MOVENTO®

2XSYS

Crop Guide for Stone Fruit

Innovative softer chemistry for the control of sucking pests.

Movento 240® SC insecticide is a powerful, innovative, IPM-friendly insecticide registered for the control of mealybugs, aphids and San Jose scale in stone fruit.

The first Group 23 insecticide registered in Australia, Movento consistently demonstrates effective pest control through its unique 2-way systemicity. Because it is distributed through the plant both upwards and downwards, Movento is able to control pests conventional insecticides don't reach.

Mode of action

Movento is mainly effective in controlling stone fruit pests through ingestion.

Movento acts as a lipid biosynthesis inhibitor and is particularly active on the immature stages of many sucking pests. Movento should therefore be applied to the early life stages of pests for best performance.

IPM compatibility

Movento is 'soft' on most beneficial species.

Movento is harmless to hoverflies and lacewings, slightly harmful to earwigs, spiders and predatory bugs, and moderately harmful to predatory mites, with no long-term population effects when used as directed.

In summary, Movento is highly compatible with IPM production systems.

PRODUCT AT A GLANCE

Pests	Longtailed mealybug Tuber (obscure) mealybug San Jose scale Black cherry aphid Black peach aphid
Rate	Mealybugs: 40 mL/100 L + adjuvant. Aphids and scale: 30 mL/100 L + adjuvant.
Spray timing	Monitor crops after petal fall and begin applications at the onset of crawler emergence or when pests reach an economic threshold – but not before shuck fall.
Spray interval	Mealybugs: 14–28 days. Aphids: 14–21 days. San Jose scale: minimum 14 days.
Maximum sprays	Cherries: No more than 2 applications per crop with a minimum 14 days between applications. Stone fruit other than cherries: No more than 3 applications per crop, with no more than 2 applications made later than 21 days after shuck fall and with a minimum 14 days between applications.
Withholding period	3 weeks (domestic market).
Adjuvants	Agridex® (or Hasten®) at 0.05% v/v (50 mL/100 L of water).
Coverage	Thorough coverage is necessary.
Compatibility	Because of the unique properties of Movento it is recommended not to tank-mix. For further information contact your local Bayer Crop Science representative.

Movento in Stone Fruit

TWO-WAY SYSTEMICITY

The ‘systemicity’ of insecticides refers to the uptake, transport and distribution of the active ingredient within a plant (including fruit trees). There are two systems of transport within plants; most older systemic insecticides are only mobile in the xylem, not the phloem.

2XSYS

The xylem carries water and nutrients upwards from the roots of a plant to the shoots. The phloem transports the sucrose produced by photosynthesis from the leaves to the young shoots, leaves, buds, fruits and developing roots. Unlike the xylem, the phloem works in both directions – upwards from roots to leaf and back down from the leaf to the roots.

The innovative advantage of spirotetramat, the active ingredient of Movento, is that is transported through both the xylem and the phloem, so it moves **both upwards and downwards** throughout the plant.

GETTING THE BEST OUT OF MOVENTO

Coverage and plant health

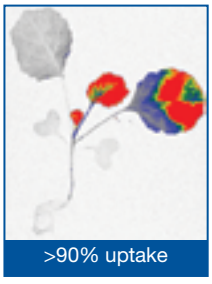
Spray coverage and overall tree health are important. Poor spray coverage and/or any form of climatic or environmental stress will impact on the uptake of Movento into the foliage and its subsequent translocation throughout the tree.

Adjuvants

Without spray adjuvant

<5% uptake

With spray adjuvant



>90% uptake

As these images show, the uptake and translocation of spirotetramat in plant tissue is dramatically improved by the addition of an effective adjuvant.

After extensive testing in stone fruit, the recommended spray adjuvants are Agridex or Hasten at 0.05% v/v (50 mL/100 L of water). Agridex was used in the majority of trials.

These adjuvants ensure that Movento penetrates through the leaf cuticle and into the sap stream for the insect to ingest. Movento is significantly less effective if it is applied without the inclusion of an effective adjuvant.

The use of straight non-ionic surfactants and organo-silicon based products has produced inconsistent results, so they are not recommended in tank-mixes with Movento in stone fruit.

HOW TO USE MOVENTO

Spray timing

Application to the juvenile life stages of the pest before pest numbers have built up is the key to success with Movento.

Trials have consistently shown that applying Movento during the early life stages (crawler release or nymphs) of the target pest gives the best results. Applying Movento to established pest populations dominated by mature adults is not recommended and will result in poor control.

Applying Movento early allows for ingestion and the subsequent death of early life stages before the pest can become established.

Under high pest pressure, Movento should be applied as two foliar sprays 2–3 weeks apart on aphids, 2–4 weeks apart on mealybugs or a minimum of 2 weeks apart on San Jose scale. Under high pressure it may be important to follow up with an application of a product with a different mode of action to keep the crop clean to harvest.

This back-to-back Movento spray program enhances the residual control, controlling young crawlers (scale/mealybugs) or nymphs (aphids) before they can establish on leaves and fruit. The follow-up spray is especially important where an extended crawler release or aphid colonisation may occur as the residual control from the first application begins to decline.

Application

Good coverage is essential, so apply thoroughly and use the same total amount of product whether using dilute or concentrate spraying methods. For concentrate spraying, do not use at rates greater than twice the dilute spraying rate (i.e. at a concentration factor greater than 2X). Note that the concentrate mixing rate is applicable only to Movento. The adjuvant rate remains unchanges (i.e. no concentrate factor applies). Refer to the label for detailed instructions.

Residues management

Movento should not be applied more than twice on each cherry crop, and not more than 3 times on other stone fruit crops.

Withholding period

Domestic market: 3 weeks.

Controlling longtailed and tuber (obscure) mealybug

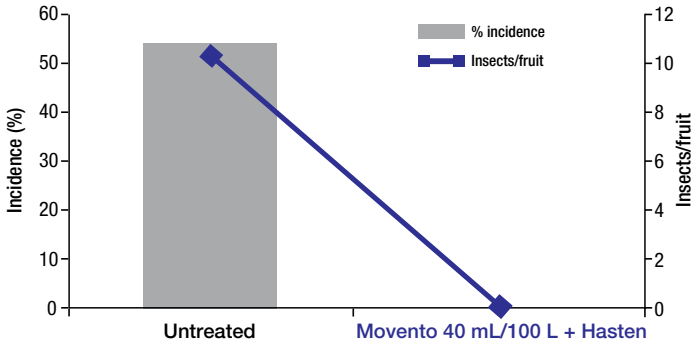
(*Pseudococcus longispinus and Pseudococcus virburni*)

It is recommended that applications of Movento for mealybug control be made at the onset of crawler emergence to keep pest numbers within the local economic threshold.

The timing of the first Movento application will vary between seasons and cropping regions. Trials have demonstrated that the best control of mealybug in stone fruit is achieved with back-to-back applications after shuck fall when crawler emergence is evident.

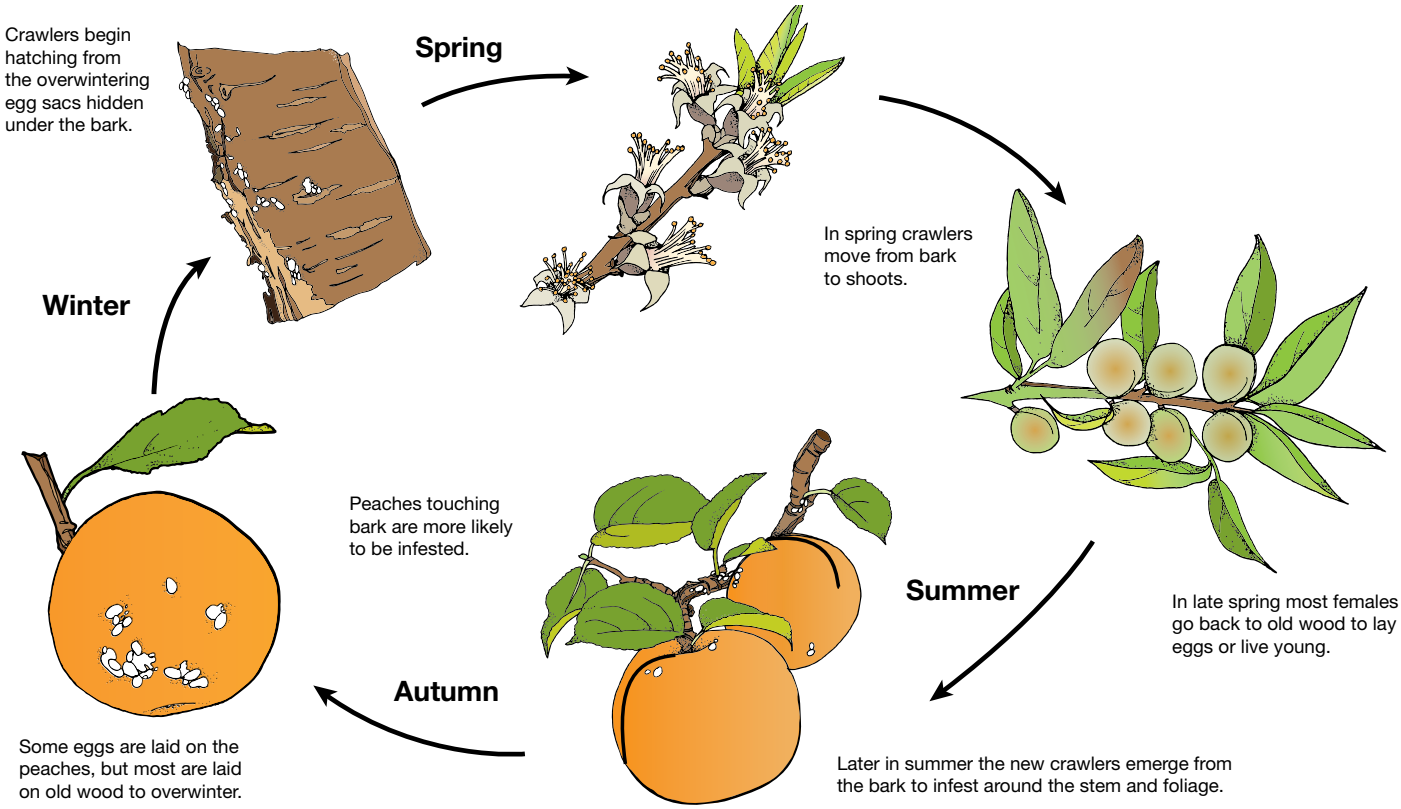
Obscure mealybug control

This graph shows the effectiveness of back-to-back applications of Movento in a trial on plum trees that measured both the percentage of plums infested and the average number of pests per plum.



TRIAL ID: Plums cv. Tegan Blue. Roleystone, WA.

BREAKING THE MEALYBUG LIFECYCLE



Controlling black peach aphid and black cherry aphid

(*Brachycaudus persicae and Myzus cerasi*)

Movento will control juvenile aphids at the rate of 30 mL/100 L provided it is applied as soon as aphids reach threshold levels and there is sufficient foliage on the trees after shuck fall. A second application 14–21 days later may be required.

Controlling san jose scale

(*Quadraspidiotus perniciosus*)

Movento is also registered for control of San Jose scale at 30 mL/100 L. Monitor the crops following petal fall. Begin applications at the onset of crawler emergence. To ensure there is sufficient foliage for product uptake, do not apply prior to shuck fall. Continue monitoring and make further applications when new generations emerge. Do not re-apply within 14 days of a previous Movento application.

APPLICATION TIMING

Flowering	Shuck fall	Fruit development	Fruit ripening
			

Shuck fall → **21 days WHP**

MOVENTO LABEL PESTS AT A GLANCE

Longtailed mealybug (*Pseudococcus longispinus*)	Tuber (obscure) mealybug (*Pseudococcus viburni*)	Black peach aphid (*Brachycaudus persicae*)
		

Black cherry aphid (*Myzus cerasi*)	San Jose scale (*Quadraspidiotus perniciosus*)
	

KEY FACTS - EFFECTIVE PEST CONTROL

Rates

Mealybugs:
40 mL/100 L water
+ adjuvant.

Aphids and scale:
30 mL/100 L water
+ adjuvant.

Activity

On all young feeding crawlers and nymphs.

Timing

Monitor the crop after petal fall and apply at the onset of crawler release or when pest numbers reach an economic threshold.
To ensure there is sufficient foliage for product uptake, do not apply prior to shuck fall.

Interval

14–28 days after the first spray application if required.

Visit **crop.bayer.com.au** or talk to your local Bayer Crop Science representative.

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