

Agnique® BioHance

Increase the
efficacy of
biological actives
in biopesticide
formulations

 **BASF**

We create chemistry

Agnique® BioHance Adjuvants

Tailor-made solution to improve biopesticide performance

Common diseases such as tomato blight, spinach downy mildew, strawberry gray mold and pumpkin powdery mildew are among many other pathogens that cause significant economic impact to farmers.

Biopesticides provide sustainable and lower non-target solutions to meet consumer and grower demand. However, maintaining and enhancing the efficacy of the biological actives in biopesticide formulations comes with its own set of challenges.

Agnique® BioHance 100 (OMRI Certified) and **Agnique® BioHance 200** BASF's tank mix adjuvants are designed to tackle the biological efficacy issue.



	Grape	Pumpkin	Spinach	Pathogen(s)
Downy Mildew	Yes		Yes	<i>Plasmopara viticola</i> , <i>Peronospora effusa</i>
Powdery Mildew	Yes	Yes		<i>Uncinula necator</i> ., <i>Podoshaera xanthii</i>

	Apple	Green Bean	Primrose	Strawberry	Pathogen(s)
Scab	Yes				<i>Venturia inaequalis</i>
White Mold		Yes			<i>Sclerotinia sclerotiorum</i>
Gray Mold			Yes	Yes	<i>Botrytis spp.</i>

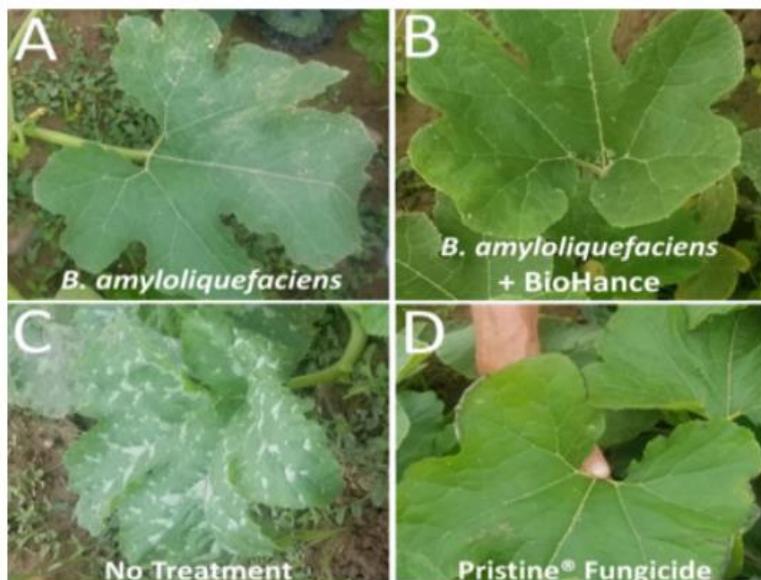
	Sweet Corn	Tomato	Pathogen(s)
Leaf Blight	Yes		<i>Setosphaeria a turcicum</i>
Rust	Yes		<i>Puccinia sorghi</i>
Bacterial Speck		Yes	<i>Pseudomonas syringae pv.</i>
Late Blight		Yes	<i>Phytophthora infestans</i>

Agnique BioHance adjuvants were tested against 11 pathogens on 9 different crops in field trials.

All trials **showed statistically significant improvement** in control when the Agnique BioHance adjuvant was paired with *Bacillus* biopesticides.

With a **strong commitment to performance, efficacy, and sustainability**, BASF is here to help farmers achieve their crop protection goals.

- **Agnique® BioHance 200** improves the control of powdery mildew when used with *Bacillus amyloliquefaciens* (Figure B) to the same degree as the synthetic fungicide Pristine (Figure D).
- **Figure A:** Pumpkin leaf treated with *Bacillus amyloliquefaciens biofungicide*
- **Figure B:** Pumpkin leaf treated with *Bacillus amyloliquefaciens* and Agnique BioHance
- **Figure C:** powdery mildew infestation on pumpkin leaf without any treatment.
- **Figure D:** Pumpkin leaf treated with Pristine® fungicide.

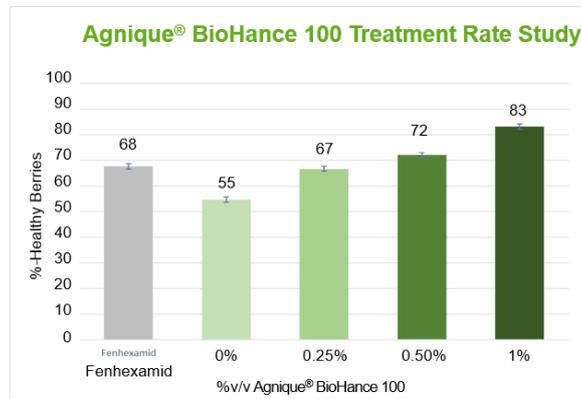


Field data show enhanced efficacy

Agnique® BioHance 100 control of Strawberry Gray Mold with *B. amyloliquefaciens* (New York)

Control of Strawberry Gray Mold (*Botrytis cinerea* – High Pressure)

Trial Time Period	April/ May 2020
Spray Volume	100 gal/a (930 L/ha)
Elevate® 50 WDG Fungicide	24 oz/a (1.68 kg/ha)
<i>B. Amyloliquefaciens</i> Biofungicide	(WP) 8 oz/a (563 g/ha)
Replicate plots	4 (7 plants/plot)
Applications	4 (7-day interval)
Evaluation	5 Days after Harvest
Phytotoxicity	0



Field trial with different use rates of **Agnique BioHance 100** being added as a **tank mix adjuvant** with *Bacillus amyloliquefaciens*.

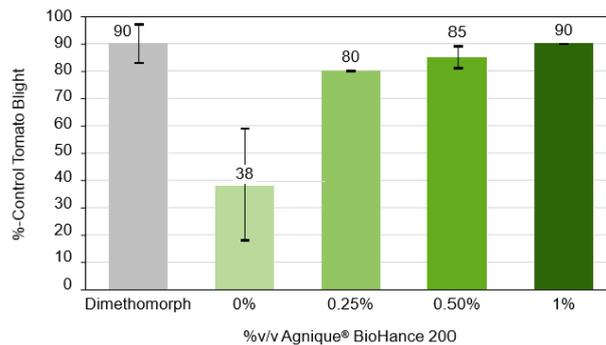
With **1% Agnique BioHance 100**, *B. amyloliquefaciens* shows superior efficacy to control strawberry gray mold compared to the synthetic fungicide benchmark Fenhexamid.

Agnique® BioHance 200 offers excellent control of Tomato Blight with *B. amyloliquefaciens*

Control of Tomato Blight (*Phytophthora infestans*)

Trial Time Period	July/August 2019
Spray Volume	100 gal/a (930 L/ha)
Forum® Fungicide	(SC) 6 oz/a (.44 L/ha)
<i>B. amyloliquefaciens</i> Biofungicide	(WP) 8 oz/a (563 g/ha)
Replicate plants	3
Applications	4 (7-day interval)
Evaluation	10 Days after last
Phytotoxicity	0
Untreated Control	75.2% Infection

Agnique® BioHance 200 Treatment Rate Study



Field trial with different use rates of **Agnique BioHance 200** being added as a **tank mix adjuvant** with *Bacillus amyloliquefaciens*.

With **1% Agnique BioHance 200**, *B. amyloliquefaciens* shows equivalent efficacy to control tomato blight compared to the synthetic fungicide benchmark Dimethomorph.

Explore BASF Agnique® BioHance products



Properties

Product	Agnique® BioHance 100	Agnique® BioHance 200
Appearance	 Straw Color, Clear	 Amber Color, Slightly Hazy
Brookfield Viscosity, DV-E-RVF, Spindle #3, 100 RPM, 25C	176cP	356cP
Specific Gravity, 25C	0.990 g/cm ³	1.053 g/cm ³
pH, 5% in DI water	6.5	6.5



Regulatory status and inventory listing

Product		Agnique® BioHance 100	Agnique® BioHance 200
EU	REACH	Registered	No
USA	TSCA	Listed	Listed
USA EPA:	40 CFR 180	910&930	910
OMRI		US & Canada	Ineligible
Biobased carbon %		50<x<95	50<x<95
Biodegradability		Yes	Yes
RSPO Certification		No	Yes



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BASF CORPORATION
North America
100 Park Avenue
Florham Park, NJ 07932
Phone: 1 973 245 6000

industrial-formulators-na@basf.com
<https://care360.basf.com/industrial-formulators/nafta/>

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