

# FAQs

## Nezapar



Koppert

# 1. Nezapar

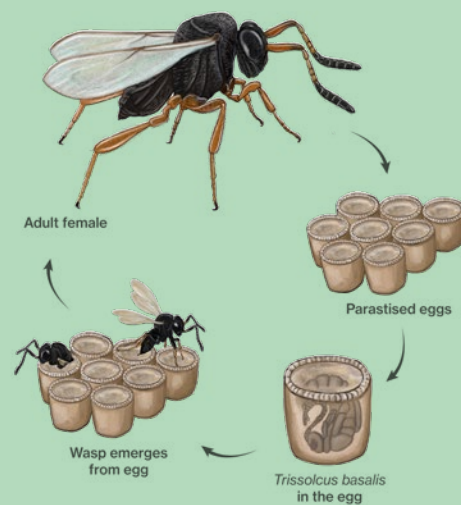
(*Trissolcus basalis*)

## What is the appearance of *Trissolcus basalis*?

Adults are black wasps of about 1-3 mm length with downward elbowed antennae and flattened abdomen. Wings extend past the abdomen, legs and antennae are brown. The larvae develop and pupate inside host eggs.

## What is the mode of action and life cycle of *Trissolcus basalis*?

Adult female parasitic wasps of *Trissolcus basalis* lay an egg in a host egg. Larvae develop inside the host egg, and after pupation, the adult emerges from the host egg by biting a hole in the lid of the stink bug egg.



## Does *Trissolcus basalis* control all stink bugs?

No, *Trissolcus basalis* only controls the Southern green stink bug *Nezara viridula*.

## Can pesticides have (in)direct effects on *Trissolcus basalis*?

Pesticides can have (in)direct effects on biological solutions. We are currently investigating side effects of important pesticides and will update the side-effects database accordingly.

## If I find an egg package, how can I tell if *Trissolcus* or *Nezara* emerged?

Check the edges of the eggs (with a loupe). If they have a nice round edge, *Nezara* emerged. If serrated, it was *Trissolcus*.

## I use Nezapar and notice an increase of bug damage. What can be the cause?

Check the presence of other bugs like *Halyomorpha halys* or *Lygus* spp. Nezapar is not effective against *Halyomorpha halys*.

# 2. Application

## When do I have to start introducing Nezapar?

As early as possible when the crop is planted, and outside temperatures are above 15 °C. Do not wait to introduce Nezapar until the first *Nezara* is found.

## What is the lead time for Nezapar?

The lead time is 5 weeks, so scouting during the season and acting fast in case *Nezara* pressure increases is essential.

## How should I scout?

Look for several (mating) adults on one plant or for freshly laid egg packages. Only the eggs will be parasitized.

## How do I introduce the pupae in the crop?

Open the bottle and manually sprinkle the pupae in Diboxes; a minimum of 100 Diboxes/ha is recommended. Place the Diboxes at eye level or in the middle of the plant and distribute them evenly in the greenhouse. After hatching, the adults will prospect around the release point. Monitor predation in the Diboxes by ants and mice that may interfere with the hatching of adult *Trissolcus basalus*.

## What is a Dibox?

A Dibox is a carton box of 4x4 cm with a hook with which it can be hung in a plant, and in which Nezapar can be released. Install Dibox in such a way that the boxes are protected from water. It is possible to reuse the Dibox.

## What should I do with spider webs on top of the Dibox?

Monitor and remove continuously.

## How many pupae do I need per m<sup>2</sup>?

The dosage of Nezapar depends on climate, crop and stink bug density and should always be adjusted to the particular situation. Start preventively 3 weeks before the first stink bugs are expected.

## Introduction rates

preventive: 10 000 wasps/ha = 2 tubes (1 wasp/m<sup>2</sup>/week)

light curative: 30 000 wasps/ha = 6 tubes (3 wasps/m<sup>2</sup>/week)

heavy curative: 60 000 wasps/ha = 12 tubes (6 wasps/m<sup>2</sup>/week)

hot spot treatment: 100 000 wasps/ha = 20 tubes (10 wasps/m<sup>2</sup>/week for at least 3-4 weeks)

Releases should be repeated at weekly intervals throughout the season or until control is achieved. Consult a Koppert advisor or a recognized distributor of Koppert products for advice on the best strategy for your situation.

## Is it possible to have a longer interval than 1 week after introduction?

No, avoid development of *Nezara* at all times.

## When do I need to increase the dosage?

When you observe 1 adult or nymph of *Nezara* per ha per week.

## Can I also release Nezapar on the slabs?

Yes it's possible, but only on the gutters, not on slabs on the ground.

## Is Nezapar a stand alone product?

No, manual killing is still recommended as well as using selective compatible chemical pesticides on hot spots.

# 3. Packaging

## **How many parasitic wasps are packed in one package?**

One 90 ml cardboard tube contains 5000 pupae.

## **I see some dead wasps in the tube. Is this an indication of bad quality?**

They are a remnant of the rearing process and are not counted with the number of wasps you are introducing. We're working on further upgrading the concept; in future products, no more dead wasps will be visible.

# 4. Handling and storage

## **When do I best use the product?**

It is recommended to use the product directly after receipt.

## **Can I store the product?**

When necessary the product can be stored for 1-2 days after receipt.

## **How do I store the product?**

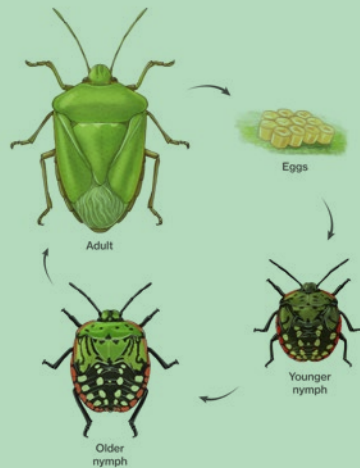
Store Nezapar in the dark at a temperature of 8-10°C/47-50°F.

# 5. Target

## (*Nezara viridula*)

### What is the appearance and life cycle of *Nezara viridula*?

<https://www.koppert.com/challenges/pest-control/bugs/southern-green-stink-bug/>

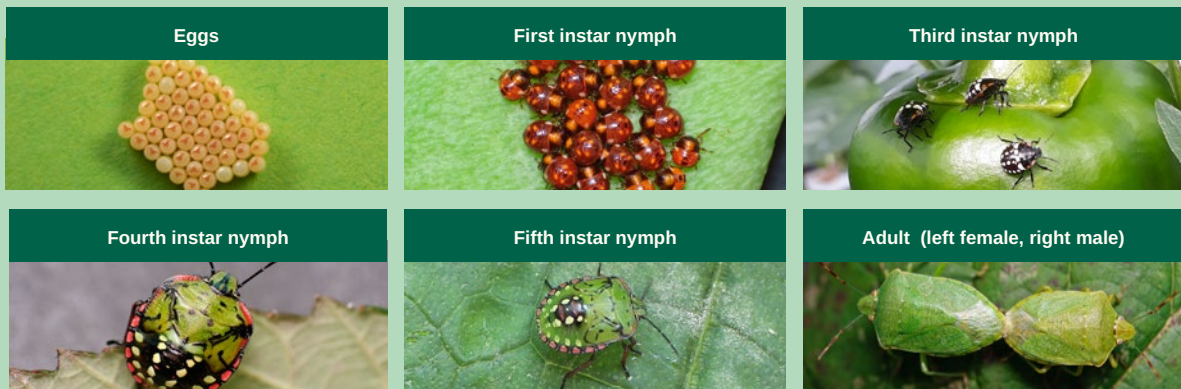


### Why is scouting for *Nezara* essential?

To make sure the right amount of Nezapar is introduced to keep track of the development of *Nezara*. Adjust dosages of Nezapar accordingly.

### How can I recognize the difference between *Nezara viridula* and *Halyomorpha halys*?

#### *Nezara viridula*



#### *Halyomorpha halys*



#### Disclaimers

The general conditions of Koppert (Koppert B.V. and/or of its affiliated companies) apply. Only use products that are permitted in your country/state and crop. Check local registration requirements. Koppert cannot be held liable for unauthorized use. Koppert is not liable for any loss of quality if the product is stored for longer than recommended and/or under incorrect conditions.