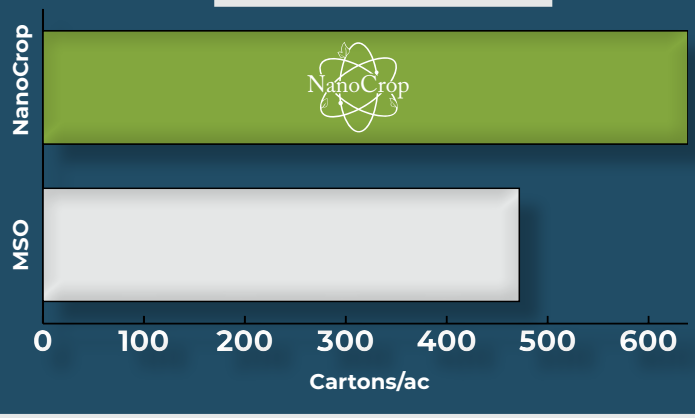
Case Study

ADJUVANT IN CAULIFLOWER

Rancho Guadalupe is a row crop farming operation in Santa Maria, California. The farm was having difficulty controlling the diamondback moth (DBM), a common pest in cauliflower crops. To find a solution, Rancho Guadalupe turned to NanoCrop, a bio-pesticide that was said to **increase the efficacy of their current chemicals and help control DBM faster than their standard adjuvant, Methylated seed oil** (MSO). They had heard about the success of other farmers using NanoCrop in strawberries as an bio-pesticide/adjuvant to control lygus and wanted to test it out for themselves.

MSO vs. NanoCrop

YIELD BY PRODUCT



To test the effectiveness of NanoCrop, Rancho Guadalupe conducted a trial with the assistance of a PCA, Frank Rivera. The trial consisted of two plots, one using NanoCrop (2 qts/100 gals) and the other using Methylated seed oil (MSO) (1 qt/100 gals) as a control. The spray rate was 50 gal/ac, and they conducted the sprays as needed. Expectations were that using NanoCrop would help control DBM pressure, with multiple applications triggering a bio-stimulant effect resulting in larger heads and improved yields.

After three applications, the trial concluded by harvesting the plots on January 4th-6th, 2023. Plot 1 (NanoCrop) produced 639 cartons/ac, while Plot 2 (Control) produced 472 cartons/ac. The use of **NanoCrop produced 167 cartons/ac more than Plot 2, despite its historically lower yields due to its location near a high-traffic dirt road.** The total amount of NanoCrop used was 96 oz/ac, and the total amount of MSO was 48 oz/ac.

products available OMRI LISTED™

YIELD BY PRODUCT

PLOT 1: NANOCROP

DATE	PRODUCTS SPRAYED				RATE
10/20	XenTari(r) 2lb/ac	Radiant 6oz/ac	NanoCrop 2qts/100gal		50gal/ac
11/20	Avaunt 3oz	Radiant 6oz	NanoCrop 2qts/100gal		50gal/ac
12/01	Avaunt 3.5oz	Leverage 360 3oz	Movento 5oz	NanoCrop 2qt/100gal	50gal/ac

PLOT 2: MSO

DATE	PRODUCTS SPRAYED				RATE
10/20	XenTari(r) 2lb/ac	Radiant 6oz/ac	MSO 1qts/100gal		50gal/ac
11/20	Avaunt 3oz	Radiant 6oz	MSO 1qts/100gal		50gal/ac
12/01	Avaunt 3.5oz	Leverage 360 3oz	Movento 5oz	MSO 1qt/100gal	50gal/ac

BENEFICIAL FRIENDLY · PLANT BASED · ZERO HOUR REI & PHI 0

The trial results showed that using **NanoCrop helped control DBM pressure 1-2 days faster than MSO and could trigger a bio-stimulant effect** when used in multiple applications when used at an adjuvant rate of 2 qts/100. Using NanoCrop as an adjuvant has proven to be an effective solution for controlling DBM and improving yields. Rancho Guadalupe is pleased with the trial results and plans to continue using NanoCrop as an adjuvant in their cauliflower farming operation.

Scan the QR Code to read more about this study!

See these results in YOUR fields
Call our team today! +1.707.972.5650

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NanoCrop Label Summary

OPTIMIZED FOR COMMERCIAL AG
POWERED BY PURECROP NANOTECH

NanoCrop

Modes of Action

INSECTICIDE

Eliminates sap-sucking insects by interfering with their digestive enzymes, causing constant micelle expansion and rupturing the insect. NanoCrop — Powered by PureCrop NanoTech — is safe for use around beneficial insects, such as honey bees, predatory mites and wasps, and ladybugs.

FUNGICIDE

Contains surface acting agents that physically remove mold and mildew from the leaf's surface. The micelle encapsulates and biodegrades spores, while also preventing reattachment and growth for up to ten days due to its translaminar properties.

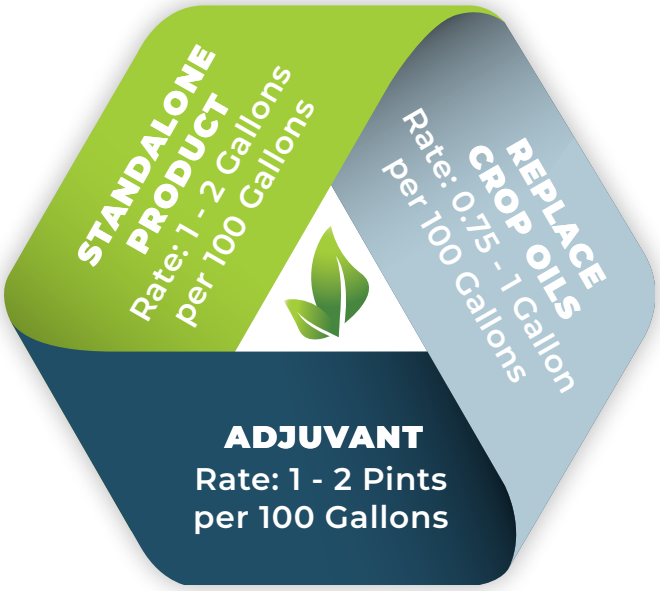
BIOSTIMULANT

NanoCrop is made of long-chain fatty acids that the plant converts into amino acids, which reduces interfacial tension, and enhances mesophyll conductance and ion transfer capacity—resulting in the ability to respond to abiotic stress, maximizing water and nutrient utilization and improve overall plant health.

SUPRA-MOLECULAR SURFACTANT

NanoCrop utilizes surfactant molecules, micelles, to lower the surface tension of water. They enable NanoCrop to spread and adhere to leaf surfaces uniformly, while dispersing evenly in water and mix indefinitely. Micelles do not clog or flood the stomata due to their size and are compatible with most products, except other surfactants.

NanoCrop Uses



PESTS & DISEASES

Including, but not limited to: Aphid, Asian Citrus Psyllid, Broad Mite, Citrus Rust Mite, Spider Mite, Russet Mite, Thrips, Whiteflies, Lygus, Stink Bug, Leaf-Footed Plant Bug, Mealybug, Scale, Snail, Botrytis, Fusarium Wilt, Downy Mildew, Powdery Mildew, Alternaria, Anthracnose, Bacterial Blast, FireBlight.

BUFFER RECOMMENDATIONS

Buffer water to pH 5.5-5.8 with citric acid before adding NanoCrop. Do not buffer with ammonia sulfates or sodium based buffers.

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