

novozymes **product guide**

This guide is designed to help make the decision-making process easier when it's time to choose which Novozymes products to use on different types of crops. It explains the benefits of each product for the crops and how that can improve your bottom line.

table of contents



- 04 **NOVOZYMES BIOAG** >
- 06 **NOVOZYMES APPLICATIONS
FOR CROP PRODUCTION** >
- 08 **SOYBEANS** >
- 14 **CORN** >
- 18 **PULSES** >
- 24 **WHEAT** >
- 28 **FORAGES** >
- 32 **PEANUTS** >
- 36 **COTTON** >
- 38 **BIOCONTROL** >



about novozymes



Farmers depend on microbe- and enzyme-based biological solutions from Novozymes BioAg to make a positive impact on their bottom line and the planet, including bioyield and biocontrol products to enhance soil fertility, protect crops and enhance overall plant health.



Novozymes BioAg leads the way with meeting the most pressing agricultural challenges by offering farmers biological solutions with new modes of action that complement traditional fertilizers. At Novozymes, we also believe that supporting good soil structure, plant health and root and shoot development are key to increasing yields in the current and future growing seasons.

We know that farmers care about enhancing their profitability while also focusing on sustainability through carbon sequestration and utilizing integrated pest management and resource management. Novozymes BioAg strives to provide ecofriendly solutions in the face of rising consumer demands and increasing regulations.

Novozymes BioAg offers growers product flexibility to help meet these demands, while improving and protecting plant health and enhancing yields.



applications **for crop production**

Our biological products are derived from naturally occurring microbes like bacteria and fungi. These microbial inoculants complement traditional fertilizers, ultimately improving crop yields.

Microbial biocontrol solutions provide robust protection against insects and disease. The solutions consist of bacteria and fungi that target damaging pests to help keep crops healthy.



soybeans

Maximize your soybean yields by harnessing the crops natural potential and enhancing the surrounding environment. Biological solutions from Novozymes improve nitrogen fixation, plant health and nutrient availability.

The benefits of biologicals:

- Enhanced nitrogen fixation
- Enhanced nutrient availability, which supports root and shoot growth
- Early season vigor
- Improved yield potential





nitrogen-fixing liquid



NEW

Optimize® FXC DS



Highly effective dual strain
bradyrhizobium



Powerful nodulation
signaling molecule



Broad compatibility with 120
days on-seed with most seed
treatments



On-seed liquid formulation



NEW formulation with
improved yield performance

[VIEW MORE ON OUR WEBSITE](#)

TagTeam® LCO XC



Powerful nodulation
signaling molecule



Highly effective
bradyrhizobium



Phosphate-solubilizing
biological



Broad compatibility with 120
days on-seed with most seed
treatments



On-seed liquid formulation

[VIEW MORE ON OUR WEBSITE](#)

Cell-Tech®



Highly effective
bradyrhizobium



Broad compatibility with four
days on-seed with most seed
treatments



On-seed or in-furrow
application



Economical soybean
inoculant

[VIEW MORE ON OUR WEBSITE](#)





nitrogen-fixing non-sterile peat

granular



Cell-Tech® NS



Highly effective
bradyrhizobium



Two-day planting window
when applied alone



Grower applied on-seed
application



Economical soybean
inoculant

[VIEW MORE ON OUR WEBSITE](#)

TagTeam®



Highly effective
bradyrhizobium



Two living biologicals
in one product



Phosphate-solubilizing
biological



In-furrow application

[VIEW MORE ON OUR WEBSITE](#)

Cell-Tech®



Highly effective
bradyrhizobium



Economical soybean
inoculant



In-furrow application

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signaling technology liquid




Torque® IF

 Powerful signal molecule between plants and soil organisms


 Compatible with wide variety of liquid nutritional products, fungicides and insecticides


 Wide application window including in-furrow at time of planting or soil applied sidedress


 Labeled on a wide variety of row crops and specialty crops


[VIEW MORE ON OUR WEBSITE](#)

Ratchet®

 Powerful signal molecule that activates processes that increase photosynthesis and sugar production


 Compatible with wide variety of foliar herbicide, fungicides, insecticides and nutritional products


 Wide application window and tank-mix options


 Labeled on a wide variety of row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)

Cue®

 Key signaling component connecting plants to organisms in the rhizosphere

 Compatible with most other chemical and biological seed treatments

 Convenient low use rate for on-seed application

[VIEW MORE ON OUR WEBSITE](#)





nutrient availability wetable powder

JumpStart®



Living biological for
season-long colonization



Broad seed treatment
compatibility



Improves phosphate
availability

[VIEW MORE ON OUR WEBSITE](#)

QuickRoots® Multi-crop



Two living organisms
in one product



Improves availability of
nitrogen, phosphate and
potassium

[VIEW MORE ON OUR WEBSITE](#)

planter box

QuickRoots® Multi-crop



Two living organisms
in one product



Improves availability of
nitrogen, phosphate and
potassium



Planter box formulation for
ease of application

[VIEW MORE ON OUR WEBSITE](#)





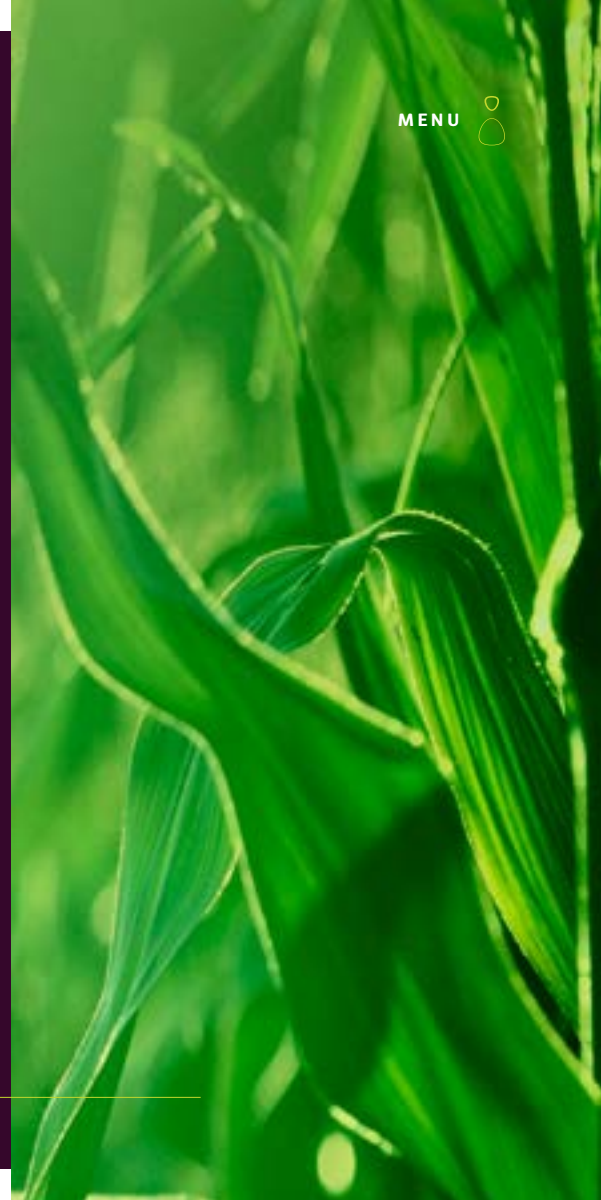


corn

Improve plant health and nutrient availability by harnessing the power of beneficial bacteria, fungi, and signaling molecules. Our solutions help maximize your corn yields through mycorrhizal associations, increased photosynthetic capacity, and by releasing bound nutrients.

The benefits of biologicals:

- Enhanced root growth and shoot development
- Improved stress tolerance
- Performance in a variety of soil conditions and types
- Improved yield potential





nutrient availability wetable powder

BioniQ®



Three living biologicals in one product for season-long colonization



Improves availability of nitrogen, phosphate and potassium



Broad seed treatment compatibility



Convenient package size



Proven field results

[VIEW MORE ON OUR WEBSITE](#)

QuickRoots® Multi-crop



Two living organisms in one product



Improves availability of nitrogen, phosphate and potassium

[VIEW MORE ON OUR WEBSITE](#)

JumpStart®



Living biological for season-long colonization



Broad seed treatment compatibility



Improves phosphate availability

[VIEW MORE ON OUR WEBSITE](#)

planter box

QuickRoots® Multi-crop



Improves availability of nitrogen, phosphate and potassium



Two living organisms in one product



Planter box formulation for ease of application

[VIEW MORE ON OUR WEBSITE](#)





signaling technology liquid

Torque® IF

Powerful signal molecule between plants and soil organisms

Compatible with wide variety of liquid nutritional products, fungicides and insecticides

Wide application window including in-furrow at time of planting or soil applied sidedress

Labeled on a wide variety of row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)

Ratchet®

Powerful signal molecule that activates processes that increase photosynthesis and sugar production

Compatible with wide variety of foliar herbicide, fungicides, insecticides and nutritional products

Wide application window and tank-mix options

Labeled on a wide variety of row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)



MENU



pulses

Novozymes inoculants for pulses work with your crop to enhance key crop functions to improve yield potential. Our biological solutions support nitrogen fixation, plant health and nutrient availability.

The benefits of biologicals:

- Enhanced nitrogen fixation
- Vigorous root growth and shoot development
- Early season vigor
- Improved yield potential





nitrogen-fixing granular



TagTeam® BioniQ® Pro Pea & Lentil



Four living biologicals
in one product



Improves availability of
nitrogen, phosphate and
potassium



Phosphate-solubilizing
biological



Convenient package size

[VIEW MORE ON OUR WEBSITE](#)

Cell-Tech® Pea & Lentil



In-furrow application



Economical soybean
inoculant

[VIEW MORE ON OUR WEBSITE](#)

TagTeam® BioniQ® Chickpea



Four living biologicals
in one product



Phosphate-solubilizing
biological



Improves availability of
nitrogen, phosphate and
potassium



Convenient package size

[VIEW MORE ON OUR WEBSITE](#)





nitrogen-fixing liquid



TagTeam® LCO Pea & Lentil



Phosphate-solubilizing
biological



Powerful nodulation
signaling molecule



On-seed liquid application

[VIEW MORE ON OUR WEBSITE](#)

Cell-Tech® Pea & Lentil



On-seed or in-furrow
application



Economical pulse inoculant

[VIEW MORE ON OUR WEBSITE](#)





nitrogen-fixing peat

TagTeam® Pea & Lentil



Two living biologicals
in one product



Phosphate-solubilizing
biological

[VIEW MORE ON OUR WEBSITE](#)

TagTeam® Chickpea



Two living biologicals
in one product



Phosphate-solubilizing
biological

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non-sterile peat

Cell-Tech® NS Pea & Lentil



Two-day planting window
when applied alone



Economical pulse inoculant



Grower applied on-seed
application

[VIEW MORE ON OUR WEBSITE](#)





nutrient availability planter box

QuickRoots® Multi-crop



Planter box formulation for ease of application



Two living organisms in one product



Improved availability of nitrogen phosphate and potassium

[VIEW MORE ON OUR WEBSITE](#)

signaling technology liquid

Ratchet®



Powerful signal molecule that activates processes that increase photosynthesis and sugar production



Wide application window and tank-mix options



Compatible with wide variety of foliar herbicide, fungicides, insecticides and nutritional products



Labeled on a wide variety of row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)





wheat

Improve plant health and nutrient availability by harnessing the power of beneficial bacteria, fungi, and signaling molecules. Our solutions help maximize yields and improve stress tolerance through mycorrhizal associations, increased photosynthetic capacity, and by releasing bound nutrients.

The benefits of biologicals:

- Enhanced nutrient availability, which supports root and shoot growth
- Improved stress tolerance
- Performance in a variety of soil conditions and types
- Improved yield potential





nutrient availability wettable powder



planter box

BioniQ®



Three living biologicals in one product for season-long colonization



Improves availability of nitrogen, phosphate and potassium



Broad seed treatment compatibility



Convenient package size



Proven field results

[VIEW MORE ON OUR WEBSITE](#)

JumpStart®



Living biological for season-long colonization



Broad seed treatment compatibility



Improves phosphate availability

[VIEW MORE ON OUR WEBSITE](#)

QuickRoots® Multi-crop



Two living biologicals in one product



Improves availability of nitrogen, phosphate and potassium

[VIEW MORE ON OUR WEBSITE](#)

QuickRoots® Multi-crop



Improves availability of nitrogen, phosphate and potassium



Two living biologicals in one product



Planter box formulation for ease of application


[VIEW MORE ON OUR WEBSITE](#)








signaling technology liquid

Ratchet®

 Powerful signal molecule that activates processes that increase photosynthesis and sugar production


 Wide application window and tank-mix options


 Compatible with wide variety of foliar herbicide, fungicides, insecticides and nutritional products


 Labeled on a wide variety of row crops and specialty crops


[VIEW MORE ON OUR WEBSITE](#)

Torque® IF

 Powerful signal molecule between plants and soil organisms

 Wide application window including in-furrow at time of planting or soil applied side-dress

 Compatible with wide variety of liquid nutritional products, fungicides and insecticides

 Labeled on a wide variety of row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)





forages

Maximize your yields by harnessing the crops natural potential and enhancing the surrounding environment. Biological solutions for forages improve nitrogen fixation, plant health and nutrient availability.

The benefits of biologicals:

- Enhanced nitrogen fixation
- Improved stress tolerance
- Higher ROI through increased forage yield





nitrogen-fixing dry clay

Nitragin® Gold Clover



Superior seed adhesion



Suitable for continuous flow
or batch treating systems



Broad seed treatment
compatibility

[VIEW MORE ON OUR WEBSITE](#)

Nitragin® Gold Alfalfa and Sweet Clover



Superior seed adhesion



Suitable for continuous flow
or batch treating systems



Broad seed treatment
compatibility



High rates of nitrogen
fixation

[VIEW MORE ON OUR WEBSITE](#)

liquid

Optimize® Gold



Powerful nodulation
signaling molecule



Liquid formulation

[VIEW MORE ON OUR WEBSITE](#)





nutrient availability wetable powder

JumpStart®



Living biological for
season-long colonization



Improves phosphate
availability

[VIEW MORE ON OUR WEBSITE](#)

signaling technology liquid

Ratchet®



Powerful signal molecule
that activates processes that
increase photosynthesis and
sugar production



Wide application window
and tank-mix options



Compatible with wide
variety of foliar herbicide,
fungicides, insecticides and
nutritional products



Labeled on a wide variety of
row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)





peanuts

Biological solutions maximize yields by harnessing the crops natural potential and enhancing the surrounding environment. Novozymes inoculants for peanuts improve nitrogen fixation, plant health and nutrient availability.

The benefits of biologicals:

- Enhanced nitrogen fixation
- Improved nodulation
- Increased yield potential





nitrogen-fixing granular

liquid



Cell-Tech®



Highly effective dual strain
bradyrhizobium



Economical peanut inoculant



In-furrow application

[VIEW MORE ON OUR WEBSITE](#)

Cell-Tech®



Highly effective dual strain
bradyrhizobium



In-furrow application



Economical peanut inoculant

[VIEW MORE ON OUR WEBSITE](#)

Optimize®



Powerful nodulation
signaling molecule



Highly effective dual strain
bradyrhizobium



Enhances early mycorrhizal
colonization

[VIEW MORE ON OUR WEBSITE](#)

TagTeam® LCO



Powerful nodulation
signaling molecule



Highly effective dual strain
bradyrhizobium



Phosphate-solubilizing
biological



Enhances early mycorrhizal
colonization



Releases bound mineral
forms of phosphate

[VIEW MORE ON OUR WEBSITE](#)





nitrogen-fixing peat

Cell-Tech®



Highly effective
bradyrhizobium



Economical peanut inoculant



Grower applied on-seed



Great option for double
inoculation

[VIEW MORE ON OUR WEBSITE](#)

nutrient availability wetttable powder

JumpStart®



Living biological for
season-long colonization



Broad seed treatment
compatibility



Improves phosphate
availability



Convenient application
with liquid inoculants

[VIEW MORE ON OUR WEBSITE](#)

signaling technology liquid

Ratchet®



Powerful signal molecule
that activates processes
that increase photosynthesis
and sugar production



Wide application window
and tank-mix options



Compatible with wide
variety of foliar herbicide,
fungicides, insecticides
and nutritional products



Labeled on a wide variety of
row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)

Torque® IF



Powerful signal molecule
between plants and soil
organisms



Wide application window
including in-furrow at time
of planting or soil applied
side-dress



Compatible with wide variety
of liquid nutritional products,
fungicides and insecticides



Labeled on a wide variety of
row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)







cotton

Improve plant health and nutrient availability by harnessing the power of beneficial bacteria, fungi, and signaling molecules. Our solutions help maximize your cotton yields through mycorrhizal associations, increased photosynthetic capacity, and by releasing bound nutrients.

The benefits of biologicals:

- Enhanced nutrient availability
- Increased stress tolerance
- Increased yield potential





nutrient availability planter box

QuickRoots® Multi-crop



Two living organisms in one product



Improved availability of nitrogen, phosphate and potassium



Planter box formulation for ease of application

[VIEW MORE ON OUR WEBSITE](#)

wettable powder

QuickRoots® Multi-crop



Two living organisms in one product



Improved availability of nitrogen, phosphate and potassium

[VIEW MORE ON OUR WEBSITE](#)

signaling technology liquid

Ratchet®



Powerful signal molecule that activates processes that increase photosynthesis and sugar production



Wide application window and tank-mix options



Compatible with wide variety of foliar herbicide, fungicides, insecticides and nutritional products



Labeled on a wide variety of row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)

Torque® IF



Powerful signal molecule between plants and soil organisms



Wide application window including in-furrow at time of planting or soil applied side-dress



Compatible with wide variety of liquid nutritional products, fungicides and insecticides



Labeled on a wide variety of row crops and specialty crops

[VIEW MORE ON OUR WEBSITE](#)

signaling technology liquid

Revv®



Key signaling component connecting plants to organisms in the rhizosphere



Compatible with most other chemical and biological seed treatments



Convenient low use rate for on-seed application

[VIEW MORE ON OUR WEBSITE](#)





biocontrol

Novozymes biocontrol products protect your crops against harmful insects and disease pressure using microbes. Keep your crops healthy with a natural, dependable solution to protect high-value crops and maximize marketable yields.

The benefits of biologicals:

- Broad spectrum activity
- OMRI-Listed
- Ideal for integrated pest management





biocontrol wetabletable powder

Taegro® 2



Low use rate



Zero-day pre-harvest interval



4-hour re-entry interval

[VIEW MORE ON OUR WEBSITE](#)

Actinovate®



Beneficial bacteria with multiple modes of action



Zero-day pre-harvest interval



4-hour re-entry interval



Rainfast in 4 hours

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ADDITIONAL ACTINOVATE® BIOCONTROL PRODUCTS

Actinovate® AG

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Actinovate® Lawn & Garden

[VIEW MORE ON OUR WEBSITE](#)

Actinovate® SP

[VIEW MORE ON OUR WEBSITE](#)





**To learn more, visit us at [Novozymes.com/bioag](https://www.novozymes.com/bioag)
or contact your local retailer.**



ABOUT NOVOZYMES

Novozymes is the world leader in biological solutions. Together with customers, partners and the global community, we improve industrial performance while preserving the planet's resources and helping build better lives. As the world's largest provider of enzyme and microbial technologies, our bioinnovation enables higher agricultural yields, low-temperature washing, energy-efficient production, renewable fuel and many other benefits that we rely on today and in the future.

We call it **Rethink Tomorrow.**

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