

# TripleX

## BIO-FUNGICIDE

### FREQUENTLY ASKED QUESTIONS

**Q** - What's in the can?

**A** - TripleX contains a combination of a base of nonviable extracts (enzymes, secondary metabolites, signal molecules and bacteriocin) from the fermentation of *Enterococcus faecium* and  $1 \times 10^9$  CFUs of *Bacillus amyloliquefaciens* BS 1b.

**Q** - How does TripleX work?

**A** - TripleX has a unique dual mode of action. The base fermentation provides the initial knockdown and clears a pathway for the establishment of the *B. amyloliquefaciens*. Once established the *B. amyloliquefaciens* is an aggressive antagonist against *Botrytis*. *B. amyloliquefaciens* produces alkaline protease and other organic molecules that dissolve the protein bonds within the outer cell walls of the *Botrytis*, causing the fungus to collapse.

**Q** - Is TripleX ACVM registered?

**A** - Yes. TripleX is registered pursuant to the ACVM Act 1997, No. P8137.

**Q** - What is TripleX registered for?

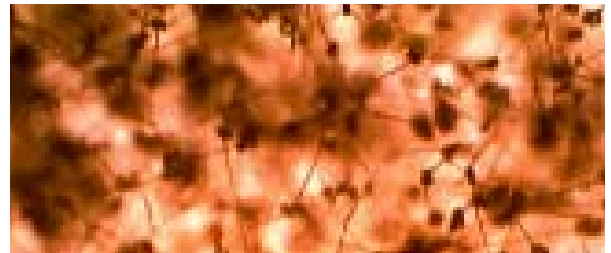
**A** - TripleX is registered for the control of *Botrytis* on grapes, top fruit and vegetables.

**Q** - Is TripleX BioGro certified?

**A** - Not at this stage.

**Q** - Where is TripleX made?

**A** - TripleX is made here in New Zealand, in BioStart's factory just north of Morrinsville.



*Botrytis*



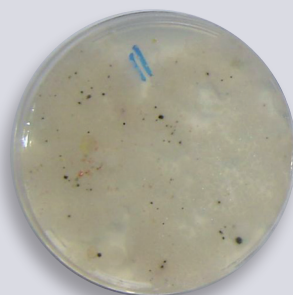
Dead *Botrytis* after contact with TripleX



## Botrytis cinerea in Leaf Print on PDA

Photo: 21.10.2008, 7 days after taking leaf prints onto PDA plates.

Bacillus amyloliquefaciens  
BS 1b



Untreated Control



**Q** - Can the cans be recycled?

**A** - Yes. BioStart is member of the AgRecovery program. Simply triple rinse the containers and return them to your nearest recycling drop off point.

**Q** - How much should you use?

**A** - Dilution of 1:200 (500ml/100lt water) minimum 1.5lt/ha.

**Q** - How quickly will TripleX reactivate in the tank?

**A** - As soon as the product is diluted to 1:200 the *B. amyloliquefaciens* in the product begins to wake up and starts multiplying.

**Q** - Does it matter what pH the water in the tank is?

**A** - Yes like most biological sprays tank pH should be close to neutral pH7.

**Q** - Can you leave diluted TripleX overnight in the tank?

**A** - Once TripleX is diluted to 1:200 it's best to use it within 2 hours.

**Q** - Can TripleX be applied with high pressure sprayers?

**A** - Yes.

**Q** - What time of day is best for applying TripleX?

**A** - For best results avoid the heat of the day or apply in overcast conditions.

**Q** - How critical is coverage?

**A** - Everywhere *B. amyloliquefaciens* colonises Botrytis can't grow so coverage is critical

**Q** - When should you start using TripleX?

**A** - If you are wanting late season control then you should start incorporating TripleX in your spray program early in the growing season:

Grapes: Pre bunch closure (pea size)

Kiwifruit: Post flowering

Black currants: Post flowering

Onions: second leaf

Lettuces: Early growth

Hothouse tomatoes: After first flower set.

**Q** - Is TripleX affected by temperature?

**A** - Yes and No. The base ferment's activity is not affected by temperature but the *B. amyloliquefaciens* is. If temperatures are too cool at the time of application the *B. amyloliquefaciens* will just sit there and wait until the temperature begins to rise.

**Q** - Will TripleX affect wild yeasts needed for wine making?

**A** - No.

**Q** - What's the withholding period?

**A** - Nil with holding period.

**Q** - What's the spray interval between applications of TripleX?

**A** - We recommend a spray interval of 10-14 days when there is high disease pressure.

**Q** - Will UV affect the *B. amyloliquefaciens*?

**A** - UV will not interfere with the activity of *B. amyloliquefaciens*.

**Q** - What's the difference between Foliacin and TripleX?

	Foliacin	TripleX
Contains <i>B. amyloliquefaciens</i>	No	Yes
Contains NPK	Yes	No
Contains elicitors	Yes	No
Primes immune system	Yes	No
Improves flowering	Yes	No
Aids photosynthesis	Yes	No
Reduces spray stress	Yes	No
Registered for the control of Botrytis	No	Yes