

Bayer Informs

Options for controlling Tomato/Potato Psyllid



Using Movento® 1500D for the control of Tomato/Potato Psyllid

Movento 1500D contains the active ingredient spirotetramat, and has the below label claims:

- Potatoes – tomato/potato psyllid and aphid (rate 560 mL/ha)
- Field tomatoes – tomato/potato psyllid (rate 560 mL/ha)

Question: How does Movento work?

Answer:

The mode of action of Movento (active ingredient, spirotetramat) is as a lipid biosynthesis inhibitor. It acts on the developmental (immature) stages of insects. Movento is active by ingestion against immature insects (i.e. psyllid nymphs) feeding on treated plants. After ingestion, juvenile stages of insects cannot moult properly and die within 2-5 days. The speed of lethal effect is variable, depending on the life stages and on external parameters (e.g. higher temperatures insect development rate is faster = faster death). Movento has a generational effect, as it prevents the population development of a generation – this provides the long lasting residual activity.

While not directly toxic to adults, Movento affects the fecundity of female adults (through reducing the number of eggs produced, the viability of eggs and survival of offspring). Movento can also drastically reduce the number of viable larvae produced by adult aphids.

Question: When is the best timing for Movento applications?

Answer:

Early to mid-season treatments are recommended because Movento works best on a developing pest population

- 2-way systemic activity is maximised when the plant is actively growing
- The mode of action of Movento stops psyllid generational development
- Safe to the key psyllid predators

Question: Does Movento move inside the plant?

Answer:

Yes, Movento is highly systemic. Movento is unique in that has 2-way systemic activity. Movento moves upwards (in the xylem) and downwards (in the phloem) in plants. Psyllids feed directly into the phloem stream so will ingest the Movento once feeding. Psyllid nymphs tend to reside in the middle to lower parts of potato plants, so the 2-way systemic movement provides activity where the psyllids reside. Movento also exhibits translaminar activity.

Answer:

Yes. Movento is widely used globally in IPM programmes in many crops. It is considered to be safe to most key beneficial insects.

In tests conducted in New Zealand by Crop and Food Research, Movento was classified as harmless or slightly harmful to the key TPP predators in NZ potato crops, lacewings and hoverflies. This information is available on the potatoes NZ website as Potato Update – issue No 5.

Question: Is Movento safe to use in IPM programmes?

Movento 1500D recommended positioning in a spray programme



Using Movento® OD for the control of Tomato/Potato Psyllid - FAQs

Question:
When should I start Movento applications?

Answer:

When yellow sticky trap catches indicate presence of adult flights, monitoring for psyllids should start in the crop. Once the presence of eggs on leaves are found, a Movento application should be applied no later than 7-10 days later. If small, early instar nymphs are found, Movento should be applied immediately.

Question:
How many Movento applications should be applied?

Answer:

The label recommendation is that two applications of Movento OD are applied, 7 days apart. This provides a reservoir of active ingredient in the plant to provide last lasting efficacy. Do not stretch the spraying interval past 14 days. Do not use more than two Movento OD applications per season.

Answer:

In this case either

- A knockdown insecticide (e.g. Avid) is mixed with the first Movento application or
- A knockdown insecticide is applied first and Movento applications start 7-10 days later

Question:
What if a large numbers of adults are present?

Question:
Is the use of adjuvants recommended with Movento OD?

Answer:

Movento must move into the leaf for the 2-way systemicity to occur. Movento OD is an "in can" formulation in that it has the adjuvants built into the formulation enabling uptake into the leaf. The use of a spreading type adjuvant may assist with coverage.

Answer:

Do not mix Movento OD with chlorothalonil based products or foliar fertilisers. As much as it is practically possible is recommended to minimise mixing partners so as to reduce chances of any antagonistic effects that could reduce Movento uptake into the leaf. Always shake the Movento OD bottle well before using.

Question:
What about tank mixing with Movento OD?

Answer:

While the 2-way systemicity of Movento is an advantage it is recommended to use a water rate to achieve complete coverage.

Question:
What water rate should be used for Movento applications?

Question:
What is the withholding period?

Answer:

Potatoes and field tomatoes - 35 days.

Question:
What about weather conditions?

Answer:

Weather extremes (excessively hot or cold) should be avoided. Ideal conditions are moderate temperatures with some humidity.

Using Proteus® for the control of Tomato/Potato Psyllid

Proteus is a co-formulation (thiacloprid and deltamethrin) for the control of:

- Potatoes – aphids and tuber moth (rate – 500 mL/ha)
- Potatoes – tomato/potato psyllid (rate – 650 mL/ha)
- Onions – thrips (rate – 500 mL/ha)
- Withholding period – 14 days
- Shake well before using

The active ingredients provide complimentary activity with the thiacloprid being systemic and the deltamethrin providing knockdown and residual activity.

Proteus is a user friendly broad spectrum option suitable for late season use. It is not IPM friendly so is best used later in the crop when biological control options are not useful.

Proteus recommended positioning in a spray programme



Proteus uses O-TEQ formulation technology being an oil based suspension concentrate formulation. O-TEQ use oil based and solvent free formulations that provide improved:

- Retention and coverage on leaves
- Rainfastness
- Penetration and translocation of systemic active ingredients
- And minimise runoff

As Proteus contains O-TEQ technology, the use of additional adjuvants is not required when using Proteus.

Upon storage, O-TEQ Formulations can exhibit syneresis. This is a cosmetic effect where separation into two layers occurs in the bottle. This can easily be re-dispersed by shaking.

The syneresis effect can easily be seen as Proteus is in a translucent 5 litre containers. Always shake Proteus before using.



Tomato/Potato Psyllid Life Cycle



Eggs

Eggs are oval shaped and yellow to orange in colour and are attached to the leaf on a stalk.

Eggs can be laid anywhere on the leaf including the underside.

Eggs are most obvious when on the leaf edges.



Nymphs

Nymphs are firstly light yellow – tan colour developing into a brownish to green colour.

Nymphs are found (and feed) on the underside of leaves. They are small (up to 2mm) and need hand glass magnification to be seen.

On the fourth and fifth instar nymphs wing buds can be seen.



Adults

After the fifth moult, the final instar hatches into an adult.

The adult looks like a tiny cicada – 3-4 mm long, a brown to black colour with clear wings.

Adult females can lay up to 500 eggs over a 21 day period.

For more information on Movento OD, Proteus or any other Bayer Crop Science products, contact your local Bayer Territory Sales Manager

Territory Sales Managers

Upper North Island	Phil Bertram	021 426 825
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