

BioNik™

PLANT GROWTH REGULATOR



A close-up photograph of a field of young corn plants. The plants are tall and green, with long leaves and visible stems. The perspective is from a low angle, looking up at the plants.

FLEXIBILITY AND CONTROL IN THE NICK OF TIME



MASSIVO™

BioNik™

PLANT GROWTH REGULATOR

MAXIMIZE FLEXIBILITY, MINIMIZE RISK

Corn seed producers have a whole season's worth of product balancing on events that take place in a few days' worth of time.

BioNik™ plant growth regulator makes the random predictable, offering producers the flexibility they need while managing risk in the process.

FLEXIBILITY BENEFITS

- Treat seed yourself vs. sending to a supplier
- Save time and resources
- Adjust rate close to planting as situation dictates
- Treat some inbreds early and spread workload
- Over-treat seed treatments to maintain current practice
- Store product until next season to manage inventory

RISK MANAGEMENT BENEFITS

- Prevent the need for split planting to offset considerable weather risk
- Plant a male inbred mix of untreated and 1x BioNik™ rate to extend germination period and elongate pollen shed window
- Protect your female yield potential by optimizing the nicking zone
- Make decisions in-season to adjust to weather patterns and planting dates

MASSIVO™

BioNik™

PLANT GROWTH REGULATOR

MASSIVO™ Plant Growth Regulators: PHYSIOLOGICAL SEED ENHANCEMENT MAKING SEEDS BETTER, NATURALLY

Physiological seed enhancement technology leverages the power of biorational agents to enhance seed and/or seedling performance, resulting in a consistent benefit to the grower.

BioNik™ plant growth regulator is the first release in the Massivo™ family, and is a 25% formulation of s-abscisic acid (s-ABA). S-ABA is one of the five classes of plant growth regulators naturally present in plants, and regulates numerous plant processes including dormancy, maturation, growth, and response to stress conditions.

BioNik is a rate-responsive product based on benefits obtained from germination delay. *BioNik* can be applied at different rates to obtain a desired level of delay once the inbred response is characterized.

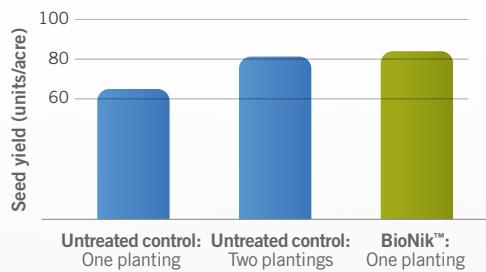
Valent BioSciences Corporation's (VBC) first registered s-ABA product, ProTone® Plant Growth Regulator, has been extremely successful in promoting the development of fruit color on red table grapes. VBC is continuing to expand its research with s-ABA into several more areas within the horticulture, agronomic, and ornamental crop segments.

YOU CAN'T CONTROL EVERYTHING, BUT YOU CAN CONTROL THE NICK

BioNik™ provides corn seed growers with the ability to precisely delay germination on male lines, providing flexibility that translates into a better nick, increased productivity and significant ROI.



YIELD RESULTS: BioNik™ TREATED vs. Untreated Control



By using BioNik™ to delay germination in a portion of the males, seed growers get the effect of two plantings with a single planting of BioNik-treated seed.

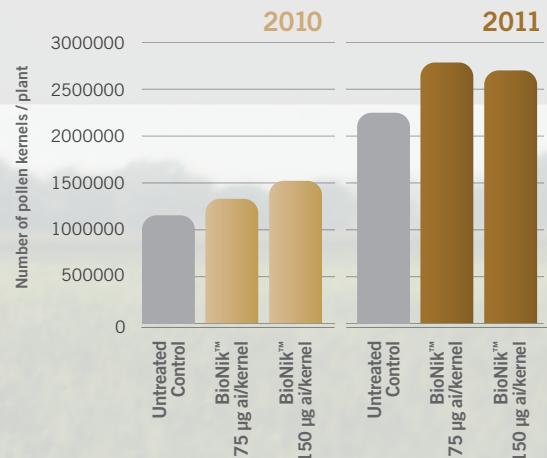
Female Inbred Line MBS2747; Male Line MBS8814GTCBLLRW

INCREASED POLLEN COUNT MEANS INCREASED EFFICIENCY

In addition to widening pollination spread, BioNik also effectively increases the amount of pollen shed by the males. More pollen, plus a wider window, equals a better nick.

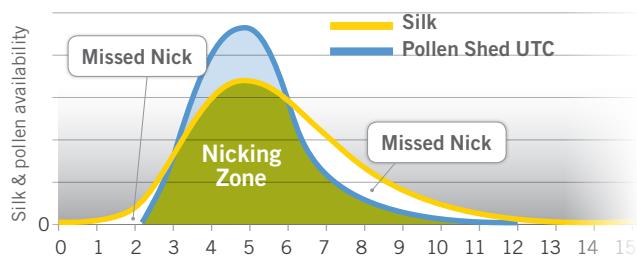
the BioNik™ EFFECT

Pollen Count: Small Plot Trials, Samatan, France



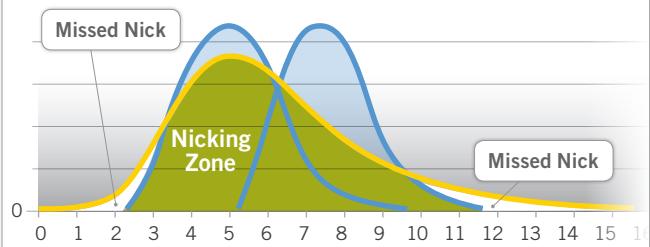
UNTREATED SINGLE AND SPLIT PLANTINGS: COVERING THE NICKING ZONE

Untreated Control: Single Planting



Corn seed producers are well-versed in the art of timing the plantings of their male and female inbreds so that pollen is readily available to the receptive silks. Even with perfect timing on the front end, however, the nicking zone area is limited by the pollen shed, which dies off well before silks are no longer viable.

Untreated Control: Split Planting

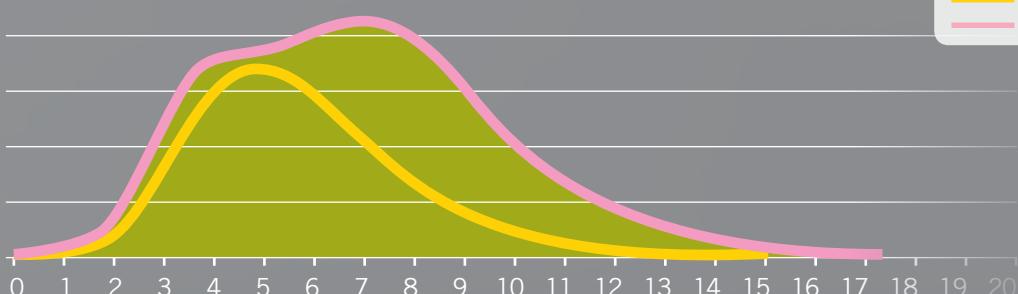


Most corn seed producers offset this missed opportunity by adding a second planting of males. A second peak of pollen shed takes advantage of the still-receptive silks, greatly expanding the area of nicking zone while reducing the missed nick. Environmental conditions, however, can severely complicate this second planting.

BioNik delivers corn seed producers the ultimate in flexibility and risk avoidance. With a single planting apportioned with both untreated and *BioNik*-treated seed, producers can stretch out

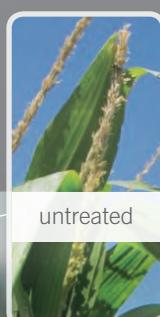
pollen shed to effectively blanket the silking period, resulting in a maximum nicking zone and no missed nick opportunity.

The BioNik™ Effect



Silk
Pollen Shed 1:1 BioNik Treated

1:1 Planting:
Untreated and
Treated with **BioNik**





Valent BioSciences Corporation is a worldwide leader in the research, development and commercialization of highly effective low-risk, environmentally compatible technologies and products for the agricultural, public health, forestry, and household markets. Through the power of technology, Valent BioSciences develops biorational products that create value and provide innovative solutions for its customers around the world.



Valent BioSciences Corporation is an ISO 9001:2008 Certified Company

Read and follow the label instructions before using.

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