

## Now registered for diamondback moth in brassicas

- No MRL
- No withholding period
- Predator & pollinator safe



## Frequently asked questions

### How is it made?

Sero-X Insecticide is extracted from a legume, Butterfly Pea (*Clitoria ternatea*) which has evolved a specific set of peptide compounds to protect itself from insect attack. It is harvested from the Butterfly Pea directly and not synthesized in a factory.

### How does it work?

It alters the pest behaviour by deterring feeding by preventing sap-sucking and biting insects feeding on the plant and it also causes direct mortality on contact. The presence of Sero-X Insecticide also disrupts the reproductive cycle of the pest; disrupts mating behaviour and deters moths from landing on the crop to deposit eggs

### Will Sero-X affect predators and pollinators?

The bio actives in Sero-X are ultra-stable peptides called Cyclotides which the Butterfly pea plant uses to defend itself against insects and diseases.

These Peptides are complex molecules and therefore very specific in their activity and only do what they are designed to do, which is to kill phytophagous insects (those that get nutrition from a plant). Predators will not be affected unless one of their life cycles has a phytophagous stage (e.g. a predator thrip spp)

### Is it safe for bees and other pollinators?

Yes, it has no effect on foraging honeybees or native bees.

It does not cause behaviour modification of any pollinators

### Will it build up in the environment?

No, the active ingredient breaks down to amino acids which are naturally occurring throughout nature.

### Will pests develop resistance to this product?

Whilst you never say never with insects, the multiple modes of action mean no individual resistant gene is likely to embed in the insect population. This means that resistance is almost impossible to develop.

### Will the actives in Sero-X breakdown in the drum causing a short shelf life?

No, the peptide chain in Sero-X is called a cyclotide. This is because the ends of the peptide chain are joined, so there is no open end which is susceptible to denaturing or breakdown by enzymes.

### Is it safe to humans?

Yes. It has extremely low mammalian toxicity. It has not even been classified as a poison and could go on a shelf in the cooking oil section at grocery stores!



**What is the Re-entry or WHP?**

There is no maximum residue limit or withholding periods in crops.  
Re-entry is permissible as soon as the product has dried.

**Is it Rain fast?**

The cyclotides contained in the product are sticky and it also has an inbuilt humectant which means light rain will not affect it adversely. However as with many other insecticides sprays heavy rain or overhead irrigation will reduce its efficacy and Sero-X will need to be re-applied in this instance.

**Is Sero-X affected by UV?**

There is no need to wait till late afternoon or evening to spray Sero-X. UV light will break down its' active compounds over time, however there is no evidence that spray timing itself adversely effects its efficacy.

**What are the rates of application?**

In early brassica growth apply at 2lt/ha at a recommended water volume of 200-300 Lt/ha  
In later plant development e.g., after head formation, water volumes may need to be increased to ensure adequate coverage so apply Sero-X at a concentration of 1-2% depending on pest pressure and favourable conditions.

**When should I apply it and how often?**

Apply as soon as Diamondback moth appears and approaches threshold levels.  
Apply every 7 days to ensure constant exposure of new larvae to the product.  
The sooner the better to take full advantage of the Sero-X deterrent and repellence modes of action.

**What about tank mixing?**

Sero-X insecticide is compatible with most used fungicides and insecticides but with any sprays including copper it is best to carry out a jar test first

Do not mix with paraffinic oils.

Do not mix with products containing polyethylene glycol.

Compatible with products such as

- Amicus Blue (Copper+ Amisulbrom mix)
- Ridomil
- Infinito (propamocarb hydrochloride and Fluopicolide) & other fungicides belonging to Strobilurin family

**What about Storage and handling?**

Store in the original container, in a cool well-ventilated area, out of direct sunlight.