



Radiate[®]

EDUCATOR



Loveland
PRODUCTS.

RADIATE is designed to drive root and shoot growth through a patented formulation of IBA & kinetin in optimized ratios to enhance early-season vigor and drive maximum plant performance. The proven technology in Radiate provides growers with consistent performance across various crops.

FEATURES

- A patented combination of IBA and kinetin in an optimized balance for root and shoot growth
- Flexible formulation is labeled for both in-furrow and foliar applications
- Compatible with most fertilizers and pesticides for utmost flexibility in tank mix partners

GROWER BENEFITS

- Promotes vigorous root and shoot growth in all crops
- Larger root system is able to access more soil for increased uptake of key nutrients and water
- Improves early season vigor and reduces the negative effects of stresses experienced during the growing season

RATES

Foliar Applied: 2 fl. oz./A

Banded or In-furrow: 4 fl. oz./A

ANALYSIS

IBA (Indole-3 Butyric Acid) & Kinetin

IBA AND KINETIN

IBA is a type of plant hormone called an auxin. Produced in the plant shoots, IBA and other auxins travel downwards to the roots, stimulating plant growth and development, including the formation of roots. Working in the opposite direction, kinetin and other cytokinins are produced at the root tips and travel up the plant, promoting cell division and other processes vital to plant growth. In Radiate, IBA and kinetin are combined in the optimum ratio to maximize physiological processes in the plant that drive root and shoot growth.

GREATER PLANT VIGOR, LESS PLANT STRESS

Until a seedling's root system is well established, it must not only survive on a finite source of nourishment, but it is also very vulnerable to stunting or damage from a wide variety of stresses. The faster the nodal root system grows, the greater the chance of a healthy plant that can withstand environmental stress and produce maximum yields.

Radiate is a proven solution for accelerating nodal root growth. It can be used on most crops to improve early season plant vigor, reduce early season stress and improve overall plant health, leading to increased root mass and optimized yield potential.

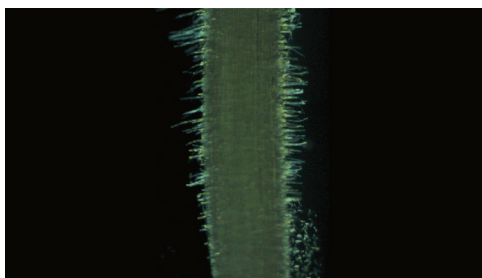
MORE ROOT MASS, BETTER NUTRIENT UPTAKE

Applying Radiate improves and accelerates the growth of root biomass, increasing nutrient uptake and improving plant development. Increased growth can be observed within a few days of applying Radiate.

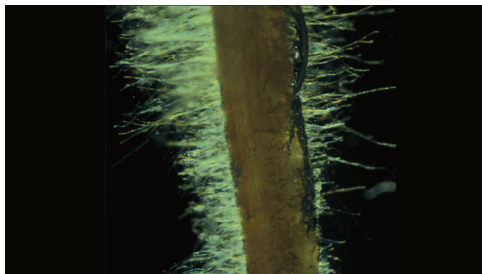
RADIATE'S EFFECT ON ROOT HAIRS

Radiate improves the growth of the primary root system and significantly increases the number of root hairs that are responsible for much of the plant's nutrient and water uptake.

I RADIATE® Effect on Root Hairs



Untreated



Radiate®

PN_85_C1221

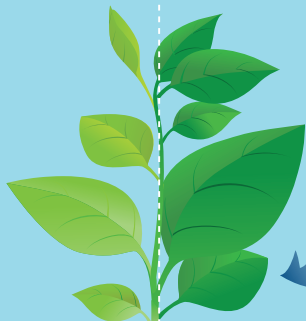
How It Works

Without Radiate:

- ✓ Less vigorous plant
- ✓ Fewer root hairs
- ✓ Plant vulnerable to stunting or damage from variety of stresses

With *Radiate*

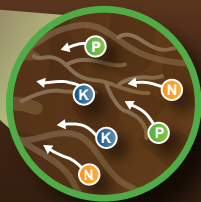
- ✓ Increased ability to produce auxin and cytokinins
- ✓ Enhanced root development, including more lateral roots and root hairs
- ✓ Greater early season plant vigor
- ✓ Reduced plant stress



Foliar application in V2-V6 stage of growth or in-furrow application at planting

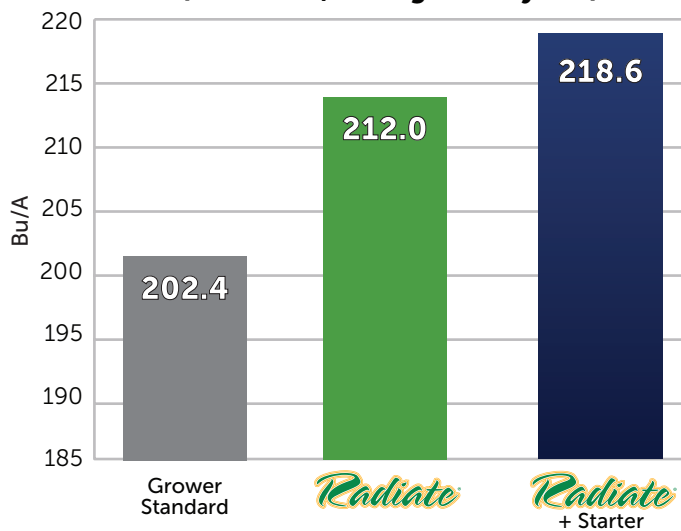
Plant hormones IBA and kinetin stimulate plant and root growth, also increasing the plant's ability to make more of these essential hormones

Fewer nutrients taken up into plant

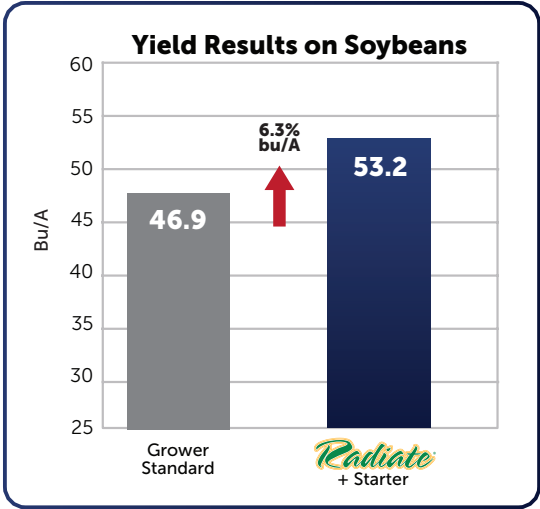


Healthy, more developed root system increases nutrient and water uptake

Yield Results on Corn (In-Furrow, Average 7 site years)



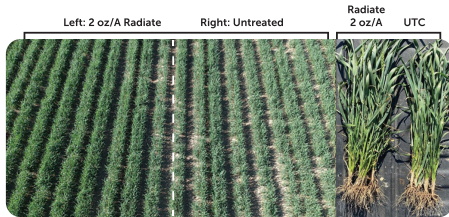
Loveland Product Research Trials



Loveland Product Research Trials

RADIATE®

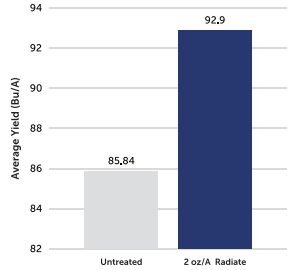
Irrigated Wheat Eaton, CO



2 oz/A of Radiate was applied with a herbicide application to half of this wheat field at Feekes & Pictures of the field were taken 20 days after application. The untreated half of the field only received herbicide.

Increased Yield & ROI

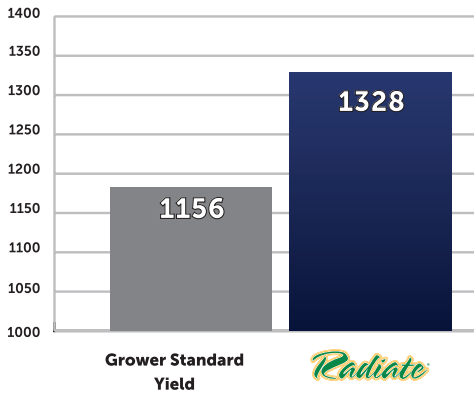
\$24/Acre Advantage



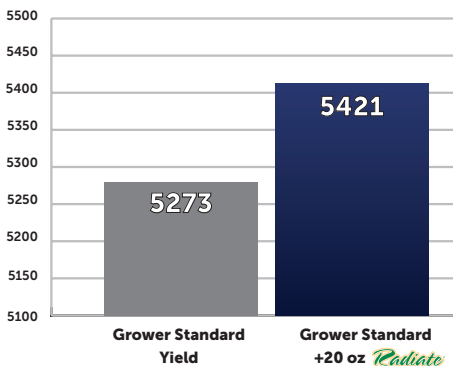
ROI assumes a \$4/A Radiate cost applies @ 2 oz/A and \$4/bu market price of wheat

RADIATE®

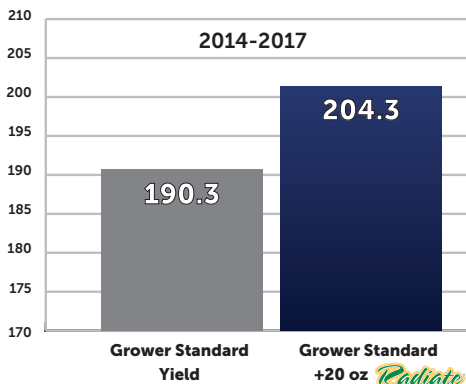
6 Cotton Trials



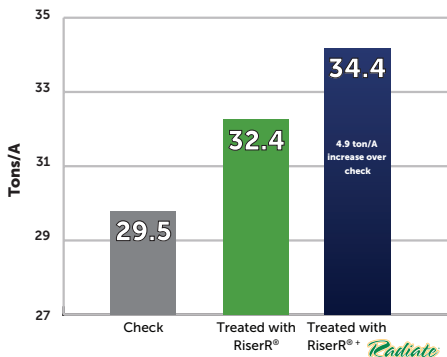
RADIATE® 7 Peanut Trials



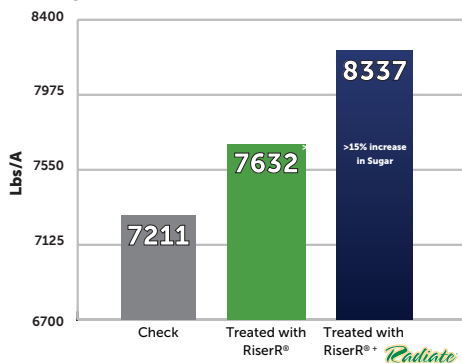
RADIATE® 7 Rice Trials



RADIATE® Sugarbeets - In-Furrow Trial



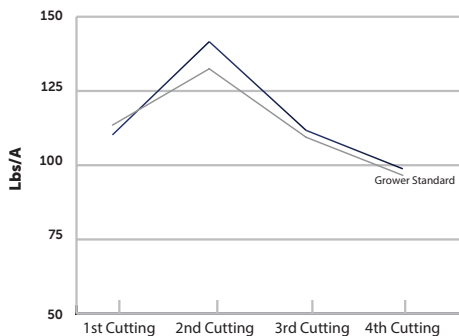
RADIATE® Sugarbeets - In-Furrow Trial



Hickson, ND (2008)

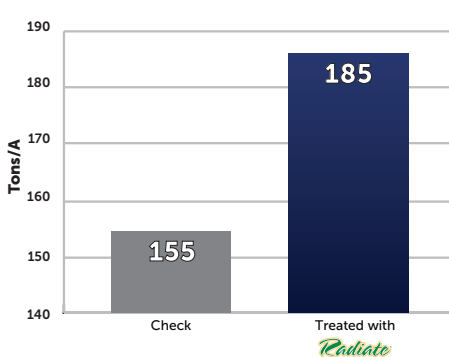
**ALFALFA – FOLIAR TRIAL,
YUMA, CO (2-YEAR AVERAGE)**

Radiate applied at 2 oz/A at green-up



**ALFALFA – FOLIAR TRIAL,
YUMA, CO (2-YEAR AVERAGE)**

Radiate applied at 2 oz/A at green-up



WHAT DO GROWERS LOVE ABOUT RADIATE?

Radiate is one of the best ways to grow strong, healthy roots for almost any type of crop. After all, if you don't use Radiate you'll never know how much of a difference it can make in your field.

"What growers like most about Radiate is that it offsets the stresses caused by weather, and it promotes a vigorous response after various applications."

–ROBBIE SCARBOROUGH, JR., CPS CROP CONSULTANT (BOYCE, LA)

"Great crops always start with a healthy and robust root system. Radiate is consistent, too. You don't cross your fingers and just hope it happens."

–JARED MEIER, CPS CROP CONSULTANT (WATERVILLE, KS)

USES AND RATES

CROP	APPLICATION	RECOMMENDED RATE
MOST CROPS	Foliar (V2-V6) (see label for crop-specific timing)	2.0-4.0 fl oz/acre
BARLEY FIELD CORN GRAIN SORGHUM OATS PEANUTS RYE SOYBEANS SWEET CORN SUGAR BEETS SUGARCANE WHEAT	In-Furrow (Pop-Up & Planter Band)	4 fl oz/acre



GET GROWING.

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contact your Loveland Products LSM.

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