



VitiSan[®]

Effective disease control in viticulture, fruit crops, vegetables and ornamentals – bio-fungicide for organic growers and residue-free growing systems

VitiSan[®]

Active substance: 994.9 g/kg Potassium bicarbonate

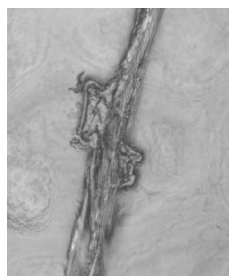
VitiSan[®] is a contact fungicide with preventive and curative effects against a wide range of fungal diseases. The effective fungicide is based on potassium bicarbonate with compelling advantages against oidium and botrytis in grapes. VitiSan[®] also controls powdery mildew and botrytis in vegetables, soft fruits and ornamentals as well as scab and sooty blotch in pome fruits.

Mode of action

VitiSan[®] has a multiplex principle of operation, acting through a combination of several effects. The working effects are pH-value, osmotic pressure and specific ion effects of bicarbonate. The hyphae burst and desiccate in consequence of the retardation of mycelium forming. Finally VitiSan[®] causes a total collapse of spores and mycelium of the susceptible fungi. As VitiSan[®] acts through a multiplex mode of action (MoA), there is no risk of resistance, even if it is applied frequently.



Vital hypha of powdery mildew with appressorium



Dried up hypha after treatment with VitiSan[®]



- ✓ Effective protection against a broad spectrum of fungal diseases
- ✓ Residue-free
- ✓ No pre-harvest interval
- ✓ Beneficial friendly
- ✓ Approved for organic farming



VitiSan® – Application

VitiSan® treatment against powdery mildew and botrytis in grapes

VitiSan® is a well established fungicide against powdery mildew (oidium) in grapes. As a contact fungicide with unspecific MoA VitiSan® is not endangered of resistance. Due to this fact, it is a common practice in integrated growing systems to use VitiSan® in combination with synthetic fungicides in anti resistance strategies. The absent pre-harvest interval allows even very late applications close to harvesting time.

- good curative effect
- additional active ingredient for integrated production (IP)
- regular use hardens the skin of the berries (lower risk of botrytis)
- tank mixtures with a broad spectrum of fungicides possible
- substitute for wettable sulphur
- improves efficacy of wettable sulphur
- late applications into the bunch zone slow down botrytis infection



VitiSan® treatment against apple scab

- VitiSan® shows its highest efficacy against apple scab and sooty blotch in combination with wettable sulphur
- curative effect even if applied 24 h after the beginning of the infection
- preventive covering after drying of spraying
- high quality composition leads to low phytotoxic impact

5 kg/ha in standard orchard (2.5 kg/ha and m crown height¹)



¹ Crown height is a dosage unit which is especially used in Germany and Austria. Normally a standard fruit orchard has a crown height of 2 meters.

VitiSan® treatment against powdery mildew and botrytis in ornamentals

The importance of residue-free ornamental plants is growing. For this reason VitiSan® is an important fungicide against powdery mildew both in organic and integrated growing. Furthermore VitiSan® can be combined very well with the widespread use of beneficials in ornamentals. Roses, primula, viola and many other varieties are important crops for the use of VitiSan®.



VitiSan® – Application

VitiSan® treatment against powdery mildew and botrytis in vegetables and soft fruit

New requirements for modern fungicides for fresh market production of vegetables and soft fruits are

- residue free → VitiSan® for late applications even during harvest
- no risk of resistance → multiplex mode of action of VitiSan®
- beneficial friendly → VitiSan® for combined use with beneficials

VitiSan® has a good effect against powdery mildew with a good side effect against botrytis in many different vegetable crops and soft fruits.

In the following crops (but not limited to) VitiSan® covers a broad range of indications:

Crop	Pest disease
Grapes	Powdery mildew (<i>Uncinula necator</i>) Grey mould (<i>Botrytis cinerea</i>)
Apples/pears	Apple scab (<i>Venturia inaequalis</i>) Pear scab (<i>Venturia pyrina</i>) Powdery mildew (<i>Podosphaera leucotricha</i>) Sooty blotch / rain spot disease
Strawberries	Powdery mildew (<i>Sphaerotheca macularis</i>) Grey mould (<i>Botrytis cinerea</i>)
Currant like berries Raspberry like berries	Powdery mildew (<i>Podosphaera mors-uvae</i>) Grey mould (<i>Botrytis cinerea</i>)
Asparagus	Stemphylium botryosum Grey mould (<i>Botrytis cinerea</i>)
Hops	Powdery mildew (<i>Sphaerotheca macularis</i>)
Cucurbits (cucumber, zucchini, pumpkin, melon)	Powdery mildew Grey mould (<i>Botrytis cinerea</i>)
Tomatoes	Powdery mildew Grey mould (<i>Botrytis cinerea</i>)
Fresh herbs	Powdery mildew
Green beans	Grey mould (<i>Botrytis cinerea</i>)
Onions	Grey mould (<i>Botrytis cinerea</i>)
Cornsalad	Powdery mildew
Ornamentals	Powdery mildew Grey mould (<i>Botrytis cinerea</i>)

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