DakotaBIO
THE BIOLOGICAL COMPANY

Product Catalog









Dakota Bio brings decades of expertise in soil microbiology, fermentation, production, agronomy, and farming. Our focus is on developing biological solutions that increase nutrient delivery, improve nutrient efficiency, help mitigate crop stress and manage crop residue. Our goal is simple: reduce your input costs while increasing yields and profitability on your farm.
Contact us—or your local Dakota Bio sales representative—today to learn more

www.dakotabio.com **833-DakotaB**

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Crave™ HC

Mitigate and Recover from Stress

Crave HC is a patent-pending metabolite used to increase your crops ability to reduce damage caused by drought, heat, disease, insect damage and other abiotic stresses that limit your crop's health — while dramatically improving nutrient efficiency.

Features

- Use on all crops
- Tank mix compatible with herbicides, fungicides, insecticides and nutritionals
- Can be applied in-furrow or foliar





Benefits

- Increases plant defenses by 5200%
- Increases stress recovery
- Increases nutrient effeciency
- Increase ear length and girth
- Decreases bloom and pod abortion

Optimum timing

Corn

- 8 fl oz infurrow for improved emergence and establishment
- Or 8 oz foliar before V5 for maximizing ear development
- Or 8 oz foliar at tassel for maximizing ear flex.

Soybeans

- Foliar 8oz at R1/R2 to reduce bloom and pod abortion.

Results

Corn

- 92% win rate
- +8 bpa
- +4% yield increase

Soybeans

- 94 % win rate
- +2.9 bpa
- 4% yield increase

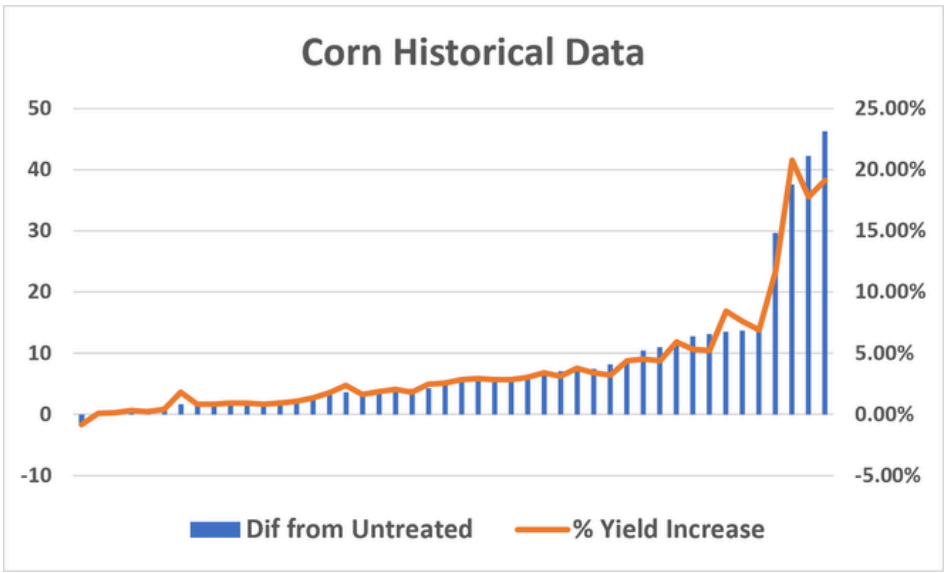
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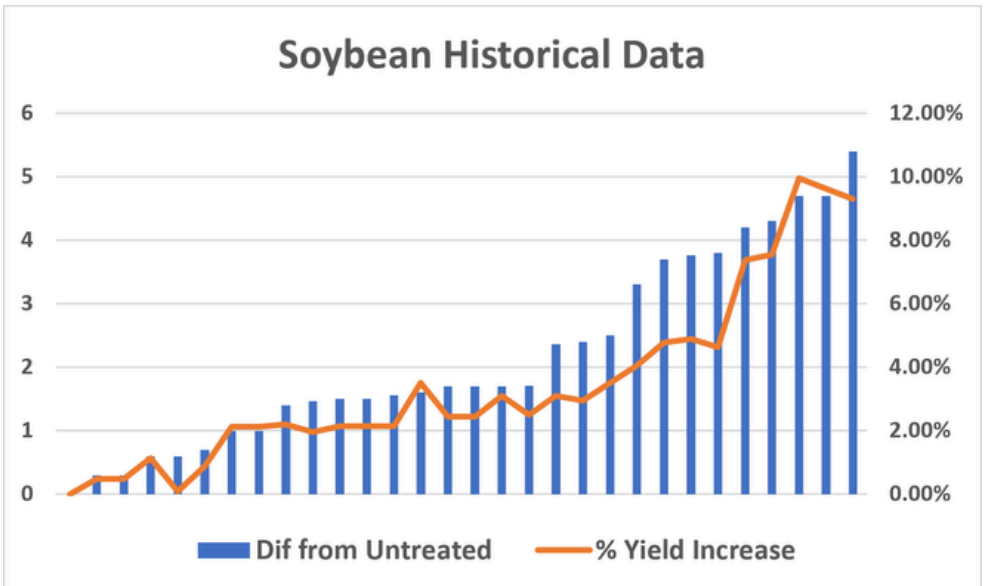
Crave™ HC

How Does Crave HC Work?

Crave HC works at the cellular level in plants. Crave HC reduces ROS in plant cells – decreasing yield reduction from stress. Crave HC also increases the efficiency of energy production, reduces damage and increases recovery from abiotic stress. Crave HC has a direct effect on the plant for 30 days, the benefits are season long.



- **78 replicated corn trials at independently managed research farms.**
- **92% positive yield response rate.**
- **+8 bpa average**
- **+4% yield increase**



- **56 replicated soybean trials at independently managed research farms.**
- **94% positive yield response rate.**
- **+2.6 bpa average**
- **+4% yield increase**

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PheNom

PheNom ST

Every Plant can make Nitrogen

PheNom is a powerful endophytic nitrogen fixing bacteria that lives inside the plant, converting atmospheric nitrogen into a usable form every day your crop breathes. That means consistent nitrogen delivery all season long. — with a second strain that enhances phosphorus efficiency, unlocking even more yield potential.

Features

- Use on all crops
- Converts atmospheric nitrogen all growing season
- Increases Phosphorus supply all season
- Tank mix compatible with herbicides, fungicides and nutritionals
- Available in 2 formulations
  - Seed Treat, In-furrow/Foliar

Benefits

- Increased Nitrogen for increased grain fill and kernal size
- Increased Phosphorus all season
- Can be used with nutrient reduction management

Application Rates

- PheNom ST = 2 fl oz per 100 lbs of large seed
- PheNom ST = 1 fl oz per 100 lbs of small seed
- PheNom = 16 fl oz per acre foliar and in-furrow

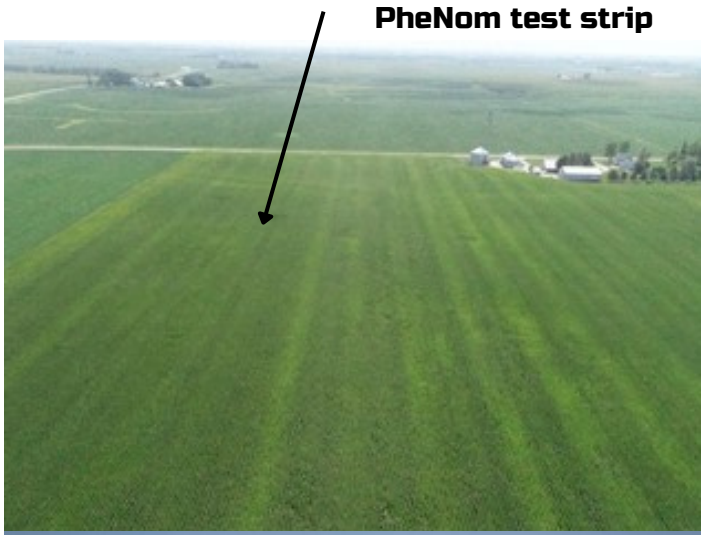
Results

Corn

- 5 yrs of independent replicated trials
- 83% win rate
- +5.1 bpa
- +2% yield increase

Soybeans

- 6 yrs of independant replicated trials
- 87% win rate
- +2.4 bpa
- +4.1% yield increase





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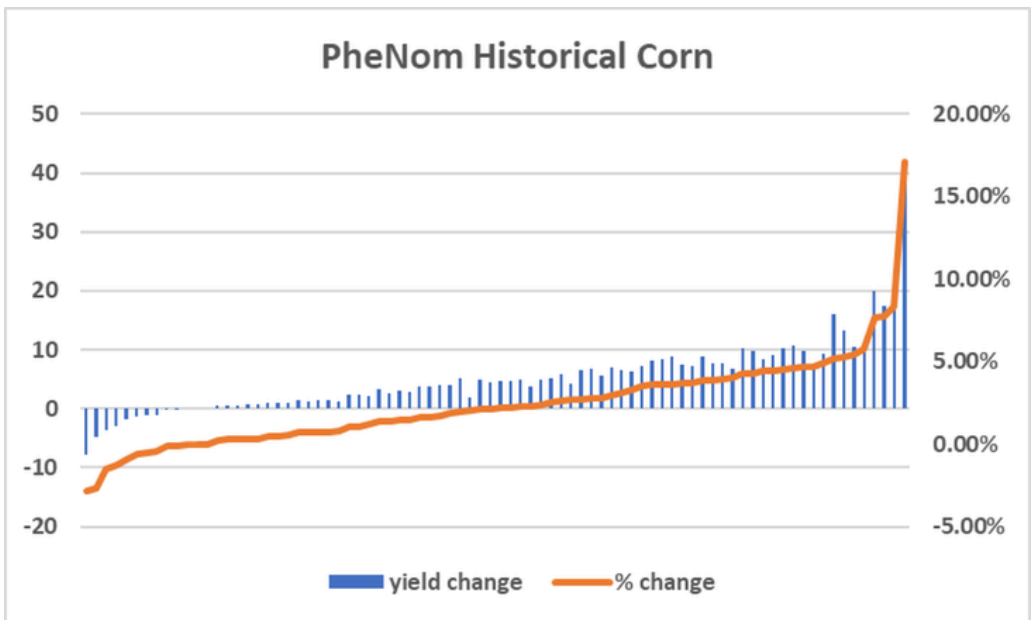
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PheNom

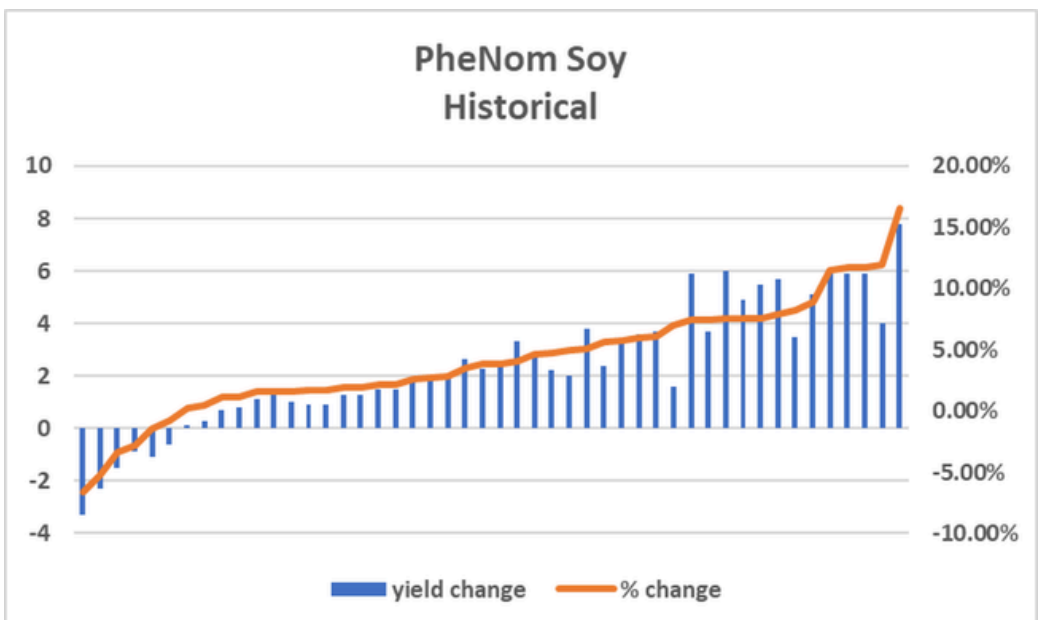
PheNom ST

How does PheNom work?

PheNom is a powerful 2 species endophyte bacteria blend. Both bacteria live inside the plant. One fixes atmospheric nitrogen into a usable form inside the plant. The other increases phosphorus uptake and efficiency inside the plant. PheNom increases nitrogen and phosphorus all season long. Nitrogen fixation increases as soil nitrogen availability decreases.



- **86 replicated corn trials at independently managed research farms.**
- **83% positive yield response rate. Without N app reduction.**
- **+5.1 bpa average**
- **+2% yield increase**



- **46 replicated soy trials at independently managed research farms.**
- **87% positive yield response rate.**
- **+2.4 bpa average**
- **+4.1% yield increase**

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B4 ST | B4 LiF Organic | B4 LiF

Unlock Season long P & K

B4 is a powerful blend of four highly concentrated, root-colonizing bacteria specifically selected to solubilize unavailable phosphorus and potassium from the soil contacting your roots.

Features

- Use on all soil types
- Use on all crops
- Tank mix compatible with herbicides, fungicides and nutritionals
- 200 day on seed life and tank mix safe
- Available in 3 formulations
  - Seed Treat, in-furrow, OMRI in-furrow

Benefits

- Increases uptake of P & K
- Increases nutrient uptake in cold and wet soils.
- Increases availability of micronutrients.





Application Rates

- B4 ST = 1 fl oz per 100 lbs of seed
- B4 LiF = 16 fl oz per acre in furrow
- B4 LiF Organic = 16 fl oz per acre in-furrow

Results

Corn

- 6 yrs of independant replicated trials
- 86% win rate
- +6.6 bpa
- +3% yield increase

Soybeans

- 6 yrs of independent replicated trials
- 86% win rate
- +2.5 bpa
- +4% yield increase

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Soy7 Soy30 Stride

Soybeans need Nitrogen

Did you know soybeans need over 5 lbs of nitrogen per bushel? That's why you can't afford to cut corners on inoculation. Soy 30™ and Soy 7™ are high-concentration, sterile liquid inoculants packed with elite Bradyrhizobium strains to maximize nodulation and nitrogen fixation.

Features

- Low use rate
- High concentration
- Sterile liquid Bradyrhizobium japonicum
- Multi Strain
- Can be applied seed treat or in-furrow

Benefits

- Increases nodule count and mass
- Increases nitrogen supply
- Increases pod fill
- Increase yield



Soy30 test strip

Application Rates

- Soy30 1 fl oz per 100lbs of seed
  - 30 day life on seed
- Soy7 1 fl oz per 100lbs of seed
  - 7 day life on seed
- Stride 0.5 fl oz per 100lbs of seed in Soy30
  - 110 day life on seed

Results

- 82% win rate
- +3 bpa
- +4.9% yield increase

Other Inoculants available

Chickpea PVL Azo

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Product	Package Size(s)	Crop	Application Rate	Pkg Treats	Application Notes	Shelf-Life	Purpose	Pro Tips
B4 ST	2 X 2.5 gallon Case	All	1 fl oz per 100 lb. of seed	640 cwt	Apply to seed immediately when mixed. Can be tank mixed with seed treatments. Plant within 200 days of applying to seed.	2-Years from Production Date	Increase availability of P,K,Fe & Zn	Apply to seed with a seed treater. Do not tank mix with inoculants.
B4 ST	6X25 fl. oz Case	All	1 fl oz per 100 lb. of seed	300 units	Apply to seed immediately when mixed. Can be tank mixed with seed treatments. Plant within 200 days of applying to seed.	2-Years from Production Date	Increase availability of P,K,Fe & Zn	Apply to seed with a seed treater. Do not tank mix with inoculants.
B4 LiF	2 X 2.5 gallon Case	All	16 fl oz per acre	40 ac	Apply within 200 days of mixing	2-Years from Production Date	Increase availability of P,K,Fe & Zn	Apply in-furrow with seed. Tank mix with sugar or carbon shortens shelf-life
B4 LiF	1 X 275 gallon Tote	All	16 fl oz per acre	2,200 ac	Apply within 200 days of mixing	2-Years from Production Date	Increase availability of P,K,Fe & Zn	Apply in-furrow with seed. Tank mix with sugar or carbon shortens shelf-life
B4 LiF Organic	2 X 2.5 gallon Case	All	16 fl oz per acre	40 ac	Apply within 30 days of mixing	2-Years from Production Date	Increase availability of P,K,Fe & Zn	Apply in-furrow with seed. Tank mix with sugar or carbon shortens shelf-life
B4 LiF Organic	1 X 250 gallon Tote	All	16 fl oz per acre	2,000 ac	Apply within 30 days of mixing	2-Years from Production Date	Increase availability of P,K,Fe & Zn	Apply in-furrow with seed. Tank mix with sugar or carbon shortens shelf-life
Azo LiF	1 X 9.5L (321 fl oz) Bladders	All	On Seed-Apply at a rate of 2.0 fl. oz per 100 lb. of seed In Furrow-Apply 1 pint per acre in furrow	20 ac	Apply to seed within 6 hours of being mixed. Plant within 7 days of applying to seed.	1-Year from Production Date	Increased plant health and nitrogen fixation	Mix and plant immediately. Apply contacting the seed.
Soy30 1x480u	7.2L (243.4 fl oz) Bladder	Soybean	1.0 fl oz per 100 lb. of seed (0.5 fl oz per 140,000 seeds)	480 u	Apply to seed immediately when mixed. Plant within 30 days of applying to seed.	1-Year from Production Date	Nitrogen Fixation	Apply with seed treater. Do not tank mix with seed treatments.
Soy30 2x240u	2 X 3.6L (243.4 fl oz) Bladders	Soybean	1.0 fl oz per 100 lb. of seed (0.5 fl oz per 140,000 seeds)	480 u	Apply to seed immediately when mixed. Plant within 30 days of applying to seed.	1-Year from Production Date	Nitrogen Fixation	Apply with seed treater. Do not tank mix with seed treatments.
Soy30 12x40u	12 X 0.6L (20.2 fl oz) Bladders	Soybean	1.0 fl oz per 100 lb. of seed (0.5 fl oz per 140,000 seeds)	480 u	Apply to seed immediately when mixed. Plant within 30 days of applying to seed.	1-Year from Production Date	Nitrogen Fixation	Apply with seed treater. Do not tank mix with seed treatments.
Soy7 1x240u	7.2L (243.4 fl oz) Bladder	Soybean	2.0 fl oz per 100 lb. of seed (1.0 fl oz per 140,000 seeds)	240 un	Apply to seed immediately when mixed. Plant within 30 days of applying to seed.	2-Years from Production Date	Nitrogen Fixation	Apply with seed treater. Do not tank mix with seed treatments.
Stride 2x240u	2 X 1.8L (121.7 fl oz) Bladders	Soybean	Apply at a 0.25-0.5 ounces per 140,000 seeds	480 u	Apply to seed immediately when mixed. Apply .25 oz/cwt will add 40 days life on seed Apply .5 oz/cwt will add 40 days life on seed Use with Soy30	2-Years from Production Date	Increase on seed life of Soy30	Apply with seed treater. Do not tank mix with seed treatments.
Stride 12x40u	12 X 0.3L (10 fl oz) Bladders	Soybean	Apply at a 0.25-0.5 ounces per 140,000 seeds	480 u	Apply to seed immediately when mixed. Apply .25 oz/cwt will add 40 days life on seed Apply .5 oz/cwt will add 40 days life on seed Use with Soy30	2-Years from Production Date	Increase on seed life of Soy30	Apply with seed treater. Do not tank mix with seed treatments.
PVL 10,000	1 X 10L (338 fl oz) Bladders	Pea, Vetch and Lentil	3.4 fl oz per 100 lbs. seed	66 ac	Apply to seed immediately when mixed. Plant treated seed within 24 hours.	1-Year from Production Date	Nitrogen fixation for peas, vetches, lentils	Apply directly to seed
Chickpea 10,000	1 X 10L (338 fl oz) Bladders	Chickpea/ Garbanzo	3.4 fl oz per 100 lbs. seed	80 ac	Apply to seed immediately when mixed. Plant treated seed within 24 hours.	1-Year from Production Date	Nitrogen fixation for Chickpeas	Apply directly to seed
PheNom	2 X 2.5 Gallon Bladders	All	16 fl oz per acre	40 ac	With Herbicide, Apply within 10 hours With Fertilizer, Apply within 15 days	12-months from Production Date	Increase supply of Nitrogen and increase efficiency of P	Apply in-furrow touching seed. Apply foliar early in growing season.
PheNom ST	1x7.1L (240 fl oz) Bladders	All	Corn/Soy: 2.0 fl oz per cwt Wheat 1.0 fl oz per cwt	120 cwt	Apply to seed immediately when mixed. Plant within 30 days of applying to seed.	12-months from Production Date	Increase supply of Nitrogen and increase efficiency of P	Apply with seed treater. Do not tank mix with seed treatments.
PheNom ST	1x1.2L (40.58 fl oz) Bladders	All	Corn/Soy: 2.0 fl oz per cwt Wheat 1.0 fl oz per cwt	20 cwt	Apply to seed immediately when mixed. Plant within 30 days of applying to seed.	12-months from Production Date	Increase supply of Nitrogen and increase efficiency of P	Apply with seed treater. Do not tank mix with seed treatments.
Crave HC	2 X 2.5 gallon Case	All	8 fl oz per acre	80 ac	Can be mixed with herbicides, fungicides, insecticides, and nutritionals	2-Years from Production Date	Stress-mitigation and recover. Increase nutrient efficiency inside plant.	Apply infurrow contacting seed or foliar by V5 or VT on corn. Apply prior to R2 on soybeans.
Crave HC	1 X 275 gallon Tote	All	8 fl oz per acre	4,400 ac	Can be mixed with herbicides, fungicides, insecticides, and nutritionals	2-Years from Production Date	Stress-mitigation and recover. Increase nutrient efficiency inside plant.	Apply infurrow contacting seed or foliar by V5 or VT on corn. Apply prior to R2 on soybeans.
DB 32	2 x 2 Gallon Jugs	All	12.8 fl oz per acre	40 ac	Tank mix, spray within 3 days. Can be applied post harvest, preplant or with first herbicide pass.	2-Years from Production Date	Convert crop residue to available nutrients & increase planter performance.	Apply post harvest, or pre plant or first herbicide pass. Apply prior to tillage.