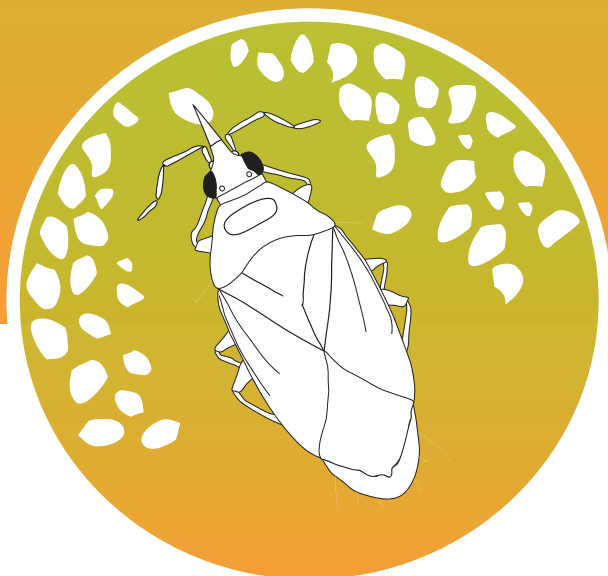




# BioOrius Combo

*Orius laevigatus* + BioArtFeed (premium *Artemia* cysts)

Predatory bug for the control of Western flower thrips  
aphids, whiteflies and spider mites



# BioOrius Combo



BioOrius feeds on plant pollen, sap and a large variety of insect prey. BioOrius Combo combines the predatory pirate bug *Orius laevigatus* (BioOrius) with BioArtFeed (premium *Artemia* cysts). This highly nutritious feed promotes and improves the establishment of BioOrius in crops, before pests arrive or if flowering is delayed.

## TARGET PESTS

Western flower thrips, aphids, whitefly and spider mite.



Whitefly leaf damage

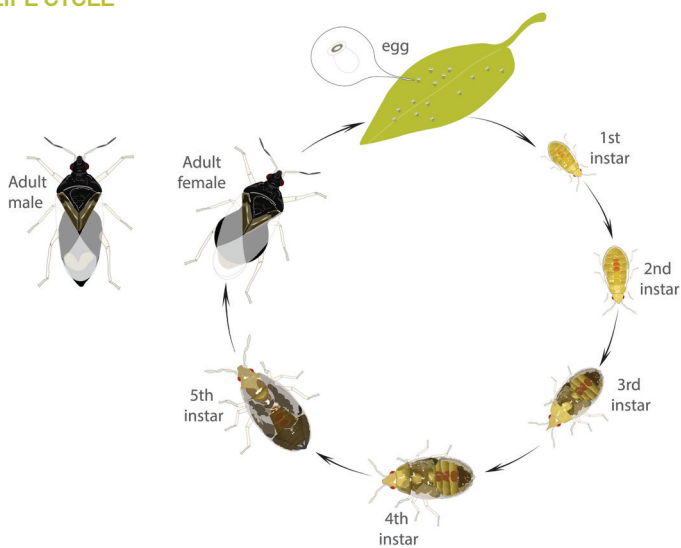


Spider mite damage

## DESCRIPTION

*O. laevigatus* is a small insect (1.5-2.5 mm in length) equipped with piercing-sucking mouthparts, and 2 pairs of wings, the front pair being partially rigid.

## LIFE CYCLE



The *Orius laevigatus* adult female lays its eggs in the plant tissue on the underside of the stems, leaves or fruit. It lays between 150-200 eggs. Adults live 3-4 weeks and all stages of BioOrius are able to consume prey. Adults are extremely mobile and able to locate new prey.

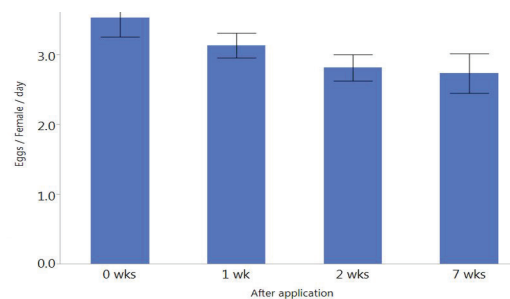


The availability of pollen or quality feed improves dramatically its development and reproduction.



## Fecundity of *Orius laevigatus* while feeding on BioArtFeed

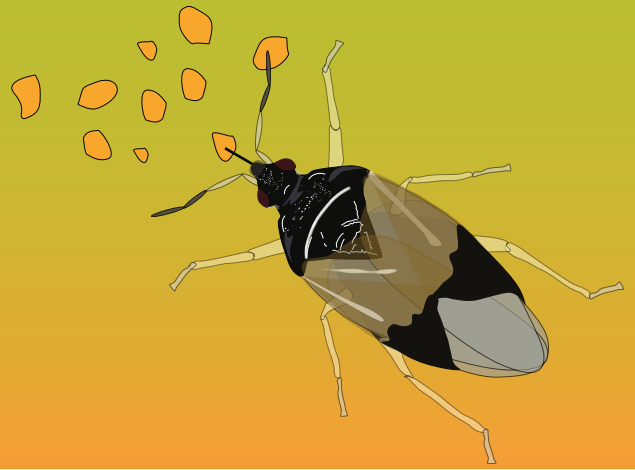
(Greenhouse conditions 70% RH, 21C crop: sweet pepper)



## CROPS

Vegetables, strawberries and ornamental flowers.

# BioOrius Combo



## THE PRODUCT

- BioOrius Combo is packed in a 100cc bottle containing 1,000 predatory bugs, high quality *Artemia* cysts and vermiculite.
- At least 80% of the individuals are adults and the rest are 4th and 5th instar nymphs.
- The *Artemia* cysts nourish them until and after the application.



## PRODUCT ADVANTAGES

- BioOrius and the feed are applied simultaneously
- Precise application
- Exact feed dosage
- Improved and simplified field application
- Saves time
- Saves manpower

## STORAGE

BioOrius Combo is shipped in isolated Styrofoam boxes chilled with icepacks. This packaging must be kept intact until application.

If necessary BioOrius Combo can be stored up to 24 hours at room temperature of 13-25°C.

**Do not expose the bottles to direct sunlight.**

## MONITORING

Scouting and monitoring is crucial.

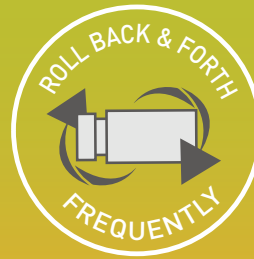
The amount and frequency of releases is determined by the degree of infestation, weather conditions and damage inflicted on the crop.

## APPLICATION & HANDLING

- The bottle should be rotated gently, while in a horizontal position, to allow proper mixing of the contents before and also a few times during application.
- Apply BioOrius Combo on the top leaves of the plants, thus applying both the pirate bug and the feed in the same location, improving the establishment of BioOrius with just one sprinkle.
- The application of BioOrius Combo must be during the early morning hours or late in the afternoon, under relatively mild temperatures.
- Temperatures of 21-27°C and high humidity (above 60%) enhances the predator's activity and ensures its success.



- BioOrius Combo can be introduced preventively, before the appearance of pests, to create a "standing army" because the *Artemia* cysts provided within the bottle will allow it to feed and reproduce regardless of the presence of pollen in the crop.
- The amount and frequency of the application is determined by the target crop, level of infestation, weather conditions and damage inflicted to the crop.



# BioOrius Combo

## BIOLOGICAL PEST CONTROL

One of the challenges of Biologically based IPM is the establishment of thrips and other pests prior to the establishment of beneficials. This may cause plant damage, increase the time and expense required for pest control, require chemical treatments as an interim solution, delay beneficial release, and increase the required application rate of beneficial insects.

By starting biological control early on and providing good quality nutrition, it is possible to establish a "standing army" of predators on the crop, thus providing earlier and overall better pest control.

BioArtFeed has already been tested successfully on chrysanthemums in the Netherlands and tomatoes, cucumbers, sweet peppers, eggplants and roses in Israel.

## GENERAL COMMENTS

Before using any pesticide or other chemical agent on the crops where beneficial predatory bugs have been applied or will be applied, consult with your field service representative for chemical compatibility.

## DISCLAIMER

The success of biological pest control is affected by the crops initial pest population (upon application of the product), weather conditions and chemical residue present in the crop, among other possible aggravating factors

## WE HAVE SOLUTIONS



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