realIPM

insect range

Control mealybug

Introducing **Real NephiFIX**



Nephus bipunctatus (**Real NephiFIX**) is a predatory beetle that preys on mealybug. Nephus is indigenous to South Africa. Both its larval and adult stages feed voraciously on pests. This ladybug, which has a black body with two reddish spots on each elytron, is an effective predator, especially in 'hot spots' where mealybug infestations are high.

Background

Mealybugs are sap sucking insects that feed on a wide range of plants. They can quickly increase in number, weakening the plant. They also produce large amounts of a sticky secretion called 'honeydew', which often promotes the growth of unsightly fungi, resulting in a black coating known as 'sooty mould'.

Mealybugs are also notoriously difficult to control chemically. The reasons for this include:

- The mealy secretion and waxy covering they produce protects them from being wetted by chemical sprays.
- Their habit of hiding in tight, confined spaces such as under the calyx or in the navel end of an orange makes it extremely difficult to get the required contact.
- Most pesticides that have any effect against mealybugs are extremely toxic and almost always cause greater harm to beneficial species leading to a resurgence of the pest in a very short time.
- Mealybugs are quick to develop resistance to synthetic pesticides.

Real NephiFIX serves as a supplement to naturally occurring enemies of mealybug, such as Lacewing, *Perminutus*, *Anagyrus*, etc.



Image of **Real NephiFIX**
Image source: https://commons.wikimedia.org/wiki/File:Nephus_bipunctatus_(5747713939).jpg

Real NephiFIX

Adult beetles are about 1.5 mm long, oval in shape and black in colour with two circular, orange-reddish spots on the posterior half. **Real NephiFIX** will eat a wide variety of mealybug species in a number of crops. They also eat other closely related mealybug and some soft scales, including hemispherical scale.

PACKAGING AND RELEASE

Available format – number of adults per package:

100

Real NephiFIX are best released in spring and early summer, before mealybug populations build up to high levels. Winter releases are not recommended due to low temperature and the consequent reduction in mealybug populations.

Real NephiFIX are sold and supplied in adult form.

To release:

- Remove the sticker and open the cap of the cylinder, exposing the exit hole.
- Place the sticker on the tree so that you can locate the release site at a later date.
- Position the cylinder inside the tree at head height and if possible, in close proximity to mealybug.
- Once the predators exit the packaging, they tend to walk and search for prey near the release point. Therefore, optimal distribution of release cylinders throughout the affected crop is essential to achieve effective mealybug control with **Real NephiFIX.**

Real NephiFIX is most effective at temperatures around 25 °C. The lowest temperature at which development can occur is 18 °C; the highest temperature is 38 °C.

DOSAGE

Please consult your **realIPM** technical representative to discuss the effects of chemical active ingredients on your beneficial insects and how to develop an effective Integrated Pest Management (IPM) programme.

Pests	Infestation	Dosage (per season)
Vine mealybug (*Planococcus ficus*) Citrus mealybug (*Planococcus citri*) Long-tailed mealybug (*Pseudococcus longispinus*) Oleander mealybug (*Paracoccus burnerae*) Citrophilus mealybug (*Pseudococcus calceolariae*) Pink hibiscus mealybug (*Maconellicoccus hirsutus*) Also other closely related mealybug & some soft scales, including hemispherical scale.	Light curative	2 x 750 individuals/ha
	Medium curative	3 x 1 000 individuals/ha
	Heavy curative	3 x 1 500 - 2 000 individuals/ha



Augmentative releases

Do not release **Real NephiFIX** too soon after applying toxic chemicals and **avoid harsh chemical applications after insects are introduced.**

Real NephiFIX can be combined with a number of other mealybug predators to clear mealybug hot spots. *See life cycle below.*

STORAGE

• Store between temperatures of 10-15 °C • Store lying down • Store in a cool dry place, out of direct sunlight

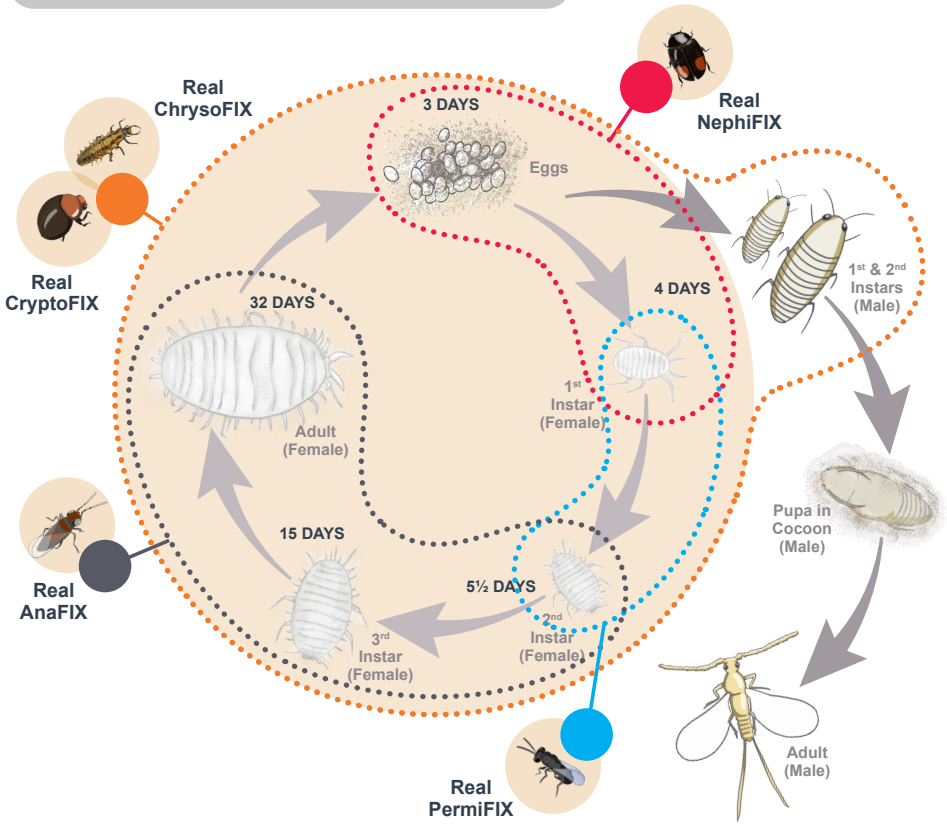
LIFE CYCLE AND OPTIMAL BENEFICIAL INSECT USE

Utilising beneficial insects to manage mealybug may require more than just one insect species. The mealybug life cycle is rapid in ideal climatic conditions and matching the right beneficial insect to life cycle stage is critical in ensuring efficacy in dealing with this pest.

There are five commercially available beneficial insects that can be used to target the various stages:

- **Real AnaFIX** are mobile and most effective against later mealybug stages, especially 3rd instar nymphs as well as 2nd instar nymphs and adult females.
- **Real CryptoFIX** are ideal to control medium-high and hot spot pest populations and feed on all mealybug developmental stages depending on beetle life stage.
- **Real PermiFIX** or **Real NephiFIX** are ideal for the early instars.
- **Real ChrysoFIX** larvae will feed on all mealybug life stages as well as other arthropod prey.

GENERAL LIFE CYCLE OF MEALYBUG



Life cycle adapted from:
https://www.researchgate.net/figure/Illustration-of-female-and-male-mealybug-lifecycles-adapted-and-altered-from-37-38_fig1_372404721

27-11-2025

realIPM South Africa (Pty) Ltd
Co. Reg. 2012/034646/07
73 Highlands Rd, Grabouw, 7160, RSA
+27 21 849 8691
www.realipm.co.za

realIPM
biological crop protection