



MOVENTO®

2XSYS

Crop Guide for Mangoes

Innovative softer IPM chemistry for the control of scale pests.

Movento® 240 SC Insecticide is a powerful IPM-friendly insecticide for scale pest management in mangoes.

The first Group 23 insecticide registered in Australia, Movento is highly effective on pest populations which may have begun to develop resistance to existing registered products.

Movento has unique '2-way systemicity'. After penetrating into leaf tissue, it becomes highly mobile in sap flows both upwards and back down through the tree canopy. This means it can reach those parts of the tree canopy where pests have previously been able to 'hide' and may not have been controlled adequately.



PRODUCT AT A GLANCE

Pests	White mango scale (<i>Aulacaspis tubercularis</i>) Pink wax scale (<i>Ceroplastes rubens</i>) Citrus mealybug (<i>Planococcus citri</i>) (suppression only)
Rate	30–40 mL/100 L. Consult label for specific rate and use information by target pest.
Adjuvant(s)	Hasten® Spray Adjuvant at 50 mL/100 L of spray mixture. See label. Contact your local Bayer CropScience representative for advice on other approved adjuvants. Do NOT add any adjuvant if any fruit exceed 50 mm diameter (width). Do NOT use wetting agent type adjuvants with Movento on fruiting trees. For the Honey Gold variety, do NOT add any adjuvant when fruit are present on the tree.
Speed of effect	Movento takes some time before full activity becomes evident on tree crops (often 2 weeks or more). Insects must be feeding to be affected by Movento. Scale which are highly mobile and dispersing are not affected by Movento until they settle and begin to feed on sap flows.
Duration of effect	Up to 60–90 days if a suitable adjuvant is used and timing is right. This period of control is much reduced if an adjuvant is not used.
Concentrate sprays	Post-harvest (no fruit) sprays only. Do not exceed 2X concentration if using concentrate sprays. Do not concentrate adjuvants (i.e. adjuvant rate remains as for dilute sprays).
Target stage	Movento is more active on juvenile stages than mature adults.
Spray timing	There are many timing options for the application of Movento. It can be applied post-harvest (no fruit), right up until two weeks before the start of flowering. It can be applied from first fruit set right up until (but not later than) 14 days prior to harvest.
Spray interval	21–35 days between applications if using 'back-to-back' sprays of Movento.
Maximum sprays	Not more than 3 sprays per crop in any 12-month period. Not more than 2 sprays total between fruit set and harvest.
Coverage	Thorough coverage is necessary, though spraying to excessive run-off is wasteful. Minimise over-spraying to avoid drip-point marking on fruit.
WHP	Domestic market: 14 days. Export market: consult Bayer Crop Science
Compatibility	See inside for details of compatible products.
Crop safety (fruit)	Movento can cause damage (drip point injury) to mango fruit under some circumstances. To reduce the risk of such damage when fruit are present on trees: do not spray to excessive run-off, do not use wetting agent type adjuvants, do not mix Movento with any other product, except the specified adjuvant when recommended, and do not mix Movento with any other product, including any adjuvant, if any fruit exceeds 50 mm diameter. See inside for additional precautions for the Honey Gold variety.

Movento in Mangoes

APPLICATION

Movento benefits from a suitable adjuvant to help it move through the plant's epidermal layers into the leaf tissue, and penetrant-type adjuvants such as Hasten are the most effective.

Once within the plant, Movento takes some time (often 14 days or more in mangoes) to reach peak activity, but it has demonstrated a very long residual effect in Australian trials.

It is important to know that when mango trees are stressed, the uptake and translocation of Movento after spraying is reduced. Spraying should occur when trees are in good vigour.

MODE OF ACTION

Movento is mainly effective in controlling mango scale pests as they feed. The active ingredient is ingested by the scale as it sucks up sap. Once taken into the insect's gut, it then moves through the insect's body where it acts as a lipid biosynthesis inhibitor. Lipids are particularly important to the growth of immature stages of insects, and this is why Movento is more effective on early stages rather than mature adults.

As a result, the early life-cycle stages are the main target of spray applications with Movento. If immature female scale insects ingest Movento before they develop to a stage where crawler release is possible, then the overall scale populations in plantations can be reduced dramatically.

CROP SAFETY

Movento has been safely applied to many mango varieties including Kensington Pride, R2E2, Keitt, Palmer, Kent, Nam Doc Mai and Honey Gold. However under some circumstances fruit damage has occurred in the form of drip point injury.

To reduce the risk of such damage when fruit are present on trees;

- Do not spray to excessive run-off*
- Do not use wetting agent type adjuvant
- Do not mix Movento with any other product except the specified adjuvant, when recommended, on fruiting trees
- Do not mix Movento with any other product, including any adjuvant, if any fruit exceeds 50 mm diameter (width)

Fruit of the variety Honey Gold has been found to be particularly sensitive to Movento, hence for application to fruiting trees the following additional precaution applies:

- Do not mix Movento with any other product, including any adjuvant, on the Honey Gold variety or other varieties where fruit safety of Movento plus adjuvants is unknown

Even when these precautions are followed, some fruit damage has occasionally been noted in the Honey Gold variety.

* Excessive run-off can result in accumulation of deposits at drip points on the bottom of fruit, which can create a blemish if drying conditions are slow. However good spray coverage is necessary, so application volumes should ensure thorough coverage without being excessive.



IPM IN MANGO PLANTATIONS

Movento is 'soft' on most beneficial species. Australian studies have shown that Movento has little effect on most parasitic wasps and predatory ladybirds. Movento is harmless to hoverflies and lacewings; only slightly harmful to earwigs, spiders and predatory bugs; and only moderately harmful to predatory mites, with no long-term population effects.

Movento is highly compatible with IPM production systems. Movento makes possible a new IPM system for scale control in mangoes. Replacing harsh broad-spectrum insecticide options with spray schedules including the 'soft' IPM-friendly Movento and/or straight oil sprays allows beneficial species in the trees to survive and prosper, and helps establish a better balance between scale pests and those beneficial predators and parasites of the scale.

COMPATIBILITY

Movento + Hasten is physically compatible with:

Dithane® Rainshield® Kocide® Blue Xtra Sacoa BioPest® Oil	Oxydul® DF Dimethoate Lorsban® 500 EC	Bugmaster®
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'Physically compatible' means that it has been shown the products indicated mix readily together and the mixture is stable.

Not all mixtures have been evaluated for safety to the mango crop. Check labels carefully before mixing. Crop safety of mixtures should be checked on a small scale before applying to larger areas.

Do not apply Movento in conjunction with any other product (except adjuvant where recommended) on mango trees while fruiting.

Do NOT apply Movento with Amistar® or Supracide®.

HOW TO GET THE BEST OUT OF MOVENTO IN MANGOES

1. Get the timing right
2. Get the adjuvant right
3. Get the coverage right

KEY FACTS

- Movento is a very powerful insecticide yet it is soft on beneficial species
- Movento is '2-way systemic'; it can move through a growing leaf canopy to reach scale insect pests which might not otherwise be controlled
- Movento shows a very long-term residual control effect
- Movento is slow to start to work – at least 14 days are required before full activity is evident in mango trees
- For maximum activity, Movento needs an adjuvant to increase penetration into leaf tissue
- For extreme scale problems, or when pink wax scale is also present, 'back-to-back' sprays of Movento + Hasten about 21 days apart will be required to get the best result
- Use the higher rate when scale pressure is high, or when intervals will be extended, or where nil adjuvant is being used



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

Always consult the product label for detailed information. The information and recommendations set out in this brochure are based on tests and data believed to be reliable at the time of publication. Results may vary, as the use and application of the products is beyond our control and may be subject to climatic, geographical or biological variables, and/ or developed resistance. Any product referred to in this brochure must be used strictly as directed, and in accordance with all instructions appearing on the label for that product and in other applicable reference material. So far as it is lawfully able to do so, Bayer CropScience Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions. Bayer CropScience Pty Ltd ABN 87 000 226 022 Level 1, 8 Redfern Road, Hawthorn East, Victoria 3123. Technical enquiries: 1800 804 479 enquiries.australia@bayer.com.