Andermatt
Madumbi

Biological Solutions

Bio Crop Protection

FytoSave®

Reg. No. L10052, Act 36 of 1947

Bio Crop Protection | Root Health | Plant Vitality

FytoSave®

Reg. No. L10052, Act 36 of 1947, Biofungicide.

Preventative biofungicide for stimulation of defences on crops as specified on the label. FytoSave® contains COS-OGA (Oligosaccharide complex) biological extracts that stimulate a plant's natural defences. This elicits both preventative and cumulative protection against diseases, on the crops specified.

Why use FytoSave®?

Features	Benefits
New, innovative active using COS-OGA (Oligosaccharide complex)	Ideal tool for Disease Resistance Management strategies
Proprietary, patented formulation	Not affected by UV Excellent rainfastness No phytotoxicity No storage restrictions
Novel mode of action	Mimics a pathogen attack and activates the plant's natural defences
Preventative applications	Early season suppression of disease outbreak
Acts cumulatively	Suppressive effect increases with repeat applications
Tank mix compatibility	Can be applied on its own, in tank mixes, or rotated with conventional fungicides
Non-toxic, no Maximum Residue Limit (MRL)	Helps growers to meet market expectations
Compatible with Organic Farming practices	Ideal for new organic export markets

How does FytoSave® work?

FytoSave® contains COS-OGA, natural extracts which mimic pathogen infestation. This elicits the activation of a plant's immune system on a molecular level, thereby increasing the defence mechanisms to protect it against pathogen attack. Plant cell walls are strengthened, proteins are synthesised to destroy pathogen cells, and antimicrobial (plant produced antibiotics) components are produced.

Untreated Cucumber leaves infected with Powdery mildew

Untreated Squash leaves infected with Powdery mildew

Trial data:

FytoSave® suppression of Downy Mildew on grapes

Cultivar: Sugraone
Location: Paarl
Commercial Standard: Broad-spectrum fungicide based on phthalimide

FytoSave® was compared with a commercial standard treatment, as well as untreated control to indicate disease pressure. Applications started at BBCH 73 (Berries groat-sized, bunches begin to hang), and continued weekly until BBCH 81 (Beginning of ripening: berries begin to develop variety-specific colour). Downy mildew incidence was evaluated weekly on leaves and berries.

Figure 1: Downy mildew incidence on grape leaves on vines treated with FytoSave® and a commercial standard, compared with untreated vines. Data is presented per evaluation date, 7 days after each treatment.

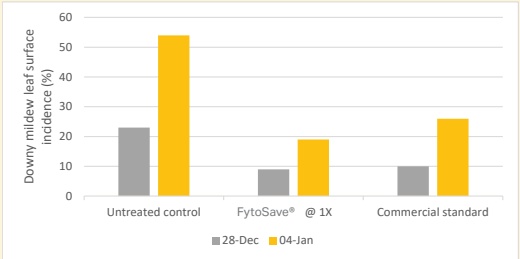


Fig. 1

Significant Downy mildew suppression was observed on vines treated with FytoSave® and the commercial standard. FytoSave® and the commercial standard supported the same level of suppression in this trial.

Figure 2: Downy mildew incidence on grape berry bunches on vines treated with FytoSave® and a commercial standard, compared with untreated vines. Data is presented per evaluation date, 7 days after each treatment.

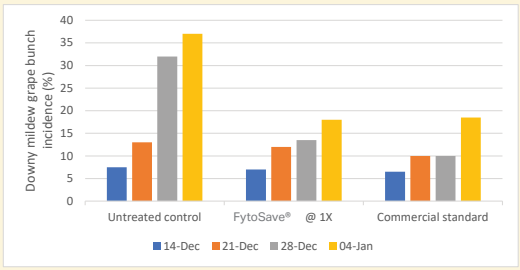


Fig. 2

FytoSave® suppression of Powdery Mildew on squash

Cultivar: Caserta
Location: Pretoria
Commercial Standard: Azoxystrobin

FytoSave® was compared with a commercial standard treatment, as well as untreated control to indicate disease pressure. Applications started as soon as early visual symptoms of powdery mildew was observed on the leaves. Powdery mildew incidence was evaluated weekly on lower and upper sides of the leaves.

Figure 3: Powdery mildew incidence on lower side leaves of squash treated with FytoSave® and a commercial standard, compared with untreated leaves. Data is presented per evaluation date, 7 days after each treatment.

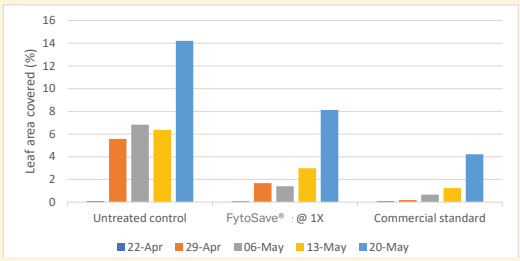
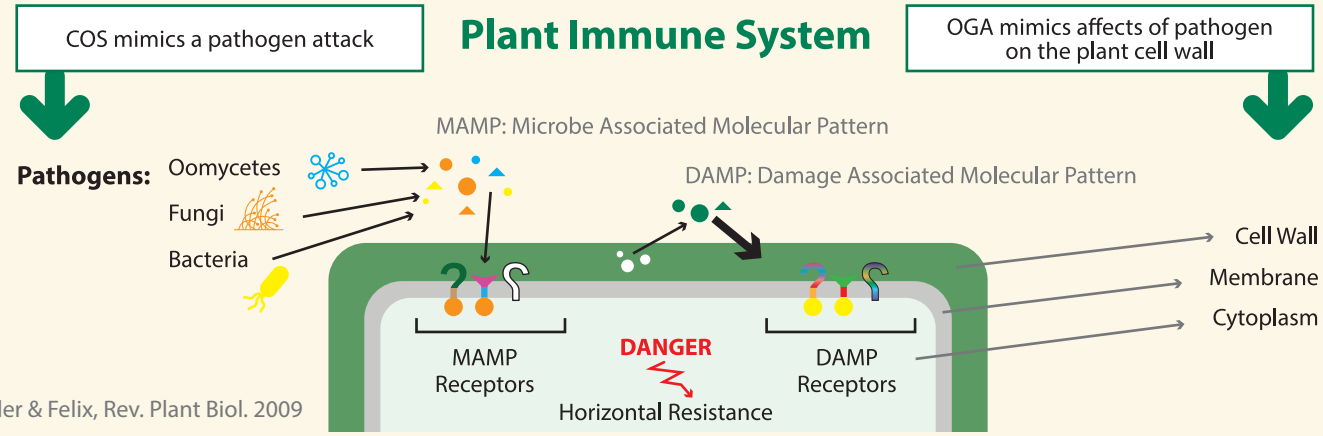


Fig. 3

The image below depicts the mechanism of action. COS molecules are recognised by plant receptors and mimic the presence of pathogens. The cell then identifies it as foreign and switches on Pathogen-Associated Molecular Patterns (PAMP) within the cell. The OGA molecules are also recognised by plant receptors, but they mimic pathogen degradation of plant cell walls. This switches Damage Associated Molecular Patterns (DAMP) on within the cell. The PAMP and DAMP patterns are emergency signals that mobilise a wide range of plant defences.



Boller & Felix, Rev. Plant Biol. 2009

FytoSave®

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Application instructions:

Crop/Disease	Dosage	Remarks
Cucurbits Powdery mildew (*Podosphaera fusca*)	3 L/ha (water volume 500-1000 L)	• Apply as a precautionary measure, when conditions favour disease outbreak, or when disease is first observed. • Repeat application every 7 days until disease is under control, or conditions are no longer favourable. • Apply as a full-cover film spray using conventional spray equipment. Good coverage is essential, preferably on the lower leaf.
Table Grapes Downy mildew (*Plasmopara viticola*) Powdery mildew (*Erysiphe necator*)	3 L/ha (water volume 200-1000 L)	

Available in pack: 10 L.

- New, original mode of action, which stimulates a plant's natural defences against pathogens.
- Preventative and cumulative protection against outbreaks of diseases on crops, as stipulated.
- Can be incorporated into an Integrated Crop Protection Management programme, to be used alone, combined in a tank-mix, or rotated with conventional fungicides.
- Non-toxic and no Maximum Residue Limit (MRL) restrictions.

Marketed and Distributed by: Andermatt Madumbi

Developed and Supplied by: Bancella® Partners - Food - Farming

Manufactured by: fytofend Pioneering Biological Alternatives

Andermatt Madumbi

Healthy Food and Healthy Environment, for all

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FytoSave® contains Chito-oligosaccharides and Oligo-galacturonic acid complex (COS-OGA Oligosaccharide complex). Reg. No. L10052, Act No. 36 of 1947 – FytoFend (Pty) Ltd, Block A Inanda Greens Business Park, 98 Albertyn Avenue, Sandton, 2196. Reg. No. 2018/306062/07