sidedressed UAN, and NanoStress and NanoK applied in-season to alleviate crop stress.



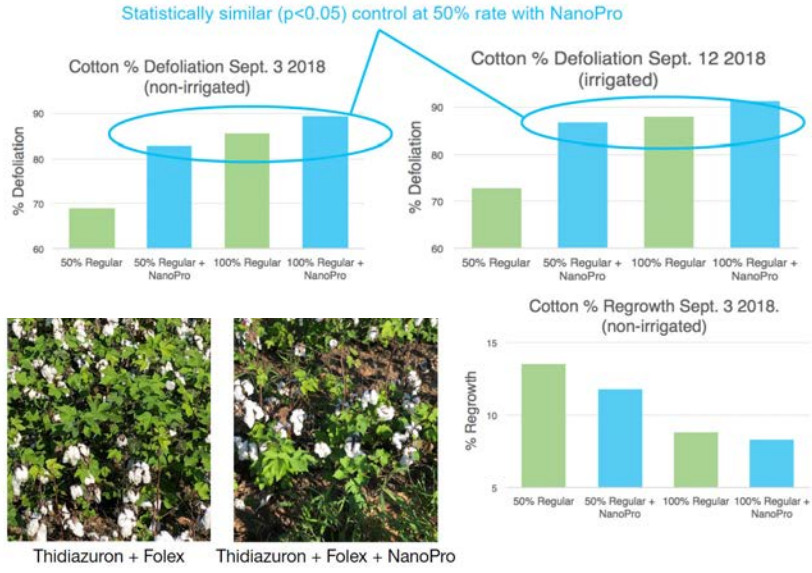
NanoPro® Improves Cotton Defoliation and Decreases Regrowth in Texas

Year:	2018
Collaborator:	Texas A&M
Location:	Snook, Texas

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	2.4 oz/ac Thidiazuron 12 oz/ac Folex 0.25 % v/v NIS

Summary:

NanoPro improved defoliation in all treatments for irrigated and non-irrigated cotton. At a reduced 50% chemical rate, the treatment with NanoPro maintained adequate defoliation while defoliation reduced significantly without NanoPro.



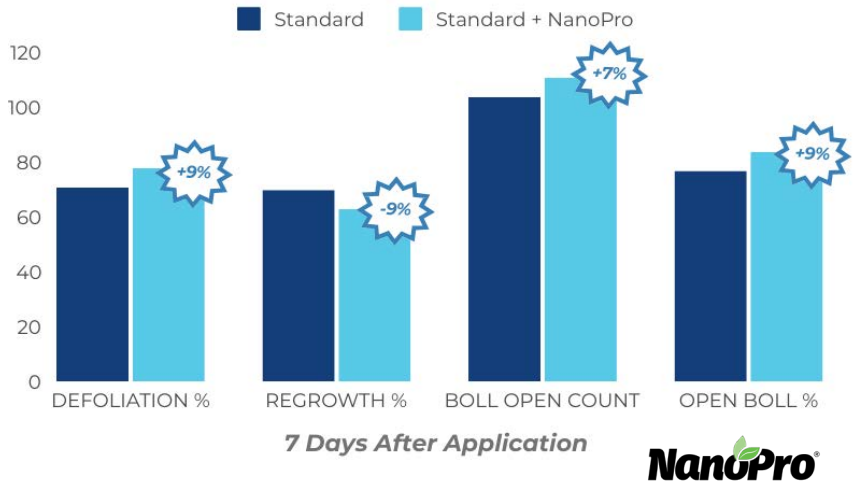
NanoPro® Improves Cotton Defoliation and Enhances Boll Opening

Year:	2023
Collaborator:	Louisiana State University
Location:	St. Joseph, Louisiana

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	2.4 oz/ac Thidiazuron 6 oz/ac Folex 22 oz/ac Ethephon

Summary:

The addition of NanoPro improved defoliation and reduced regrowth of cotton while increasing the number of open bolls. The effects on defoliation and regrowth were seen starting at 7 days after application (DAA) and continued through 21 DAA. Boll opening was similar by 21 DAA.



NanoPro® Improves Lodging Control with Palisade® EC PGR

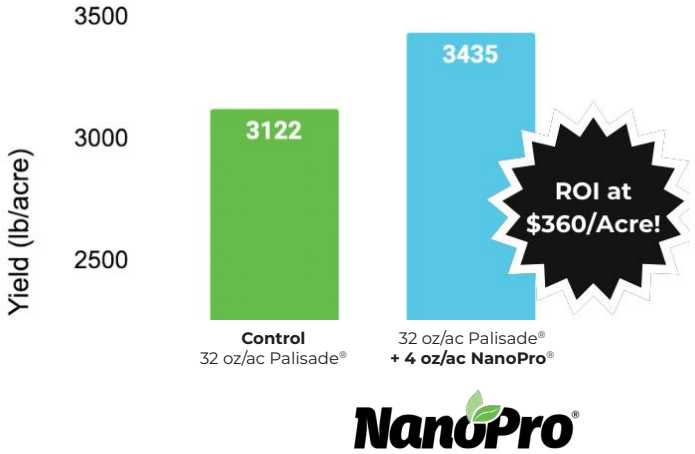
ROI: $360 per acre

Year:	2023
Collaborator:	Grower
Location:	Washington

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	32 oz/ac Palisade® EC PGR

Summary:

The addition of NanoPro to Palisade EC plant growth regulator improved lodging control for the grower's grass seed crop drastically, resulting in a 313 lb/acre increased yield. Where growers rely on a PGR product to mitigate the risk of crop lodging that prevents a smooth machine harvest, NanoPro is an optimal carrier adjuvant to ensure success.



PEANUT

NanoPro® Improves Peanut Yield

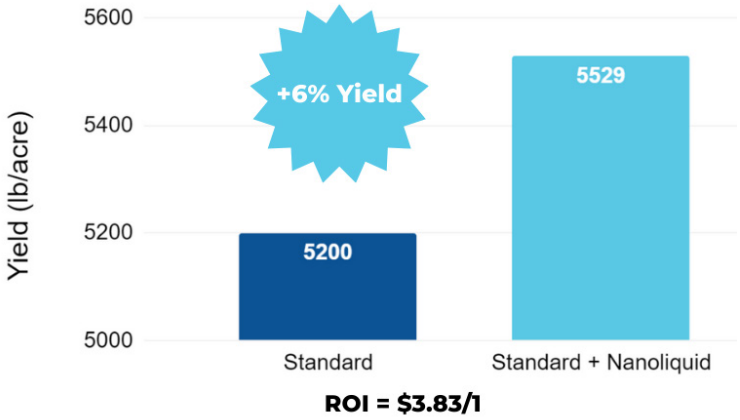
ROI: 3.8:1

Year:	2023
Collaborator:	Sunbelt Expo
Location:	Moultrie, Georgia

Application Type:	Multiple, Crop Nutrition
Nano-Yield Product:	6 oz/ac NanoCS® 4 oz/ac NanoCalSi® 4 oz/ac NanoPro®

Summary:

Incorporating three nanoliquid products into a standard peanut program resulted in a 6% increase in yield (+329 lb/ac) compared to the side of the field without nanoliquid applications.



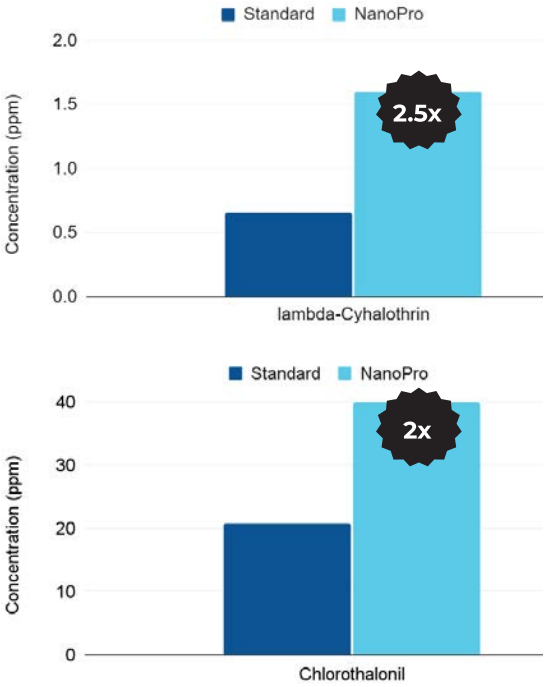
NanoPro® Improves Peanut Pesticide Uptake

Year:	2023
Collaborator:	Sunbelt Expo
Location:	Moultrie, Georgia

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	3 oz/ac Silencer® 1 EC (lambda-cyhalothrin) 24 oz/ac Tilt® Bravo® SE (Chlorothalonil)

Summary:

Adding NanoPro to a tank mix increased foliar uptake of Silencer insecticide and Bravo fungicide. The products were applied during the pod development phase and samples were collected 2 hours after application. Two other products were also tank mixed, but not tested (Convoy® fungicide and Tracite® fertilizer). The mix was applied at 15 gal/ac.



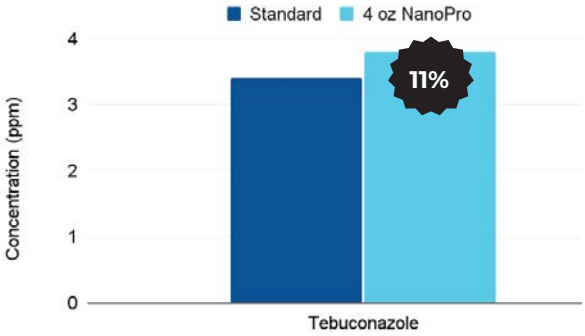
NanoPro® Improves Provost Silver Fungicide Uptake for Peanuts

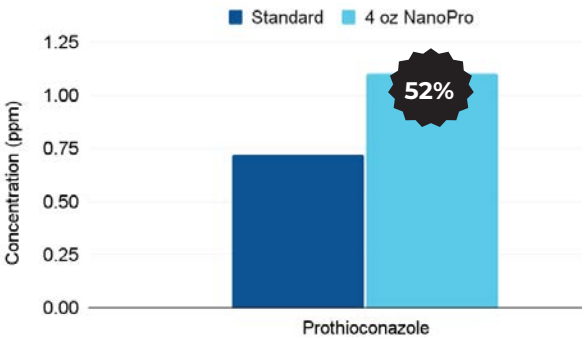
Year:	2023
Collaborator:	Sunbelt Expo
Location:	Moultrie, Georgia

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Provost® Silver

Summary:

Adding NanoPro to a tank mix increased foliar uptake of Provost Silver fungicide on peanuts. The two chemical components were tested separately.





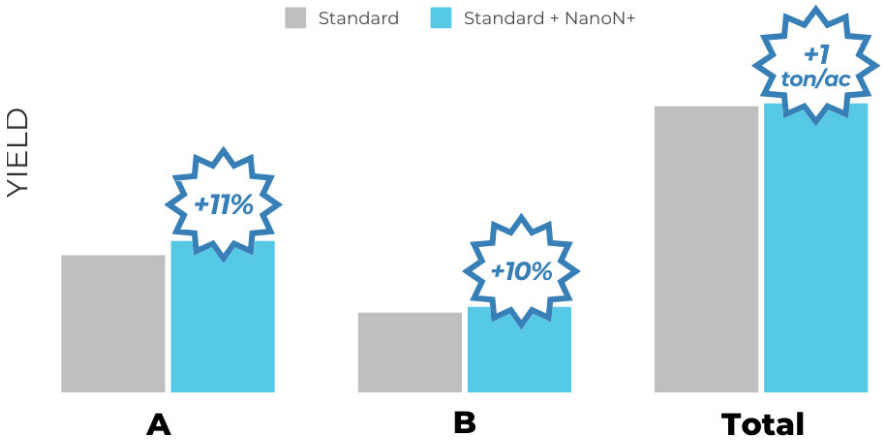
NanoN+® Increases Potato Yield and Quality

Year:	2024
Collaborator:	Grower
Location:	Western Washington

Application Type:	In-furrow, Crop Nutrition
Nano-Yield Product:	NanoN+

Summary:

Potato yield and quality is increased when NanoN+ is added with a grower standard in-furrow fertilizer program. This grower experienced a 10%+ increase in A and B quality potatoes in addition to a 1 ton/acre increase in yield.



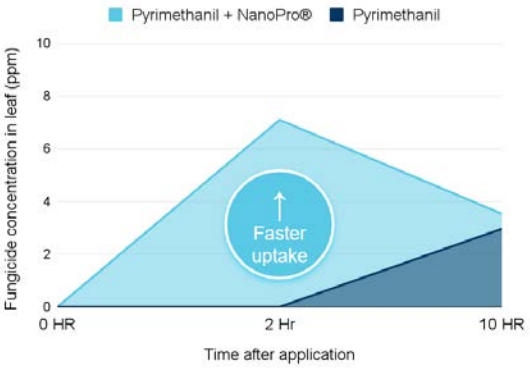
NanoPro® Speeds Up Fungicide Absorption in Potato

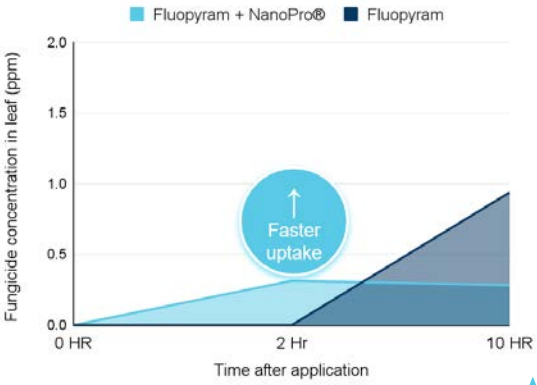
Year:	2022
Collaborator:	Grower
Location:	Florida

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Pyrimethanil Fluopyram

Summary:

Potato tissue samples were collected and sent for laboratory analysis to measure the absorption of fungicide with and without NanoPro at 2 and 10 hours after application. The analysis showed faster absorption of Fluopyram fungicide at 2 hours when NanoPro was added.





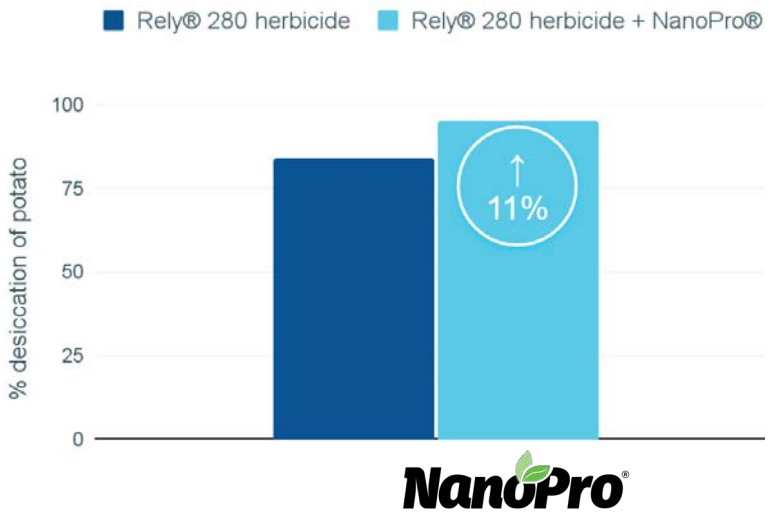
NanoPro® Improves Potato Desiccation with Rely® 280 Herbicide

Year:	2022
Collaborator:	Washington State University
Location:	Washington

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Rely® 280

Summary:

NanoPro has been shown to improve desiccation activity of many products. This study at Washington State University demonstrated that adding NanoPro with Rely herbicide increased potato desiccation by 11% compared to Rely alone.



NanoPro® Provides Increased Blight Control on Potato Crop

Year:	2019
Collaborator:	University of Wisconsin
Location:	Hancock, Wisconsin

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Bravo® WS 720C Priaxor® Endura® Dithane® DF Super Tin®

Summary:

To verify customer success, collaborators at the University of Wisconsin evaluated NanoPro to improve early and late blight control on potato crops. Treatments with NanoPro added with a grower standard product blend showed significantly less blight and healthier foliage.

▼ Grower Standard ONLY (1.5 pt Bravo WS 720SC, 4.5 oz Priaxor + 1.5 pt Bravo WS, 3.5 oz Endura + 1.5 pt Bravo WS, 2 lb Dithane DF + 2.5 oz. Super Tin)

▼ Grower Standard + NanoPro®: ***INCREASED BLIGHT CONTROL***

NanoPro®

NanoK® Increases Indiana Soybean Yield

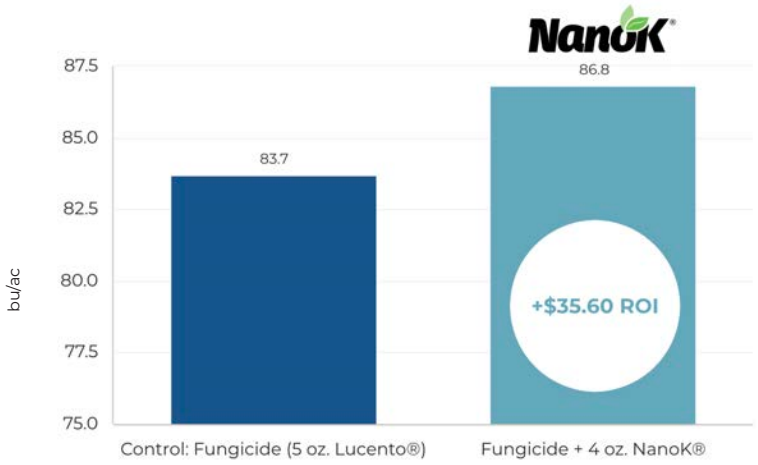
ROI: $30.60 per acre

Year:	2022
Collaborator:	Beck's PFR
Location:	Indiana

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoK®
Additional Product:	5 oz/ac Lucento®

Summary:

Adding NanoK to Lucento fungicide at R3 increased soybean yield, providing a $35.60 ROI per acre (soybean price $13.76).



PURPOSE: To evaluate the use of various additives applied with a fungicide at the R3 growth stage in an attempt to increase plant health, yield, and profitability. ***Participating Site: IN.*** *PAGE 157 of Beck's 2022 PFR Book.*

NanoK® Increases Soybean Yield applied at R3

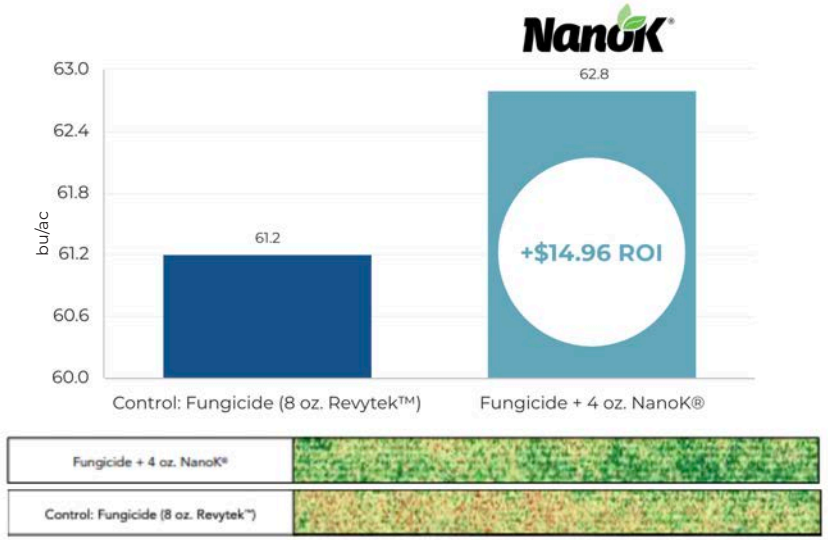
ROI: $14.96 per acre

Year:	2022
Collaborator:	Beck's PFR
Location:	Delta PFR

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoK®
Additional Product:	8 oz/ac Revytek®

Summary:

Adding NanoK to Revytek fungicide at R3 increased soybean yield, providing a $14.96 ROI per acre (soybean price $13.76).



PURPOSE: To evaluate the use of various additives applied with a fungicide at the R3 growth stage in an attempt to increase plant health, yield, and profitability. ***Participating Site: Delta PFR.*** *PAGE 279 of Beck's 2022 PFR Book.*

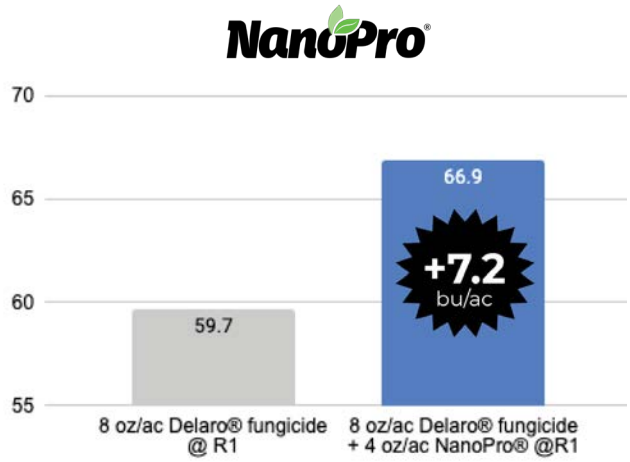
NanoPro® Increases Soybean Yield with Foliar Application

Year:	2023
Collaborator:	North Carolina State University
Location:	Plymouth, North Carolina

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	8 oz/ac Delaro®

Summary:

NanoPro was evaluated to increase soybean yield in the southwest region. NanoPro was applied in a single foliar application with Delaro fungicide at R1. Disease pressure was low, however NanoPro increased yield significantly by 7.2 bu/acre.



Nanoliquid® Products Improve Pesticide Uptake in Soybeans

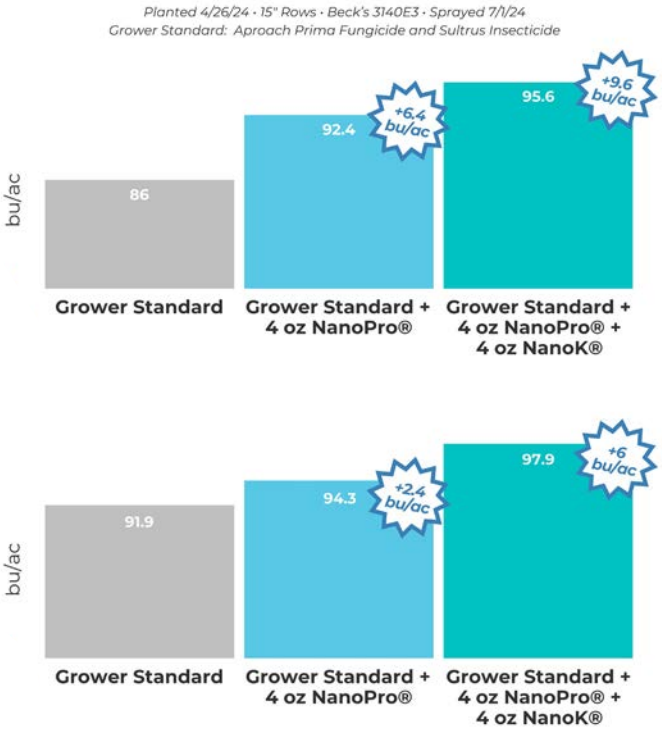
NEW!

Year:	2024
Collaborator:	Stoelting Ag Services
Location:	Indiana

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Aproach® Prima Fungicide Sultrus™ Insecticide

Summary:

In this Indiana replicated trial on soybeans, 4 oz/ac NanoPro and 4 oz/ac NanoK were applied with Aproach Prima fungicide and Sultrus insecticide. Adding NanoPro alone added an average +4.4 bu/ac over the grower standard, while adding NanoPro and NanoK added an average +7.8 bu/ac over the grower standard.



Beck's PFR Proven: NanoPro®
3-Year Replicated Fungicide Trial

NEW!

Year:	2022-2024
Collaborator:	Beck's PFR
Location:	Indiana, Ohio, Iowa, Nebraska, Minnesota

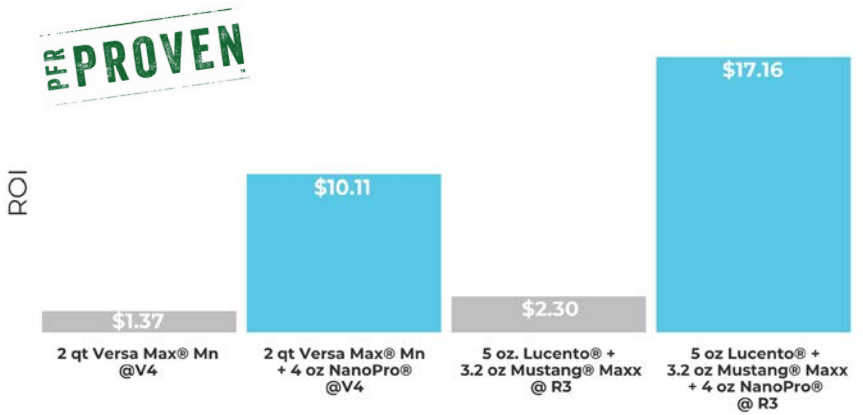
Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Versa Max® Mn Lucento® Mustang® Maxx

Summary:

For the third year in a row nanoliquid products increased soybean yield for Beck's PFR trials. Incorporating NanoPro in the fungicide trial resulted in a return on investment of $10.11 and $17.16 per acre. This average was calculated with replicated third party data across multiple states. **NanoPro is now PFR PROVEN!**

2024 Beck's PFR Book, pg 212

Indiana, Ohio, Iowa, Nebraska, Minnesota



BECK'S

Beck's PFR Proven: NanoPro®
2024 Replicated Fungicide Trial

ROI: $19.20 per acre

NEW!

Year:	2024
Collaborator:	Beck's PFR
Location:	Indiana, Ohio, Iowa, Nebraska, Minnesota

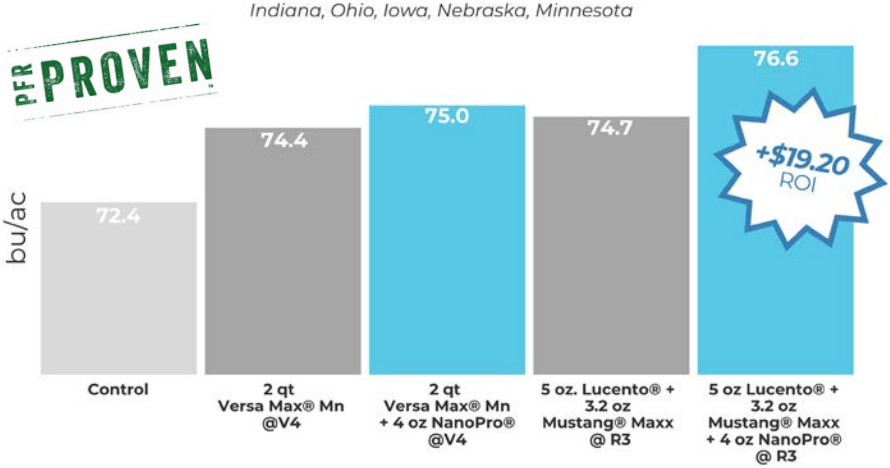
Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Versa Max® Mn Lucento® Mustang® Maxx

Summary:

Adding NanoPro to fungicide and insecticide products increased soybean yield, providing $19.20 ROI per acre. **NanoPro is now PFR PROVEN!**

2024 Beck's PFR Book, pg 212

Indiana, Ohio, Iowa, Nebraska, Minnesota



NanoPro® Soybean Foliar Fungicide Study by Precision Planting

ROI: $34.91 per acre

NEW!

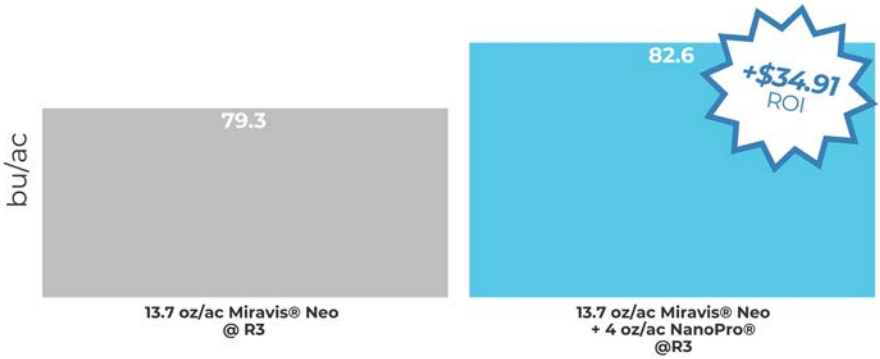
Year:	2024
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	13.7 oz/ac Miravis® Neo

Summary:

In this trial by Precision Planting, 4 oz/ac NanoPro was tested with a foliar application of 13.7 oz/ac Miravis Neo, resulting in an additional +3.3 bu/ac at a $34.91 ROI.

2024 PTI Results Book, pg 260



Precision Planting®

NanoPro® Increases Efficiency of Fungicides

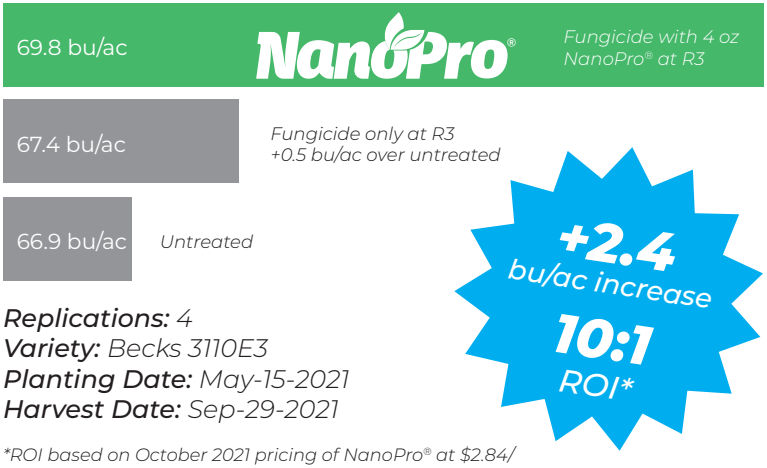
ROI: 10:1

Year:	2021
Collaborator:	ABG Ag Services
Location:	Sheriden, Indiana

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®

Summary:

In this trial with ABG Ag Services, NanoPro increased the efficiency of fungicide at the R3 growth stage, yielding an additional 2.4 bu/ac at a 10:1 ROI.



Replications: *4*
Variety: *Becks 3110E3*
Planting Date: *May-15-2021*
Harvest Date: *Sep-29-2021*

**ROI based on October 2021 pricing of NanoPro® at $2.84/ac and CBOT Futures on the day we received harvest data*

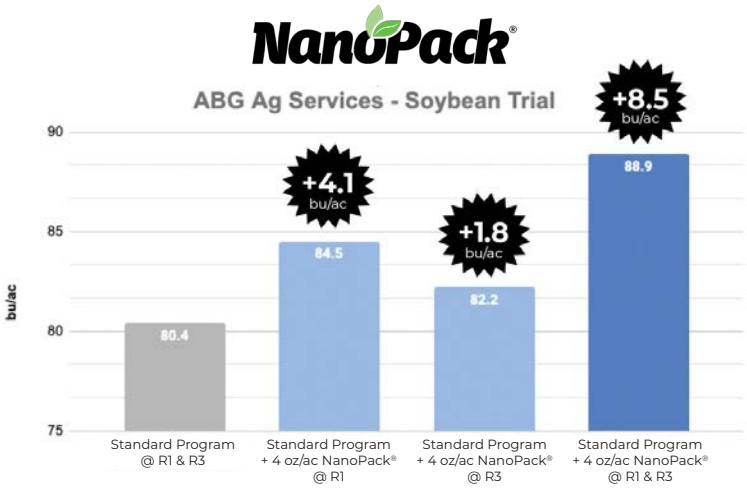
NanoPack® Demonstrates Success with Soybean Crops

Year:	2023
Collaborator:	ABG Ag Services
Location:	Sheriden, Indiana

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoPack®
Additional Product:	13.7 oz/ac Miravis® Neo

Summary:

NanoPack demonstrated success in improving soybean yield when applied in-season with grower standard products. Application timing was evaluated to compare applying at R1, R3, and both timings. Applying at R1 resulted in the highest yield for a single application, increasing yield by 4.1 bu/acre. Applying NanoPack at R1 and R3 resulted in an incredible 8.5 bu/acre increase in yield.



Sugar Beet Trial Shows Two Ton Yield Increase with NanoK®

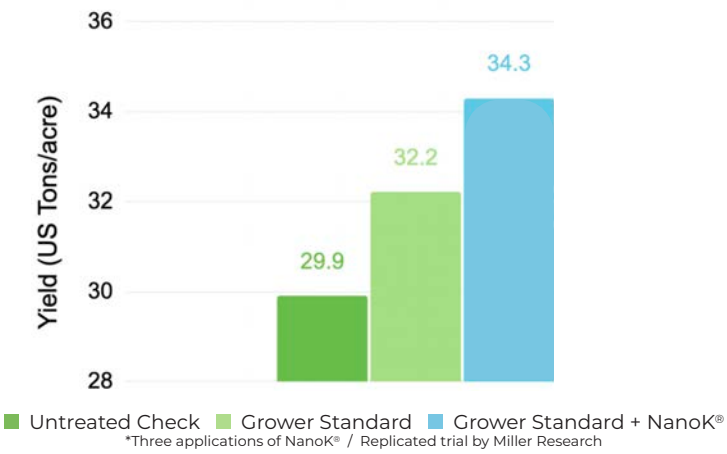
ROI: 4:1 ($40/ton)

Year:	2023
Collaborator:	Miller Research
Location:	Idaho

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoK®

Summary:

Adding NanoK is a popular practice with growers across the US to deliver valuable potassium in-season. This trial verified that our customer results can be replicated in a controlled study. Three applications of NanoK applied with grower standard products resulted in a more than two ton per acre increase in sugar beet yield.



NanoPro® Improves Burndown and Residual in Sugar Cane

Year:	2023
Collaborator:	Glades Crop Care
Location:	Jupiter, Florida

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Products:	4 pt/ac Atrazine 4F 6 pt/ac Asulox® 2 pt/ac Weed Rhap® (2, 4-D) 0.4 pt/ac Grounded®

Summary:

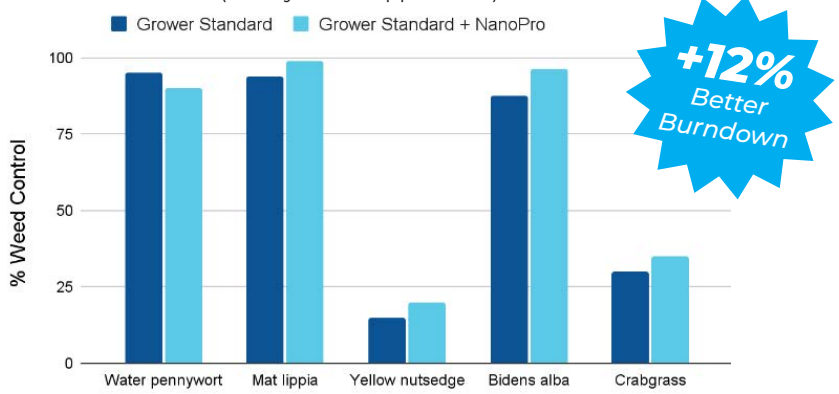
The addition of NanoPro to a grower standard herbicide mix resulted in significantly better weed burndown and increased residual weed control for all weeds except water pennywort.

Burndown was increased by NanoPro 12% on average across all weed species 14 days after application. NanoPro significantly affected burndown of the weeds Mat Lippia, Yellow Nutsedge, and Crabgrass resulting in up to 33% higher control than the grower standard alone.

Weed coverage was decreased by NanoPro 33% on average across all weed species at 57 days after application. The addition of NanoPro improved residual control by reducing weed coverage up to 64% compared to the grower standard alone.

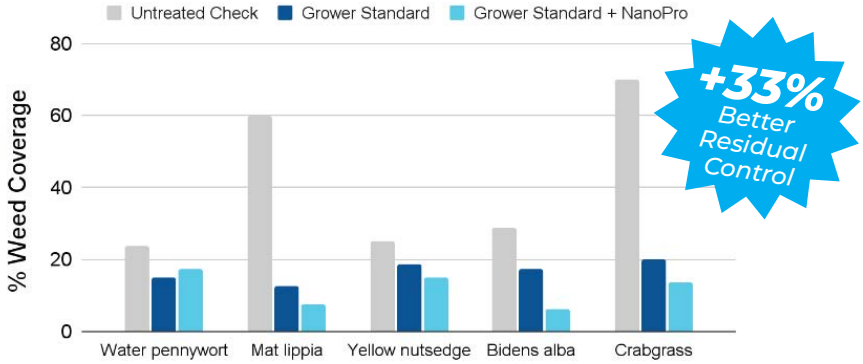
Burndown of weeds in Sugar Cane

(14 Days After Application)



Residual weed control in Sugar Cane

(57 Days After Application)



NanoN+® on Winter Wheat in North Central Kansas

NEW!

Year:	2024
Collaborator:	Grower
Location:	Kansas

Application Type:	Starter, Crop Nutrition
Nano-Yield Product:	NanoN+®

Summary:

In this grower trial from North Central Kansas, we can see the visual impact of adding NanoN+ at planting (pictures taken November 19, 2024).

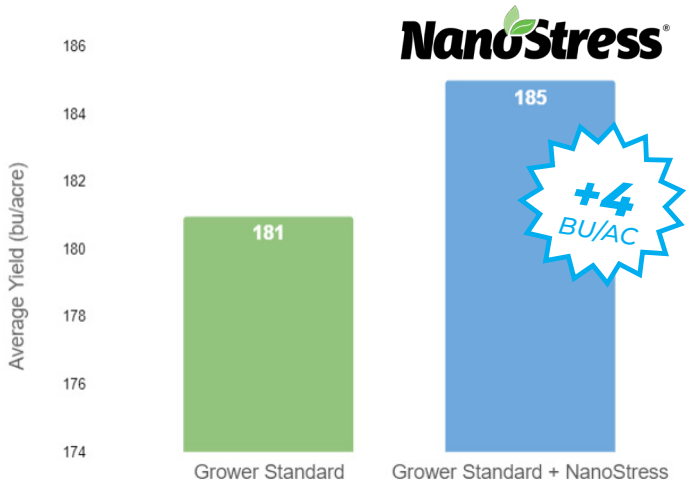
NanoStress® Improves Wheat Yield

Year:	2018
Collaborator:	Utah State University
Location:	Utah

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoStress®
Additional Products:	11-52-0 0-0-60 Ammonium Sulfate

Summary:

NanoStress was evaluated as a liquid fertility supplement for winter wheat production in a replicated trial conducted by Dr. Earl Creech, Agronomy Professor at Utah State University in collaboration with Nano-Yield. The variety grown was SY Ovation, a soft white winter wheat. Wheat received 3 applications of NanoStress at the rate of 4 oz/acre. The result was 4 bu/acre higher yield when NanoStress was applied.



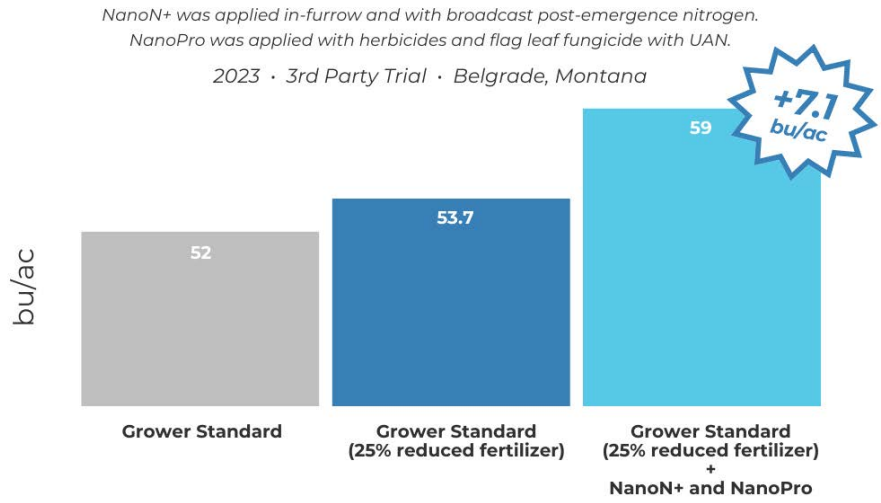
Nanoliquid® Products Increase Spring Wheat Yield in Montana

Year:	2023
Collaborator:	Ed Davis Independent Research
Location:	Belgrade, Montana

Application Type:	Multiple, Crop Nutrition & Protection
Nano-Yield Product:	4 oz/ac NanoN+® 4 oz/ac NanoPro®
Additional Products:	100 lb/ac DAP 28 lb/ac Urea 72 lb P_2O_5 Tilt®

Summary:

A replicated trial in Belgrade, Montana in 2023 showed that adding 5 nanoliquid applications while reducing dry fertilizer rate 25% resulted in a 7.1 bu/acre (13%) increase in wheat yield compared to the grower standard.



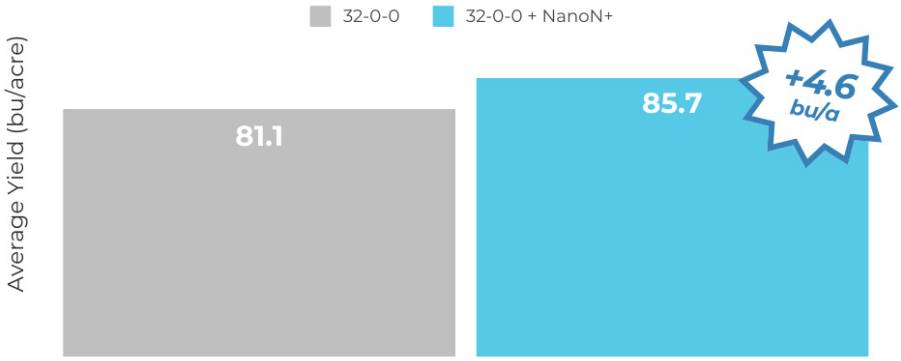
NanoN+® Increases Wheat Yield with Nitrogen Applications

Year:	2024
Collaborator:	Grower
Location:	Kentucky

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	NanoN+®
Additional Products:	UAN 32-0-0

Summary:

NanoN+ was added with a second spring application of 32-0-0 on red winter wheat for seven different grower fields. The result was an average increase of 4.6 bu/acre, with a maximum increase of 16 bu/acre.



A cabbage grower decided to give Aqua-Yield a try on his cabbage crop specifically grown for sauerkraut. NanoCS was used in the transplant mix followed by NanoPro in every sprayer pass, yielding up to 40 pound heads!

-Skagit Farm Supply • Washington

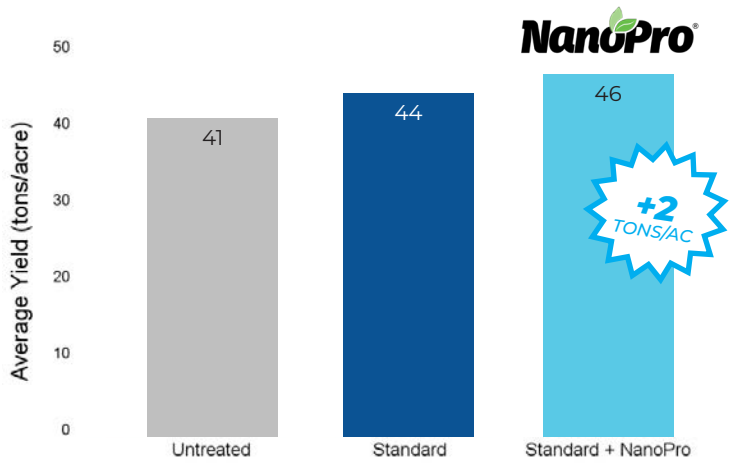
NanoPro® Improves Thrip Control and Yield of Onion

Year:	2022
Collaborator:	Washington State University
Location:	Washington

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Movento®, Agri-Mek® SC Radiant® SC, Lannate® SP

Summary:

Adding NanoPro with grower standard products improved the activity of crop protection for thrip control, resulting in 2 tons per acre higher yield on average. This replicated trial was conducted by Washington State University. NanoPro was included in 8 separate applications. Grower standard products included Movento, Agri-Mek, Radiant, and Lannate products along with a non-ionic surfactant.



TOMATO

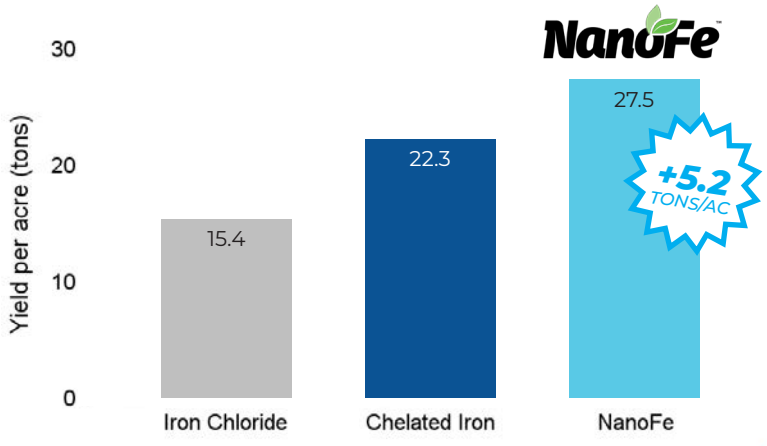
NanoFe® Offers Superior Performance for Tomato

Year:	2021
Collaborator:	The Ohio State University
Location:	Ohio

Application Type:	Drip Injection, Crop Nutrition
Nano-Yield Product:	24 oz/ac NanoFe®
Additional Product:	Iron Chloride Chelated Iron (EDDHA)

Summary:

Two applications via drip of NanoFe was applied at the early vegetative stage and again in the early flowering stage at 24 oz/acre as a primary fertilizer application. NanoFe drastically improved yield compared to equivalent iron concentrations of iron chloride and chelated iron (EDDHA), including 18% larger fruits. NanoFe increased yield 2x more than chelated iron when compared to iron chloride. Yield was 5.2 tons higher compared to the chelated iron treatment.



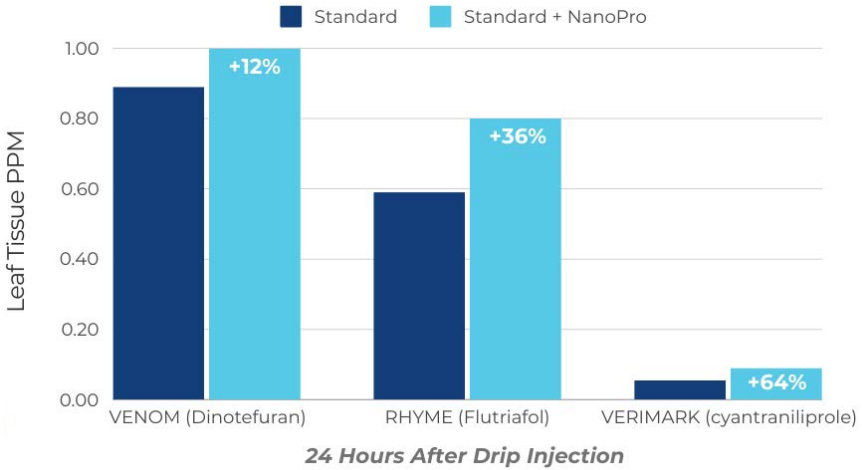
NanoPro® Increases AI Uptake for Tomato

Year:	2024
Collaborator:	Grower
Location:	Florida

Application Type:	Drip Injection, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Venom®, Rhyme®, Verimark®

Summary:

Replicated lab sampling from leaves collected 24 hours after drip injection revealed increased systemic translocation of three different products when NanoPro was added. Fast and efficient plant uptake with NanoPro improves crop protection for both fungicides (Rhyme) and insecticides (Venom and Verimark).



TOMATO

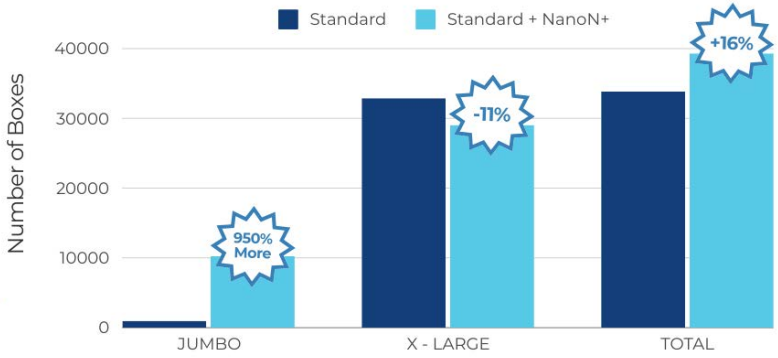
NanoN+® Improves Yield and Quality of Tomato

Year:	2023
Collaborator:	Grower
Location:	Baja, Mexico

Application Type:	Drip Injection, Crop Nutrition
Nano-Yield Product:	8 ml NanoN+® per kg fertilizer

Summary:

NanoN+, delivered full-season via fertigation with a standard fertilizer blend, resulted in a drastic increase in the number of premium jumbo size fruit, and produced an overall yield increase of 16%. The rate of NanoN+ used was 8 ml per kg of water soluble fertilizer.



**Rate: 8 ml NanoN+ per kg of water soluble fertilizer*

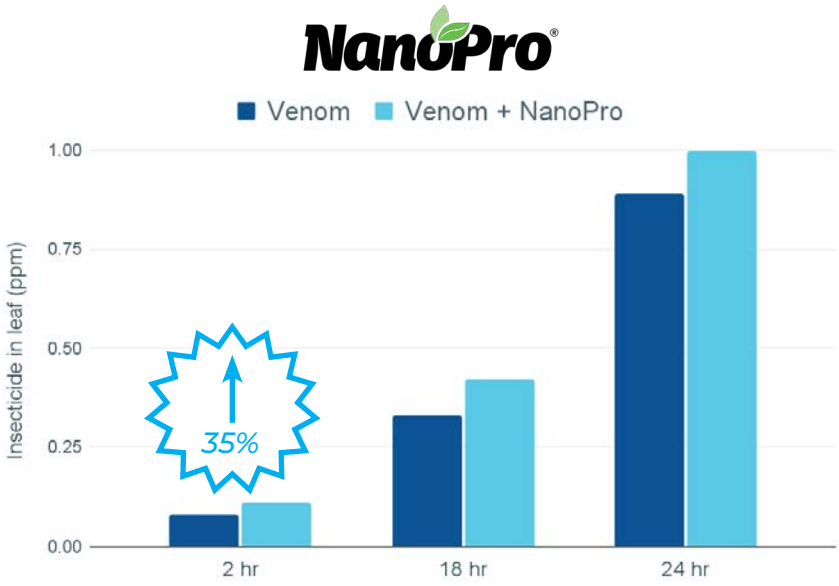
NanoPro® Speeds Up Insecticide Uptake in Tomato

Year:	2022
Collaborator:	National Grower
Location:	Florida

Application Type:	Drip Injection, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Venom®

Summary:

In this grower demo, leaf tissue tests revealed 35% higher concentration of Venom insecticide with NanoPro starting 2 hours after drip injection. Improved plant absorption speed is advantageous to reduce pest populations more quickly.



NanoPro® Increases Avocado Yield through Improved PGR Activity

Year:	2023
Collaborator:	AgroFuturo
Location:	Rapel, Chile

Application Type:	Multiple, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Sunny® (Uniconazole-p)

Summary:

AgroFuturo conducted a replicated grower demo to measure the benefit of adding NanoPro to improve plant uptake of Uniconazole-p (PGR) on avocado crops.

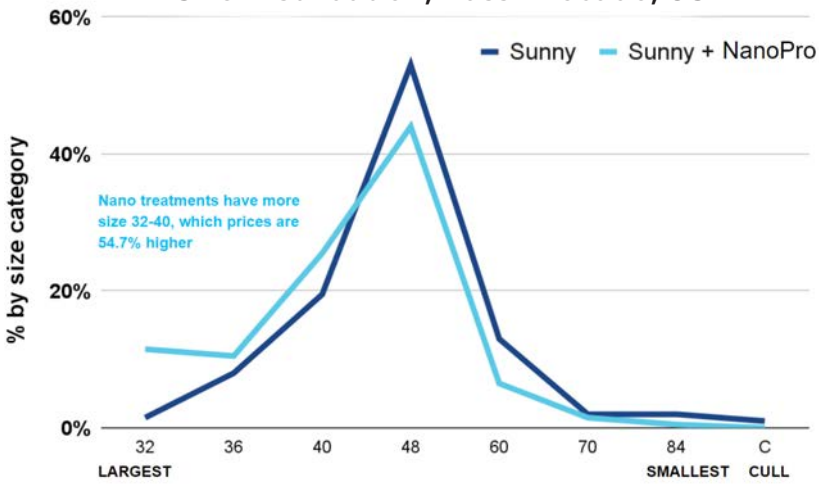
Fruit Set: At the first fruit set evaluation (12/9/22), trees with Uniconazole-p + NanoPro had 66% more fruit than those without NanoPro. On the second evaluation (1/13/2023) following fruit drop, trees Uniconazole-p + NanoPro had 82% more fruit.

Fruit Retention: Trees sprayed with Uniconazole-p + NanoPro retained 2% more fruit in addition to increased fruit set.

Shoot Reduction: Trees treated with Uniconazole-p + NanoPro at a full rate of 2L/ha had 75% more shoot reduction. Trees with 25% reduced rate of Uniconazole-p + NanoPro did not improve shoot reduction.

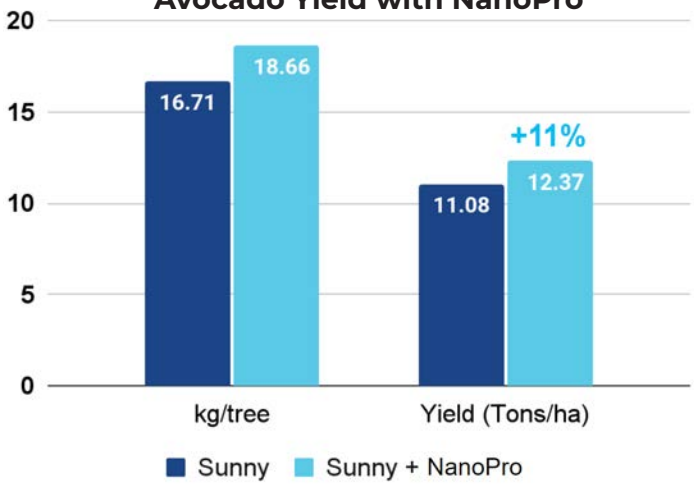
Yield: Yield was increased with the addition of NanoPro by 1.29 tons/ha (11%). Fruit size and quality was similar between treatments.

Size Distribution, Hass Avocado, USA



Foliar Application November 8, 2022, phenological stage Flowering
Harvest September 22, 2023

Avocado Yield with NanoPro



Foliar Application November 8, 2022, phenological stage Flowering
Harvest September 22, 2023

NanoN+® Increases Potassium Uptake for Citrus

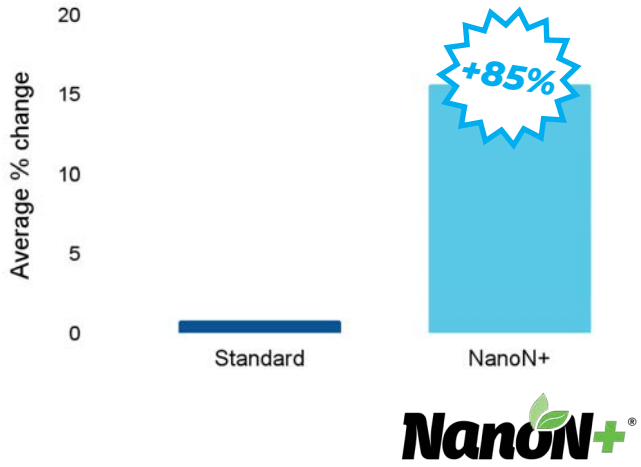
Year:	2018
Collaborator:	Grower
Location:	Florida

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	Potassium Nitrate (KNO_3)

Summary:

Adding NanoN+ with potassium nitrate (KNO_3) foliar fertilizer increased leaf potassium by 85% compared to KNO_3 alone. Potassium promotes plant health in multiple ways including water regulation and fruit quality.

Increased Leaf Potassium After Application
(10 lb/ac KNO_3)



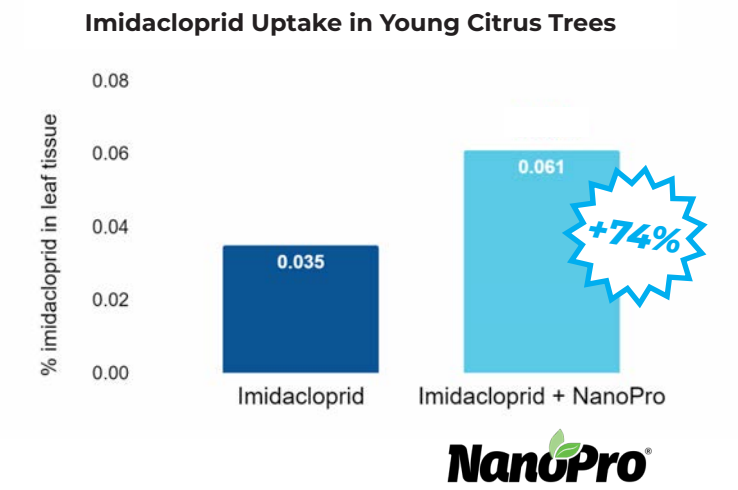
NanoPro® Increases Imidacloprid Uptake

Year:	2018
Collaborator:	Grower
Location:	Florida

Application Type:	Drip Injection, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Imidacloprid

Summary:

NanoPro increased imidacloprid uptake for young citrus trees in a nursery by 74% compared to imidacloprid alone. This is advantageous to provide faster and more effective insect control at a vulnerable stage of growth.



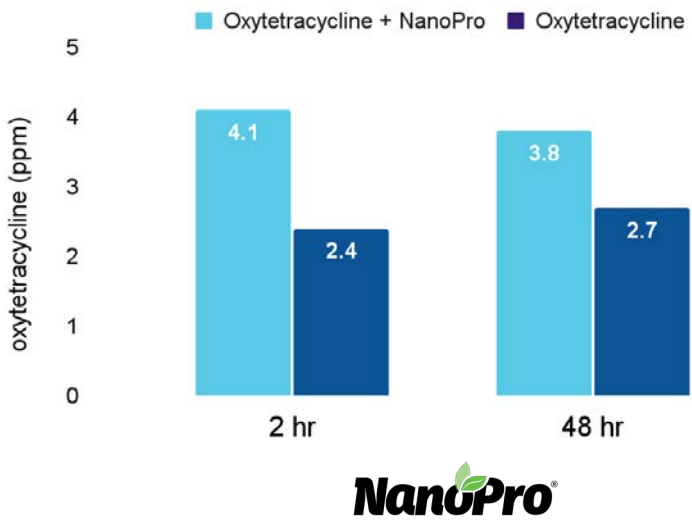
NanoPro® Increases Oxytetracycline Uptake

Year:	2018
Collaborator:	Grower
Location:	Florida

Application Type:	Trunk Injection, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Oxytetracycline

Summary:

NanoPro increased oxytetracycline uptake for citrus trees by 70% at two hours, and 40% at 48 hours after injection. This trial demonstrates the potential of NanoPro for increasing the absorption and efficacy of oxytetracycline to provide increased yield and quality of citrus.



OCTOBER 2020

MAY 2021

NanoPro® Improves Fungicide Activity for Almonds

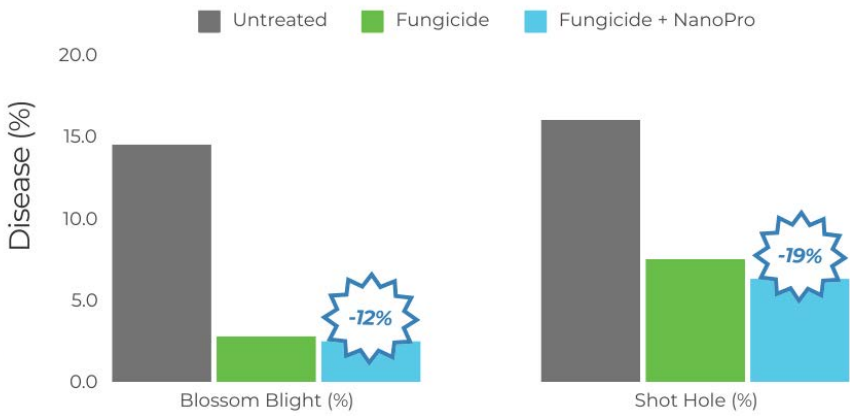
Year:	2023
Collaborator:	Sawtooth Ag Research
Location:	California

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	6 oz/ac Luna Experience®

Summary:

In this replicated trial, 3rd party collaborators Sawtooth Ag Research found the addition of NanoPro with Luna Experience resulted in decreased disease of both shot hole and blossom blight on almonds. It is estimated that greater activity of NanoPro may be seen with an increased rate of 6-8 oz/acre considering the high volume application in this study of 100 gallons per acre.

Adding NanoPro® (4 oz/ac) with Luna Experience® (6 oz/ac) fungicide decreased both blossom blight and shot hole fungus compared to the fungicide alone



NanoCalSi® Decreases Bitter Pit in Honeycrisp Apple

Year:	2023
Collaborator:	AgriManagement
Location:	Washington

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoCalSi®

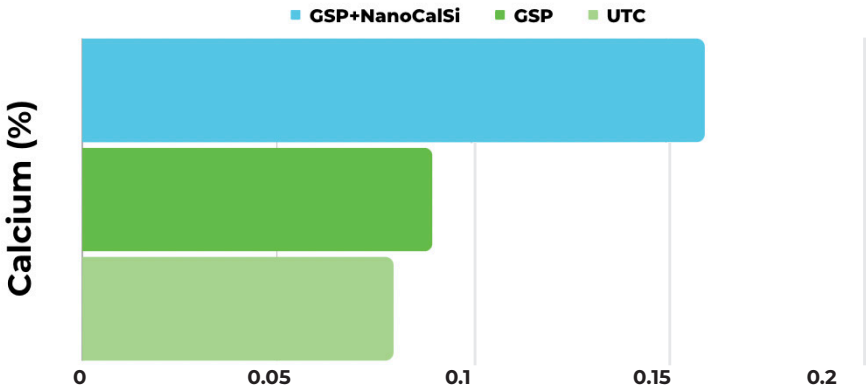
Summary:

Nano-Yield sponsored a research trial with partners at AgriManagement to demonstrate the economic value of NanoCalSi to the apple industry. This trial evaluated NanoCalSi as a nutrient enhancement for growers standard practices (GSP) in delivering calcium for bitter pit prevention in Honeycrisp apples. NanoCalSi also contains 6% calcium.

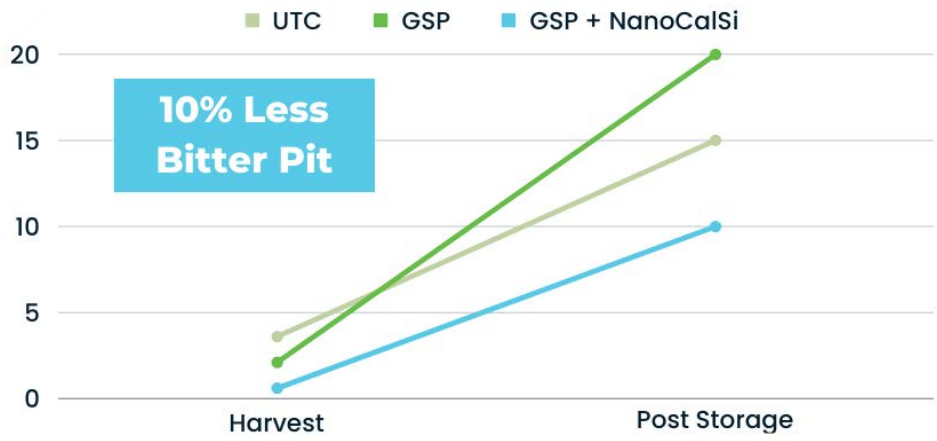
Fruit yield, quality, and brix was similar between GSP and GSP + NanoCalSi. However, plots treated with NanoCalSi had significantly more calcium content in the plant tissues, and significantly less instances of bitter pit. For NanoCalSi treatments, Calcium content was 77% higher in the fruit at harvest compared to the GSP. Bitter pit was 10% lower compared to GSP.

NanoCalSi®

Calcium Concentration in Honeycrisp Apples
Whole Fruit at Harvest
Full Season NanoCalSi Trial (12 applications) at 4 oz/ac



Full season NanoCalSi trial (12 applications) at 4 fl oz/ac



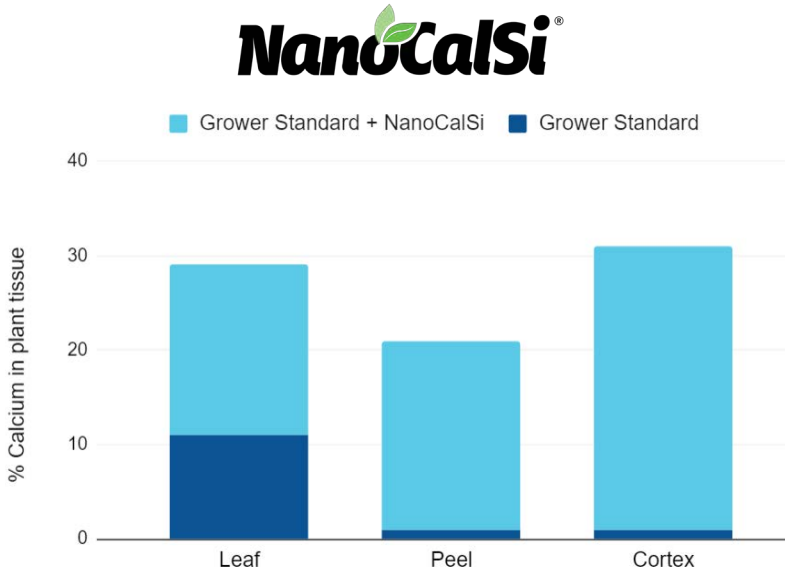
NanoCalSi® Increases Calcium in Honeycrisp

Year:	2022
Collaborator:	AgriManagement
Location:	Washington

Application Type:	Foliar, Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoCalSi®

Summary:

Tissue testing 6 hours after application revealed NanoCalSi increased calcium uptake in leaf, peel, and cortex of honeycrisp apple compared to grower standard.



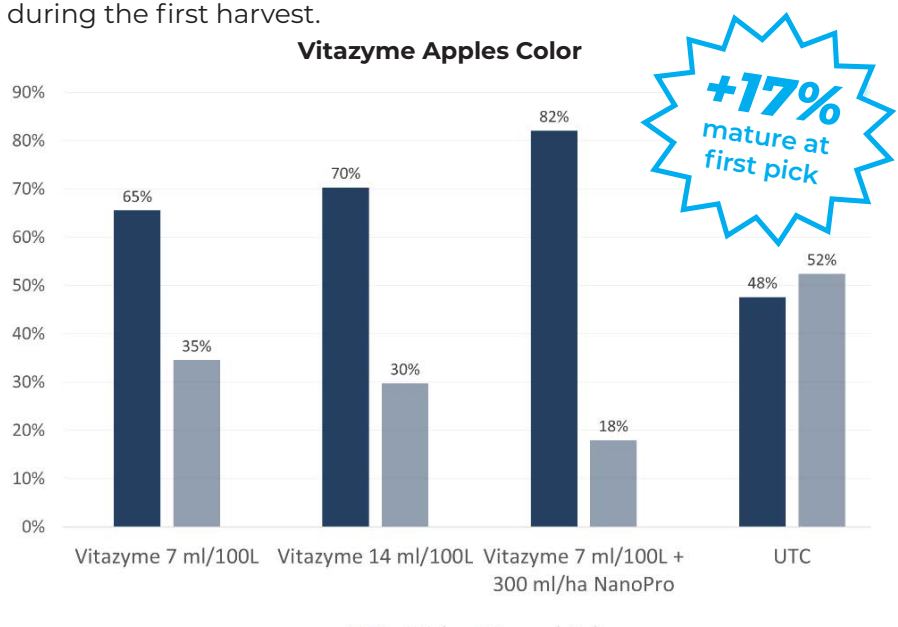
NanoPro® Improves Activity of Vitazyme® Biostimulant for Apple Coloration

Year:	2023
Collaborator:	AgroFuturo
Location:	Rapel, Chile

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Vitazyme®

Summary:

Vitazyme biostimulant is applied foliar to promote faster apple coloration for earlier harvesting. This helps to preserve fruit quality and save on labor cost. The addition of NanoPro with Vitazyme resulted in an increase of 17% more mature apples during the first harvest.



NanoPro® Improves Fruit Set of Cosmic Crisp Apple

Year:	2023
Collaborator:	Grower
Location:	Washington

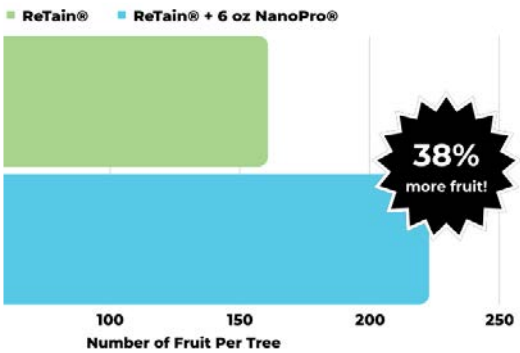
Application Type:	Foliar, Crop Protection
Nano-Yield Product:	6 oz/ac NanoPro®
Additional Product:	11.7 oz/ac ReTain® SG 3 lbs/ac Boric Acid 4 oz/ac Sil-100

Summary:

NanoPro was added to a grower standard mix including ReTain to increase fruit set for Cosmic Crisp apples. The result was 38% more fruit when NanoPro was added.

Variety: Cosmic Crisp Grafts
Rootstock: M26 with Gala Interstem
Training System: Vertical Bi-axis
Spacing: 5' x 14'
Stage Applied: 7-9 mm fruitlet
Application Type: Airblast
Application Date: 5/12/23
1st Count Date: 6/23/23

Grower Standard, applied at 100 gal/ac:
ReTain SG: 11.7 oz
Boric Acid: 3 lbs
Sil-100: 4 oz



NanoPro® Improves Uptake of Kudos®

Year:	2023
Collaborator:	Grower
Location:	Washington

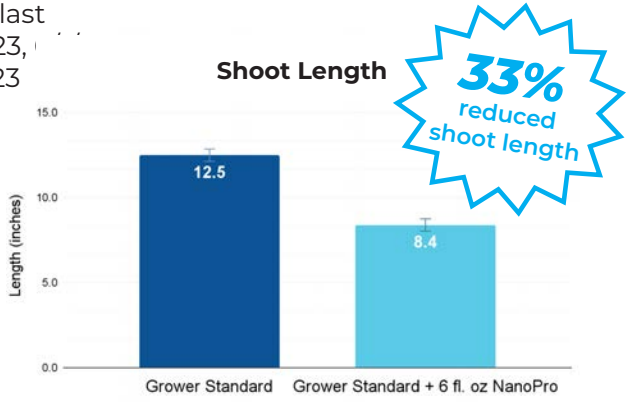
Application Type:	Foliar, Crop Protection
Nano-Yield Product:	6 oz/ac NanoPro®
Additional Product:	1 lb/ac Kudos® 27.5 WDG (Prohexadione-calcium) 1 lb/ac 21-0-0 8 oz/ac Nu-Film® P

Summary:

NanoPro was added to a grower standard mix including Kudos to decrease shoot length for Cosmic Crisp apples. The result was 33% reduced shoot length due to increased PGR uptake with NanoPro.

Variety: Cosmic Crisp Grafts
Rootstock: M26 with Gala Interstem
Training System: Vertical Bi-axis
Spacing: 5' x 14'
Application Type: Airblast
Application Date: 5/2/23,
Evaluation Date: 8/15/23

Grower Standard applied at 100 gal/ac:
21-0-0: 1 lb
Kudos 27.5 WDG: 1 lb
Nu-Film P: 8 oz



NanoPro® with ReTain Reduces Fruit Drop and Improves Firmness

Year:	2023
Collaborator:	AgroFuturo
Location:	Rapel, Chile

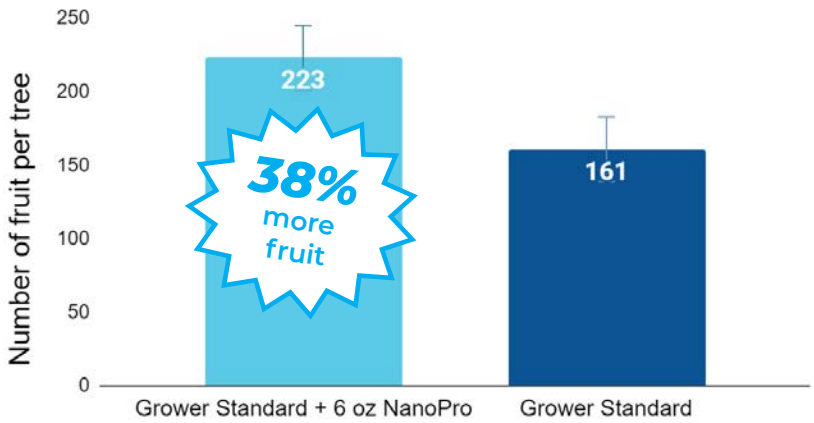
Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	ReTain® SG

Summary:

A commercial demo applying NanoPro with ReTain resulted in 90% less fruit drop for apple trees. Where NanoPro was added, a 2% increase in fruit firmness was also measured.

NanoPro®

Fruit Set of Cosmic Crisp Apple with ReTain + NanoPro



NanoPro® Improves Grape Coloration with ProTone® SG

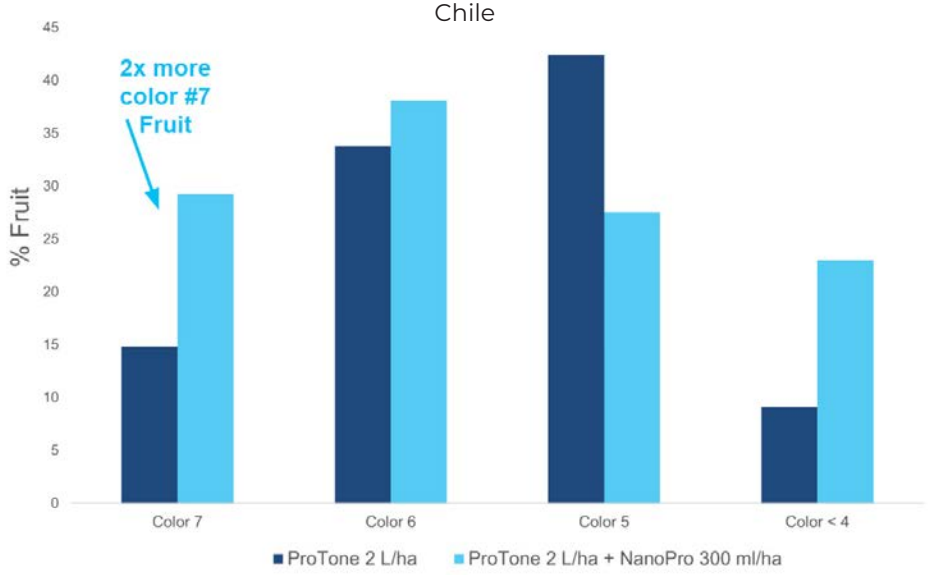
Year:	2023
Collaborator:	AgroFuturo
Location:	Rapel, Chile

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	ProTone® SG

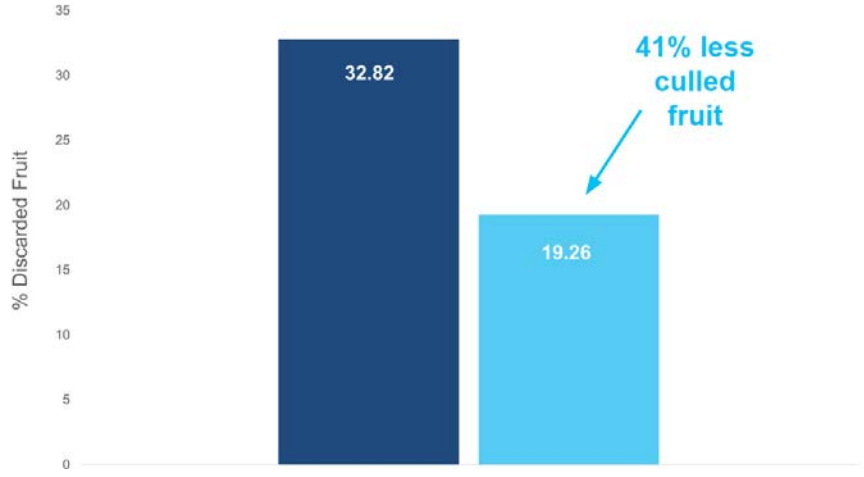
Summary:

AgroFuturo conducted grower trials to measure the benefit of adding NanoPro to improve plant uptake of ProTone (PGR) on table grape crops. Adding NanoPro provided higher coloration of Candy Hearts grapes with twice as many category 7 at the first harvest. The addition of NanoPro also reduced the culled fruit by 41%.

Table Grapes Color Trial
NanoPro + ProTone Candy Hearts
Chile



NanoPro®



NanoPro® Improves Grape Coloration with Ethephon

Year:	2023
Collaborator:	AgroFuturo
Location:	Rapel, Chile

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Ethephon 2 SL

Summary:

AgroFuturo conducted grower trials on multiple farms to measure the benefit of adding NanoPro to improve plant uptake of Ethephon (PGR) on table grape crops. Early results indicate adding NanoPro provides faster and more effective coloration of four cultivars of table grapes. The improved activity resulted in higher yield due to less wasted fruits.

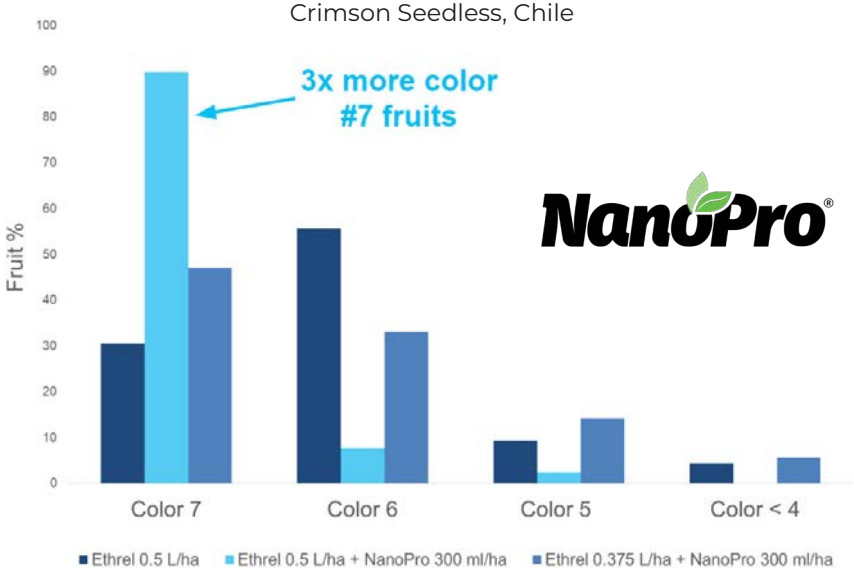
Crimson Seedless: Adding NanoPro resulted roughly in 3 times more #7 (highest coloration grade) fruits compared to Ethephon alone.

Celebration: Adding NanoPro resulted in roughly 2 times more #7 (highest coloration grade) fruits compared to Ethephon alone. Culled fruit was reduced by 8.5%.

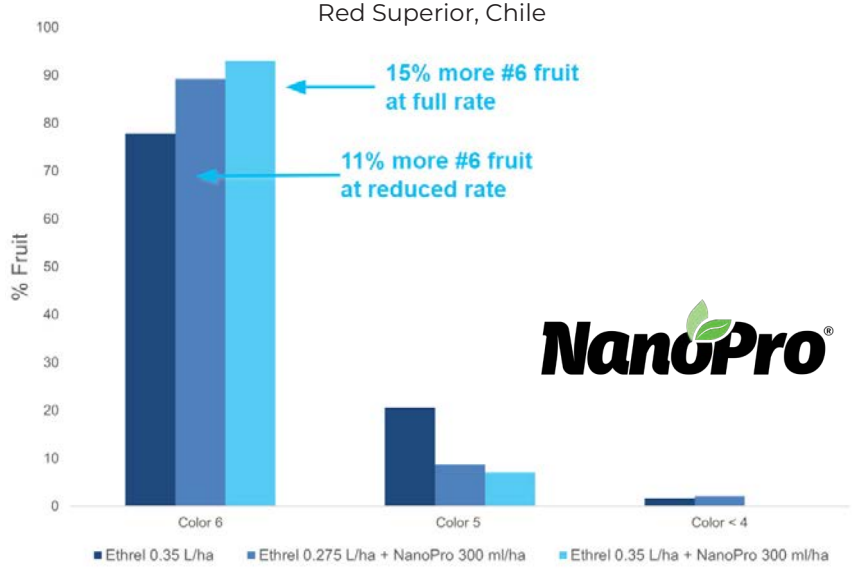
Krissy: Adding NanoPro resulted in roughly 2 times more #7 (highest coloration grade) fruits compared to Ethephon alone. Culled fruit was reduced by 10%.

Red Superior: Adding NanoPro increased the number of #6 fruits (highest coloration grade in this comparison) at two different rates of Ethephon. At a higher rate of Ethephon (0.35 L/ha), adding NanoPro resulted in 15% more #6 fruits. At a 25% reduced rate of Ethephon (0.275 L/ha), adding NanoPro resulted in 11% more #6 fruits compared to the higher rate.

Table Grapes Color Trial
NanoPro + Ethrel
Crimson Seedless, Chile



Red Superior, Chile



PEACH

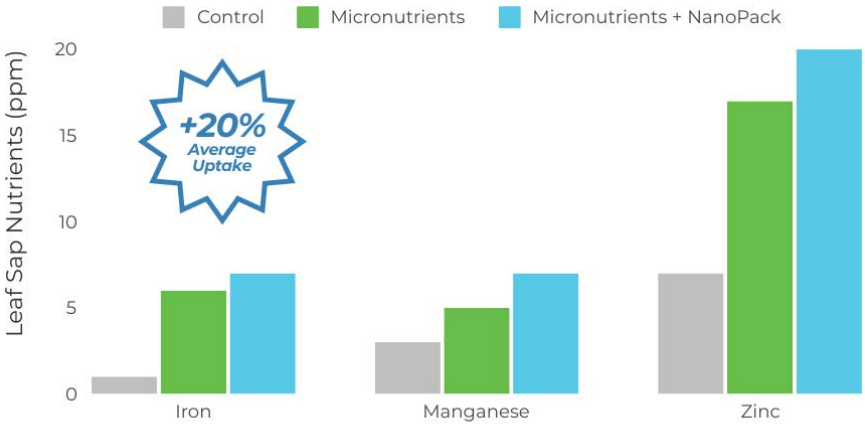
NanoPack® Delivers Micronutrients for Peaches

Year:	2024
Collaborator:	3rd Party Researcher
Location:	California

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	2 qt/ac PhotoGreen® Foliar 1 qt/ac Zicron® Foliar

Summary:

Foliar micronutrients are an important consideration for perennial crops. In this replicated trial by a 3rd party researcher, adding NanoPack with a standard micronutrient blend increased nutrient uptake by 20% on average.



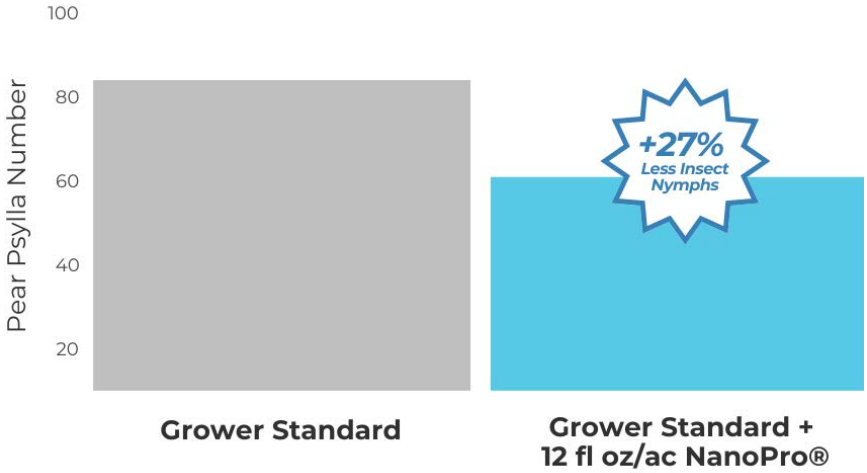
NanoPro® Improves Control of Pear Psylla

Year:	2024
Collaborator:	Columbia Ag. Research Inc.
Location:	Hood River, Washington

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	12 oz/ac NanoPro®
Additional Product:	Nexter® SC, Magister®, Ultor®, Abamex™, Aza Direct®, Horticultural oil

Summary:

A replicated trial was conducted to evaluate NanoPro as a carrier adjuvant to increase efficacy for a grower standard insecticide program to control pear psylla, a major pear pest in commercial pear orchards. NanoPro provided significantly greater control of pear psylla nymphs than the grower standard alone, with 27% less total nymphs.



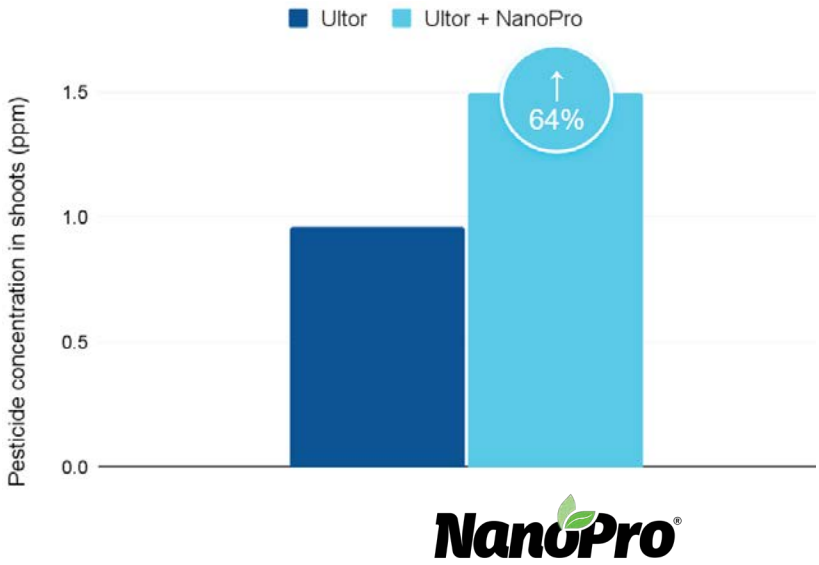
NanoPro® Speeds Up Insecticide Activity for Psyllids

Year:	2022
Collaborator:	Grower
Location:	Washington

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Ultor®

Summary:

NanoPro was added to Ultor insecticide to prevent psyllid damage on young leaves. Tissue testing 5 days following spray application revealed NanoPro increased Ultor uptake in new shoots 64%, showing improved activity for psyllid control.



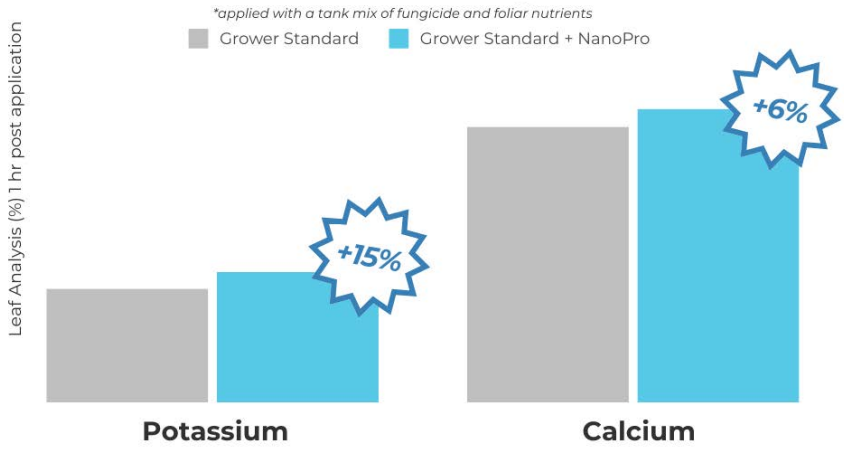
NanoPro® Improves Foliar Fungicide and Nutrient Uptake for Pecan Crops

Year:	2023
Collaborator:	Grower
Location:	Barney, Georgia

Application Type:	Foliar, Crop Nutrition & Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Miravis® Neo OXYCOM® Calcium diKaP™

Summary:

A blend of fungicide and nutrients were foliar applied to a pecan crop with and without NanoPro. NanoPro increased plant uptake for both the fungicide and nutrient products. Tissue testing revealed 15% higher potassium and 5% higher calcium with NanoPro added compared to areas without NanoPro.



NanoN+® Improves Potassium Uptake of Walnut Trees

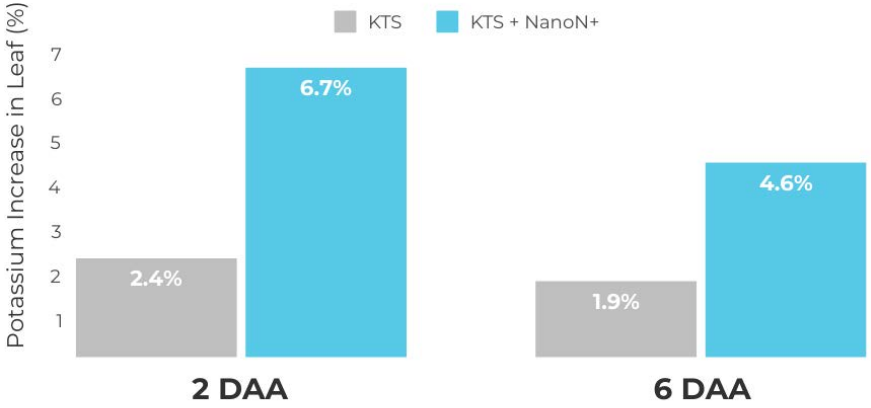
Year:	2024
Collaborator:	3rd Party Researcher
Location:	California

Application Type:	Crop Nutrition
Nano-Yield Product:	4 oz/ac NanoN+®
Additional Product:	Ultor®

Summary:

A replicated 3rd party researcher trial found that adding NanoN+ to a potassium thiosulfate (KTS) soil injection resulted in drastically higher potassium uptake for young walnut trees.

Potassium Thiosulfate (KTS) was injected to the root zone of young trees
Tissue samples were taken at 2, 4, and 6 days after application (DAA)



NanoGro® for Nursery Production

Year:	2018
Collaborator:	River View Flower Farm
Location:	Florida

Application Type:	Soil, Crop Nutrition
Nano-Yield Product:	4 oz/100 gal NanoGro®

Summary:

River View Flower Farm, reported plants 3 weeks ahead after receiving 2 soil drenches of NanoGro at 4 oz per 100 gallons. This was a huge advantage in getting plants ready to market sooner.

NanoPhos® Improves Root Development at Low Rates

Year:	2018
Collaborator:	Tropical Star Farm
Location:	Alamo, Texas

Application Type:	Soil, Crop Nutrition
Nano-Yield Product:	4 oz/100 gal NanoPhos®

Summary:

Tropical Star Farm reported being able to reduce phosphorus inputs by 10x when using NanoPhos with their standard program. Tropical Star Farm produces millions of vegetable transplants yearly in the Rio Grande Valley.

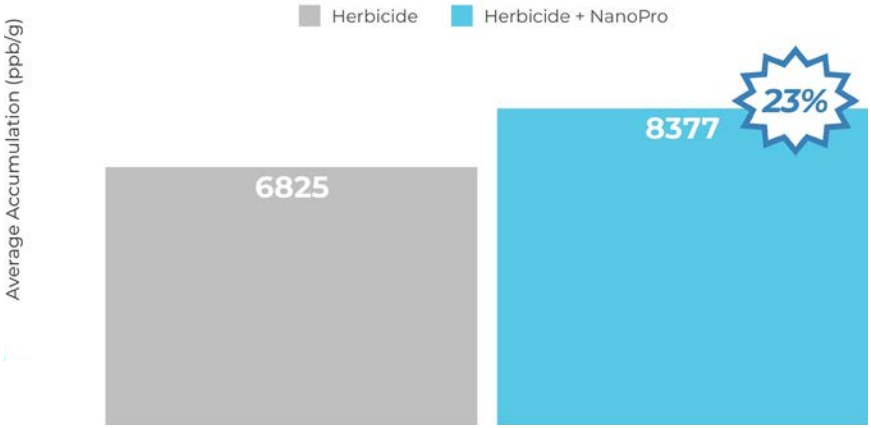
NanoPro® Improves Uptake of Dicamba and 2,4-D on Kochia

Year:	2024
Collaborator:	University of Nebraska
Location:	Scottsbluff, Nebraska

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	2,4-D

Summary:

A replicated trial at the University of Nebraska showed an increase in 2,4-D accumulation when NanoPro was added to an application on Kochia weeds.



NanoPro® Improves Herbicide Uptake and Weed Control

Year:	2018
Collaborator:	Grower
Location:	Texas

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Glyphosate

Summary:

A grower demo resulted in a clearly visible difference in weed control when NanoPro was added with glyphosate herbicide. Tissue tests submitted after application showed roughly 25% better uptake of glyphosate, demonstrating the power of NanoPro to improve herbicide delivery.

NanoPro® Improves Weed Control with Escalade® Herbicide

Year:	2018
Collaborator:	University of Tennessee Martin
Location:	Tennessee

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Escalade® 2

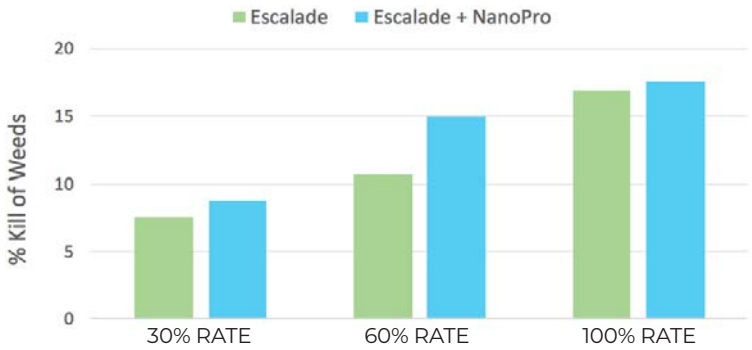
Summary:

NanoPro has been successfully utilized by growers throughout the U.S. to improve the efficacy of various herbicide products in agricultural fields. In 2017, a replicated study was sponsored by Nano-Yield in collaboration with the University of Tennessee Martin to quantify the effect of incorporating nanotechnology in herbicide sprays.

Results and Discussion

All Escalade treatments with added NanoPro had a higher percent kill of weeds than Escalade alone. The increased herbicide efficiency with NanoPro added is particularly apparent when the application rate was reduced to 60%.

This data shows NanoPro can improve the efficacy of Escalade herbicide up to 30%. The data also corresponds with the improved efficacy consistently noted by Nano-Yield customers throughout the United States.



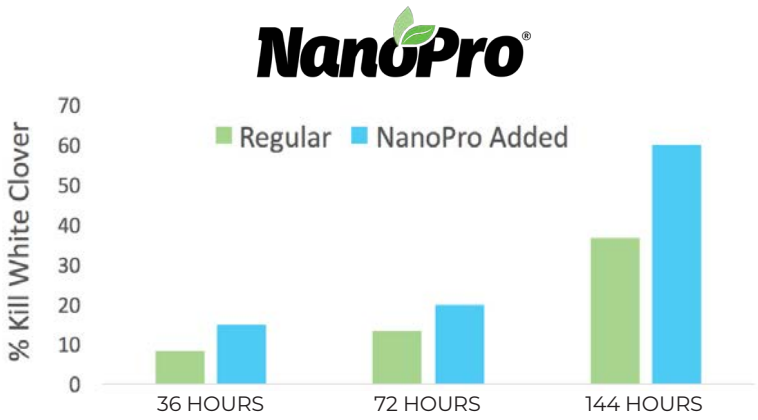
NanoPro® Speeds Up and Improves Weed Control with Glyphosate

Year:	2018
Collaborator:	University of Tennessee Martin
Location:	Tennessee

Application Type:	Foliar, Crop Protection
Nano-Yield Product:	4 oz/ac NanoPro®
Additional Product:	Glyphosate

Summary:

Collaborators at the University of Tennessee Martin showed 60% improved weed control of white clover with glyphosate herbicide compared to glyphosate alone. The effects were seen starting 36 hours after treatment.



ONE product to treat your entire dry fertilizer blend

NITROGEN

PHOSPHORUS

POTASH

nanoCOTE™

▲
Want to see NanoCote Core in action? Scan this QR Code to learn more.

- Evenly coats every particle with nutrient enhancing nanoparticles
- Reduces up to 99% of dust and material build up on equipment
- Increases nutrient uptake and crop yields
- Designed for regenerative agriculture

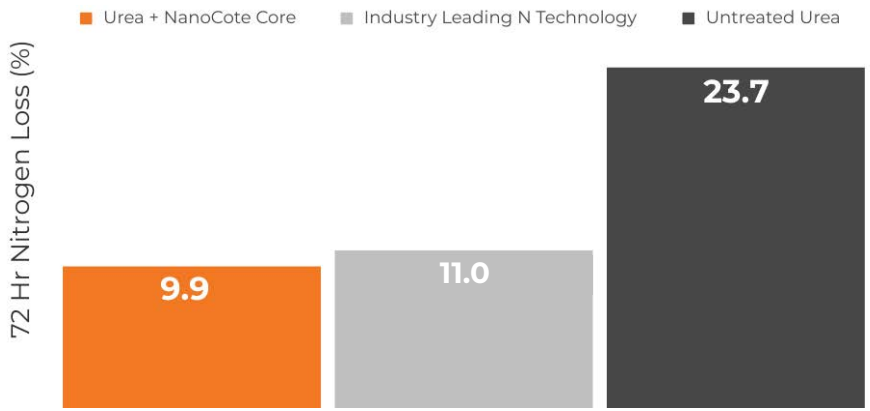
NanoCote™ Core Prevents Nitrogen Losses

Year:	2023
Collaborator:	Penn State University
Location:	Pennsylvania

Application Type:	Crop Nutrition
Nano-Yield Product:	108 fl oz/ton NanoCote™ Core
Additional Product:	0.9 lb/1000 ft^2 46-0-0 Urea

Summary:

NanoCote Core was evaluated by our partners at Penn State University to measure reduced nitrogen volatility after application using specialized chambers. The nitrogen rate was 0.9 lb per 1000 ft^2 of 46-0-0 urea. NanoCote Core was shown to reduce volatile losses by over 50% compared to urea alone. This result was similar to a leading nitrogen stabilizing product. However, NanoCote Core is different from other leading technologies because it can be used with any dry fertilizer product.



NanoCote™ Core Increases Phosphorous Availability

Year:	2024
Collaborator:	BYU Idaho
Location:	Rexburg, Idaho

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	MAP

Summary:

Phosphorous fertilizers tend to bind tightly to soils before they can be utilized by crop plants. Collaborators at Brigham Young University confirmed that NanoCote Core significantly increases phosphorous availability when applied as a coating on a common nutrient blend such as Monoammonium phosphate (MAP). The result is less waste and better nutrient efficiency.

NanoCote™ Core Increases Alfalfa Yield and Quality

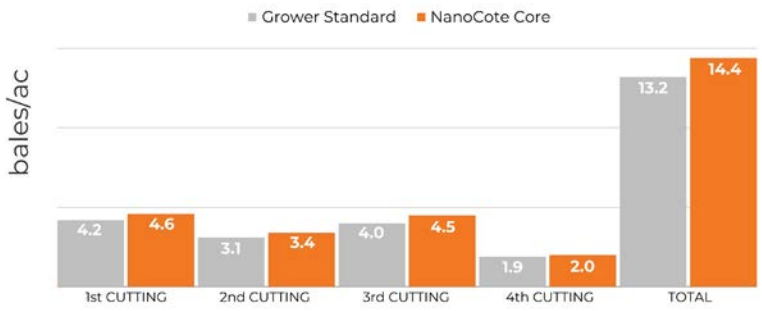
Year:	2023
Collaborator:	Grower
Location:	Mt. Vernon, Washington

Application Type:	Crop Nutrition
Nano-Yield Product:	108 fl oz/ton NanoCote™ Core
Additional Product:	150 lb/ac 0-0-60 Potash 75 lb/ac 11-52-0 MAP 65 lb/ac SOP 10 lb/ac Boron 15%

Summary:

Two alfalfa fields side by side were used with the same soil types and management practices. They were fertilized and cut on the same days throughout the season. The grower cut 5 cuttings; all silage bales. No other fertilizer was applied to the field throughout the year. The field received rainfall prior to first cutting and then had no measurable rainfall for the rest of the season.

Results: Over the year there was an average increase in yield of 8% per cutting. The total yield increase with NanoCote Core was 1.2 bales and 0.9 tons per acre. Protein content was also increased by 17% in the NanoCote treated field. This result represents a significant gain for the grower and a return on investment of approximately $144/acre or 11:1.



Beck's PFR: NanoCote™ Core Nitrogen Coating Study

NEW!

Year:	2024
Collaborator:	Beck's PFR
Location:	Indiana, Kentucky

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	Urea

Summary:

In this first year, third party trial by Beck's PFR, different rates of fertilizer were tested with urea and NanoCote Core. The lower application rates of urea and NanoCote Core achieved a higher ROI of $28.22.

2024 Beck's PFR Book, pg 112

Indiana and Kentucky

BECK'S

NanoCote™ Urea Treatment Study by Precision Planting

NEW!

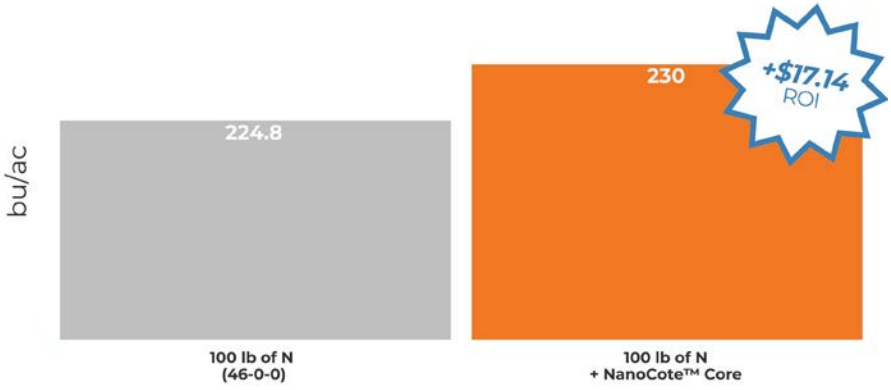
Year:	2024
Collaborator:	Precision Planting
Location:	Pontiac, Illinois

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	Urea

Summary:

This is a first year NanoCote urea treatment trial with Precision Planting. 100 lbs of 46-0-0 urea nitrogen was tested with NanoCote Core, resulting in a 5.2 bu/ac increase and a $17.14 ROI per acre.

2024 PTI Results Book, pg 110-111



Nitrogen Volatility Trial

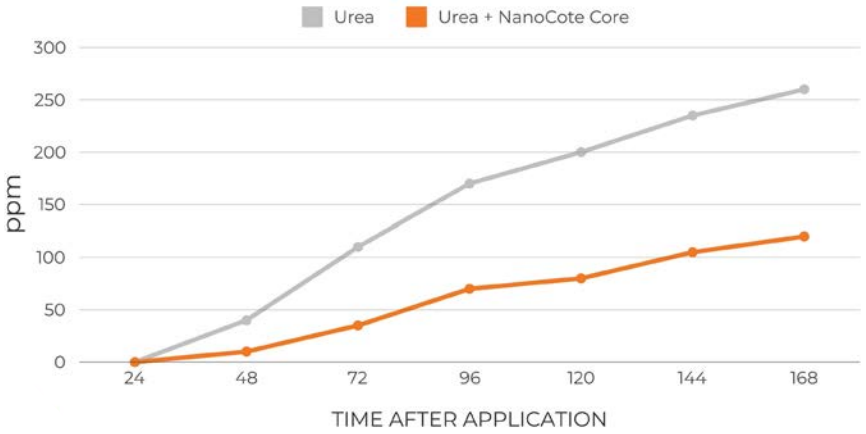
NEW!

Year:	2024
Collaborator:	Skagit Farmers Supply
Location:	Washington

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	Urea

Summary:

Skagit Farmers Supply in Mount Vernon, WA recently started offering products treated with NanoCote Core. A field test was performed in a customer field to measure the effect of NanoCote Core on nitrogen volatility of urea. In this test, NanoCote Core reduced volatility approximately 50%.



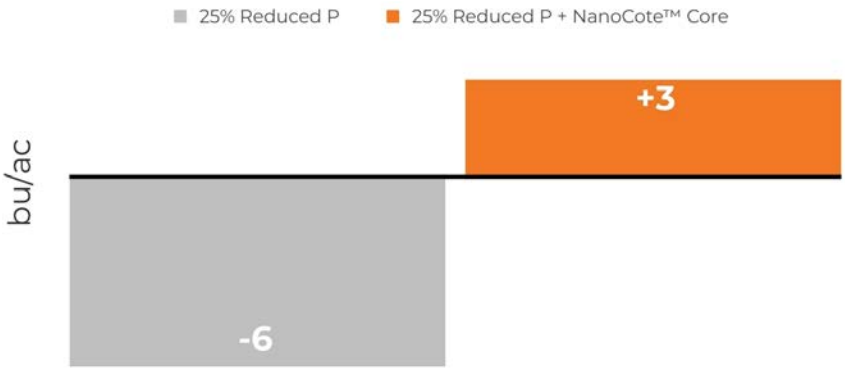
NanoCote™ Core helps Increase Corn Yield Despite Severe Drought

Year:	2023
Collaborator:	INTENT
Location:	Vernon, Missouri

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	18-46-0 DAP

Summary:

Third party research collaborators evaluated NanoCote Core for enhancing nutrient efficiency of DAP fertilizer applied as a spring application for corn production. A grower standard rate of DAP (150 lb/ac) was compared side by side with a 25% reduced rate of DAP (112 lb/ac) treated with NanoCote Core. Extreme drought significantly impacted the yield in this trial. The field with NanoCote and a reduced rate had a yield 3 bu/acre higher than the average. Without NanoCote, yield was 6 bu/acre lower than average.



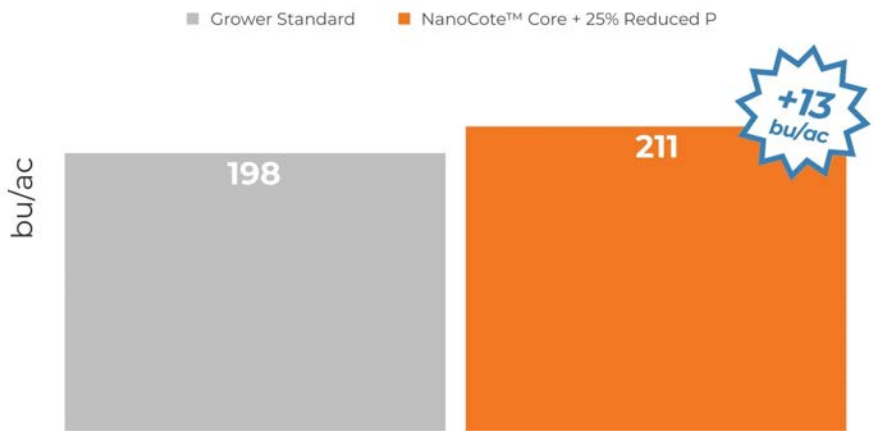
NanoCote™ Core Increases Corn Yield

Year:	2023
Collaborator:	INTENT
Location:	Carroll, Iowa

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	11-52-0 MAP

Summary:

Third party research collaborators evaluated NanoCote Core for enhancing nutrient efficiency of MAP fertilizer applied as a spring application for corn production. A grower standard rate of MAP (200 lb/ac) was compared side by side with a 25% reduced rate of MAP (150 lb/ac) treated with NanoCote Core. The field with NanoCote and a reduced rate had an increased yield of 13 bu/acre compared to the grower standard without NanoCote.



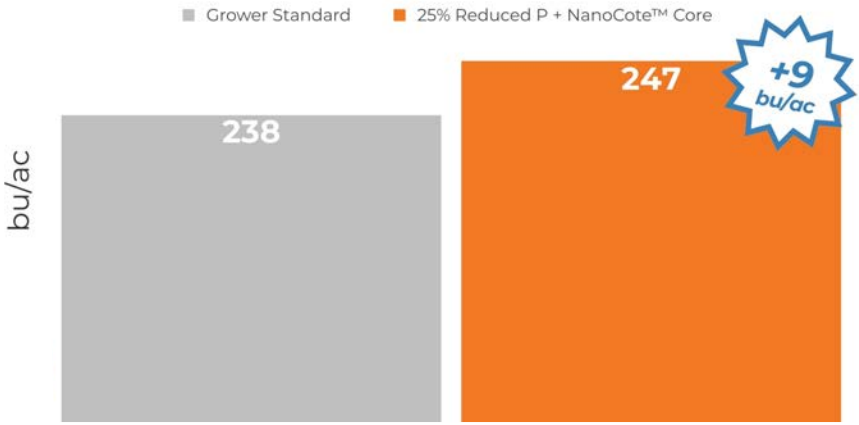
NanoCote™ Core Increases Corn Yield in Ohio with Phosphorous Application

Year:	2023
Collaborator:	INTENT
Location:	Brown, Ohio

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	18-46-0 DAP

Summary:

Third party research collaborators evaluated NanoCote Core for enhancing nutrient efficiency of DAP fertilizer applied as a spring application for corn production. A grower standard rate of DAP (100 lb/ac) was compared side by side with a 25% reduced rate of DAP (75 lb/ac) treated with NanoCote Core. The field with NanoCote and a reduced rate had an increased yield of 9 bu/acre compared to the grower standard without NanoCote.



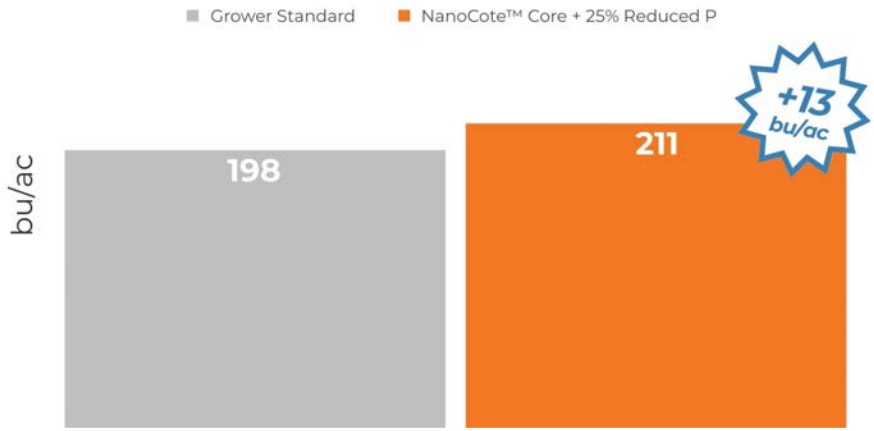
NanoCote™ Core Increases Nutrient Uptake for Corn

Year:	2023
Collaborator:	INTENT
Location:	Carroll, Iowa

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	11-52-0 MAP

Summary:

Third party research collaborators evaluated NanoCote Core for enhancing nutrient efficiency of MAP fertilizer applied as a spring application for corn production. A grower standard rate of MAP (200 lb/ac) was compared side by side with a 25% reduced rate of MAP (150 lb/ac) treated with NanoCote Core. The field with NanoCote and a reduced rate had an increased yield of 13 bu/acre compared to the grower standard without NanoCote.



NanoCote™ Core Provides Two Ton Yield Increase for Potatoes

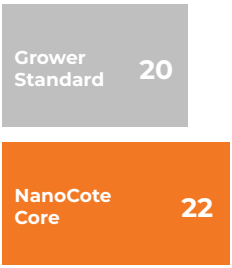
Year:	2023
Collaborator:	Grower
Location:	Washington

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	AMS, MAP, KMag, 0-0-60, SOP, YaraVita® PROCOTE® B and Mn, Boron 15%, Mn Sulfate 32%, Dolopril®

Summary:

In 2023, two large potato growers in the Skagit valley in Washington State incorporated NanoCote Core into their dry fertilizer programs. The result over three trials was an average increase of two tons per acre when NanoCote was added to their dry fertilizer blends.

Average Yield
(tons/ac)



POTATO

NanoCote™ Core Increases Potato Yield with Phosphorus Application

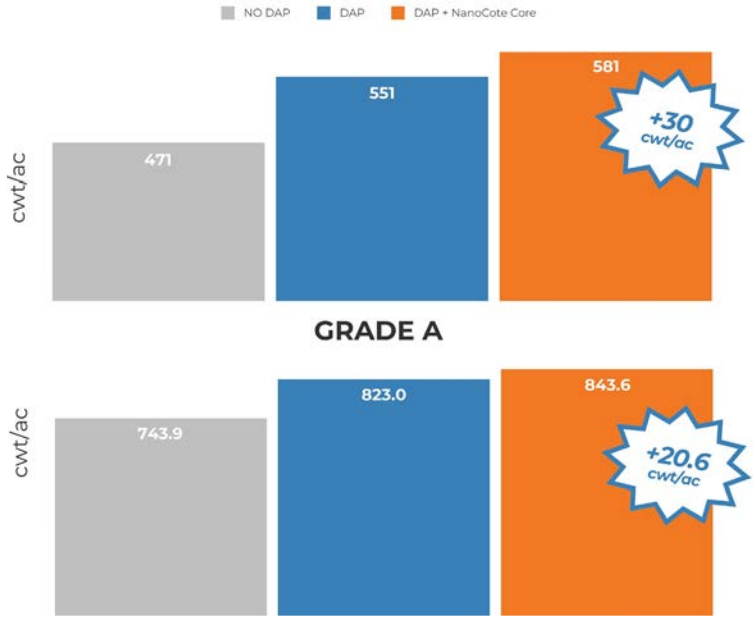
NEW!

Year:	2024
Collaborator:	Mid Michigan Agronomy
Location:	Manistee, Michigan

Application Type:	Top Dress, Dry Fertilizer
Nano-Yield Product:	NanoCote™ Core
Additional Product:	DAP 80 lb/ac

Summary:

In 2024, Mid Michigan Agronomy incorporated NanoCote Core into their replicated top dress DAP fertilizer program. The result was a 13.4% increase over the check and 2.5% over the grower standard when NanoCote was added to their dry fertilizer blends.



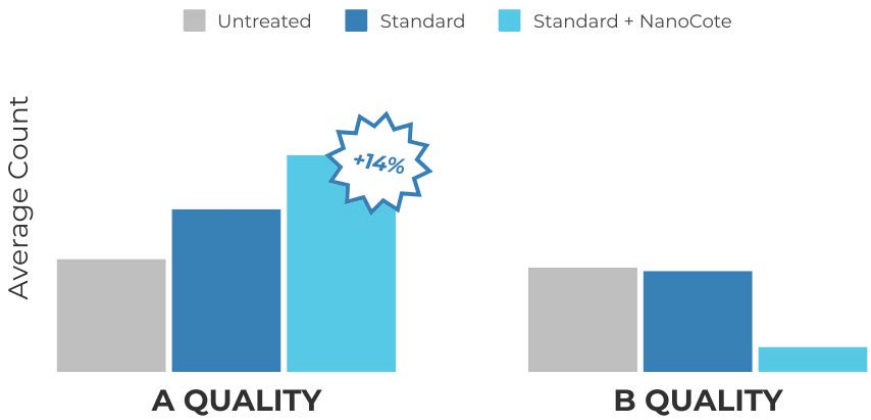
NanoCote™ Core Increases Sweet Potato Quality

Year:	2024
Collaborator:	Mid Michigan Agronomy
Location:	North Carolina

Application Type:	Crop Nutrition
Nano-Yield Product:	NanoCote™ Core
Additional Product:	DAP

Summary:

A replicated trial in North Carolina found that when DAP fertilizer was treated with NanoCote Core, the result was an increase in the number of “A” quality sweet potatoes compared to untreated. Yield was similar between the two treatments. Fertilizer was applied at first bloom.



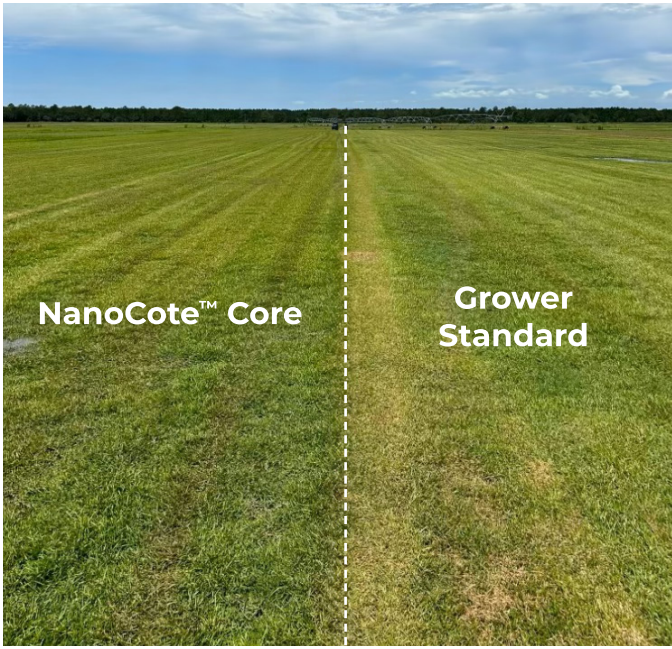
NanoCote™ Core Improves Color and Density of Sod

Year:	2023
Collaborator:	Tri-Yield, LLC
Location:	Ocala, Florida

Application Type:	Crop Nutrition
Nano-Yield Product:	108 fl oz/ton NanoCote™ Core
Additional Product:	21-0-21

Summary:

In 2023, a customer in Ocala, Florida evaluated NanoCote Core with 21-0-21 fertilizer to improve centipedegrass sod quality established from ribbons. At three weeks after establishment there were visible differences. At four weeks the grower noted strong differences in color and density. The conclusion is that NanoCote Core increased nutrient uptake and also prolonged the release of fertilizer to provide overall higher nutrient efficiency.



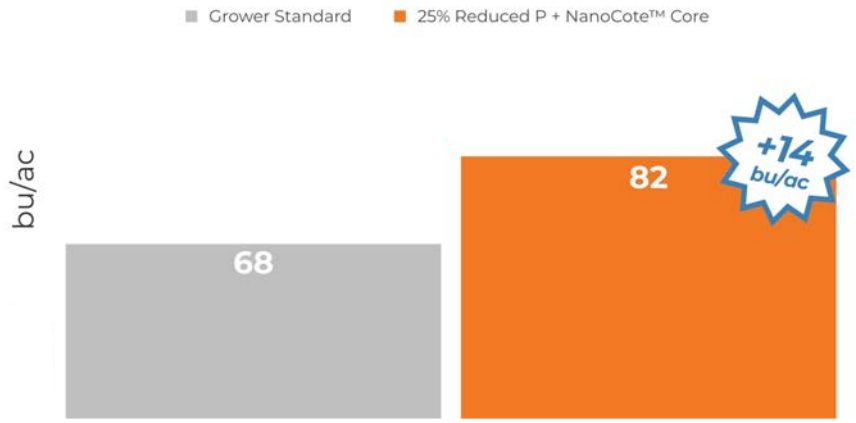
NanoCote™ Core Increases Soybean Yield in Ohio with Phosphorous Application

Year:	2023
Collaborator:	INTENT
Location:	Brown, Ohio

Application Type:	Crop Nutrition
Nano-Yield Product:	108 fl oz/ton NanoCote™ Core
Additional Product:	18-46-0 DAP

Summary:

Third party research collaborators evaluated NanoCote Core for enhancing nutrient efficiency of DAP fertilizer applied as a spring application for soybean production. A grower standard rate of DAP (100 lb/ac) was compared side by side with a 25% reduced rate of DAP (75 lb/ac) treated with NanoCote Core. The field with NanoCote and a reduced rate had an increased yield of 14 bu/acre compared to the grower standard without NanoCote.



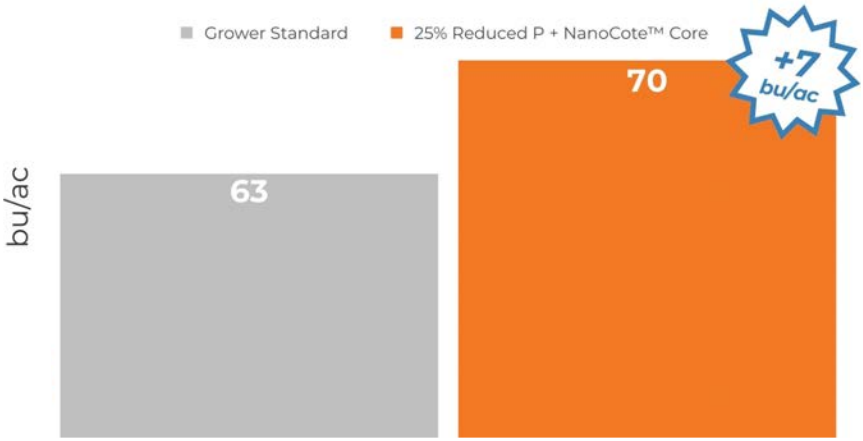
NanoCote™ Core Increases Soybean Yield

Year:	2023
Collaborator:	INTENT
Location:	St. Charles, Missouri

Application Type:	Crop Nutrition
Nano-Yield Product:	108 fl oz/ton NanoCote™ Core
Additional Product:	18-46-0 DAP

Summary:

Third party research collaborators evaluated NanoCote Core for enhancing nutrient efficiency of DAP fertilizer applied as a spring application for soybean production. A grower standard rate of DAP (60 lb/ac) was compared side by side with a 25% reduced rate of DAP (45 lb/ac) treated with NanoCote Core. The field with NanoCote and a reduced rate had an increased yield of 7 bu/acre compared to the grower standard without NanoCote.



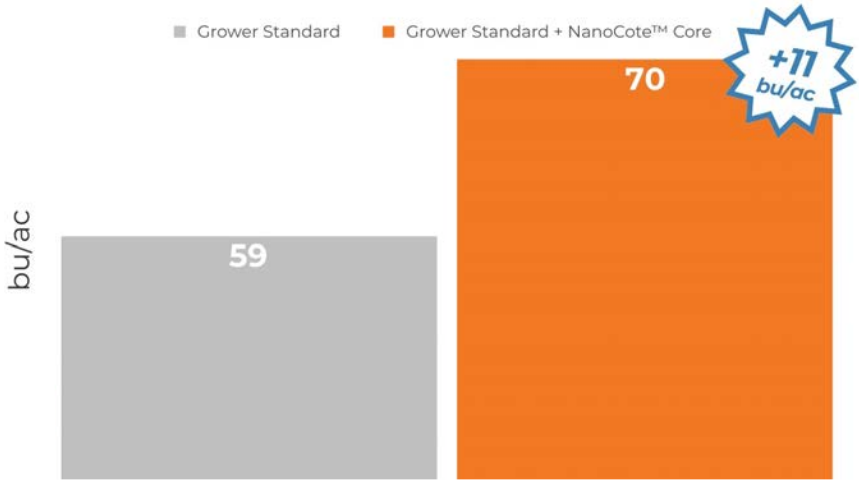
NanoCote™ Core Increases Soybean Yield

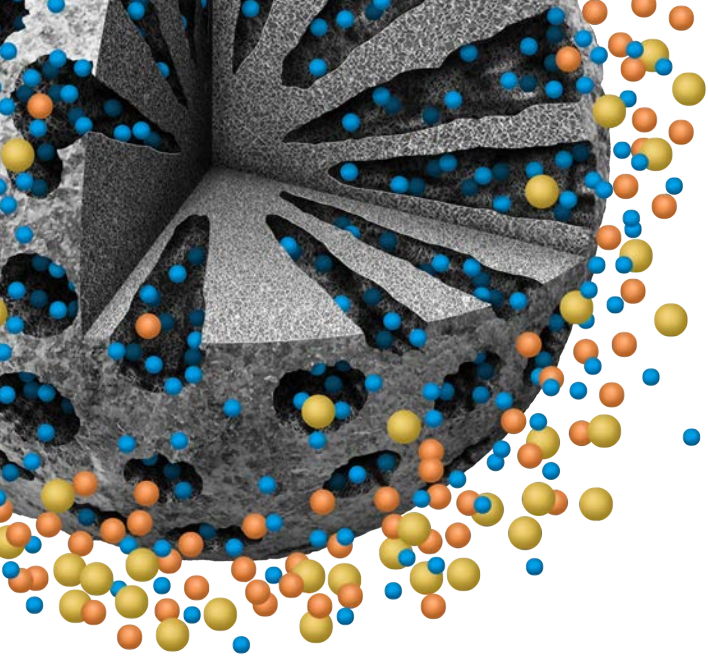
Year:	2023
Collaborator:	INTENT
Location:	St. Charles, Missouri

Application Type:	Crop Nutrition
Nano-Yield Product:	108 fl oz/ton NanoCote™ Core
Additional Product:	18-46-0 DAP

Summary:

Third party research collaborators evaluated NanoCote Core for enhancing nutrient efficiency of DAP fertilizer applied as a spring application for soybean production. A grower standard rate of DAP (60 lb/ac) was compared side by side with and without NanoCote Core. The field with NanoCote had an increased yield of 11 bu/acre compared to the grower standard without NanoCote.





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