



FytoSave®

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



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Preventative biofungicide for stimulation of defences on crops as specified on the label. Fyto-Save® 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 Fyto-Save®?

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 Fyto-Save® work?

Fyto-Save® 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:

Fyto-Save® suppression of Downy mildew on grapes

Cultivar: Sugraone

Location: Paarl

Commercial Standard: Broad-spectrum fungicide based on phthalimide

Fyto-Save® was compared with a commercial standard treatment, as well as untreated control to indicate disease pressure. Applications started at BBCH 73 (Berries goat-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 Fyto-11 and a commercial standard, compared with untreated vines. Data is presented per evaluation date, 7 days after each treatment.

Significant Downy mildew suppression was observed on vines treated with Fyto-Save® and the commercial standard. Fyto-11 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 Fyto-Save® and a commercial standard, compared with untreated vines. Data is presented per evaluation date, 7 days after each treatment.

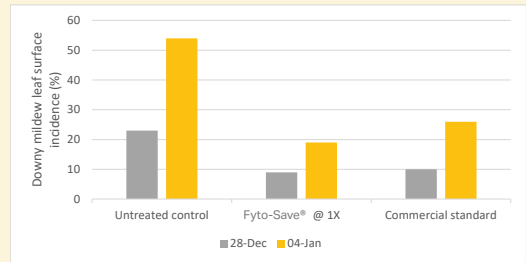


Fig. 1

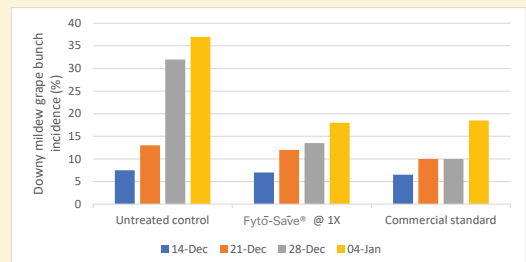


Fig. 2

Fyto-Save® suppression of Powdery mildew on squash

Cultivar: Caserta

Location: Pretoria

Commercial Standard: Azoxystrobin

Fyto-Save® 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 Fyto-Save® and a commercial standard, compared with untreated leaves. Data is presented per evaluation date, 7 days after each treatment.

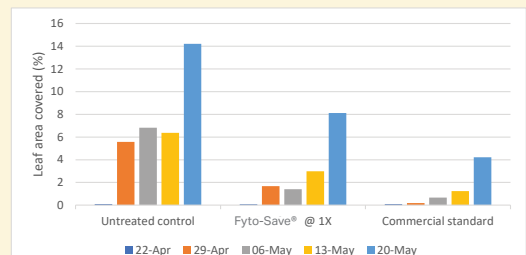
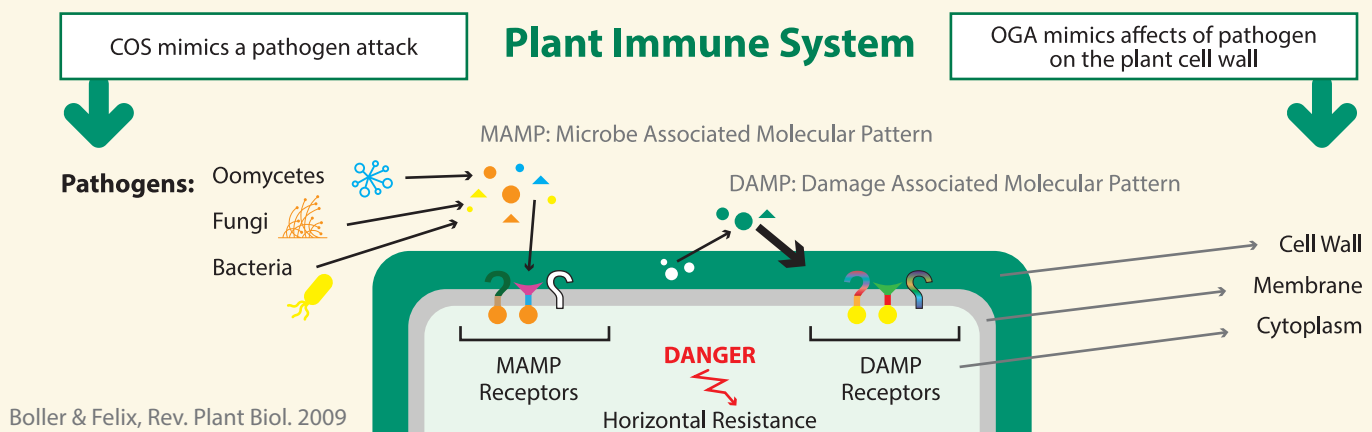


Fig. 3

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.



Application instructions:

Crop/Disease	Dosage	Remarks
Cucurbits Powdery mildew (<i>Podosphaera fusca</i>)	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 (<i>Plasmopara viticola</i>) Powdery mildew (<i>Erysiphe necator</i>)	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.

Developed and Supplied by:



Manufactured by:



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Healthy Food and Healthy Environment, for all



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