
Koppert
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Sportnem
the biological solution for main pests on sports fields
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Sportnem-T & Sportnem-H

Koppert offers biological solutions based on entomopathogenic nematodes against the main pests on sports fields: crane flies and chafer grubs.



Crane fly larva



Adult crane fly



Chafer grub



Garden chafer

LeatherjacketsLeatherjackets are the larvae of crane flies (*Tipula* spp.). Crane flies are large flies reaching up to 50 mm across. The adults do not cause any damage but the larvae live in the soil and feed
on roots and shoots of mainly grasses and cereal crops, which they pull into the ground. Larval feeding causes brown spots in grasslands, turf and cereal fields. Exit holes of the burrows of the larvae might also be visible. Secondary damage may come from birds and rodents searching for larvae and digging up turf.

There are different species. The European crane fly *Tipula paludosa*, which is present throughout the northern hemisphere has one generation per year and young larvae start to cause damage in autumn. The larvae overwinter and become active again and feed voraciously when the soil begins to warm up in spring. The common crane fly *Tipula oleracea*, which is present in parts of Europe and the USA, has two generations per year, one in autumn, with overwintering larvae and one in summer.

Sportnem-T for the control of leatherjackets

Sportnem-T contains the entomopathogenic nematode *Steinernema carpocapsae* which controls the crane fly larvae by entering their body cavity and releasing symbiotic bacteria which kill the larvae. To avoid damage Sportnem-T can best be applied when larvae are in a young stage.

Check the schedule to see when the product can best be applied for the different species. Sportnem-T can also be used against cutworms and other pests of sports fields.

Chafer grubs

Chafer grubs are the larvae of scarabid beetles or chafers. Different species can cause damage in sports fields, depending on the region. Two particularly damaging species are the common European cockchafer and the common garden chafer.

The common (European) cockchafer (*Melolontha melolontha*), also known as the May bug is a large brown chafer of 25-30 mm length, with characteristic forked antennae. The adults can be seen in early summer when they mate and lay eggs. The emerging larvae feed on roots of grasses, cereals and many other crops. It takes three to four years for the larvae to fully develop. The adults feed on the leaves of trees.

The common garden chafer (*Phyllopertha horticola*) is present in Europe and parts of Asia. The males can be seen in early summer in swarming flights just above the soil surface, waiting for females to mate. Once mated eggs are deposited into the soil at a depth of approximately 5 cm. Young larvae feed on humus particles. In the second larval stage they start to feed on the roots of grasses. The older larvae overwinter and start feeding again in spring.

Sportnem-H for the control of chafer grubs

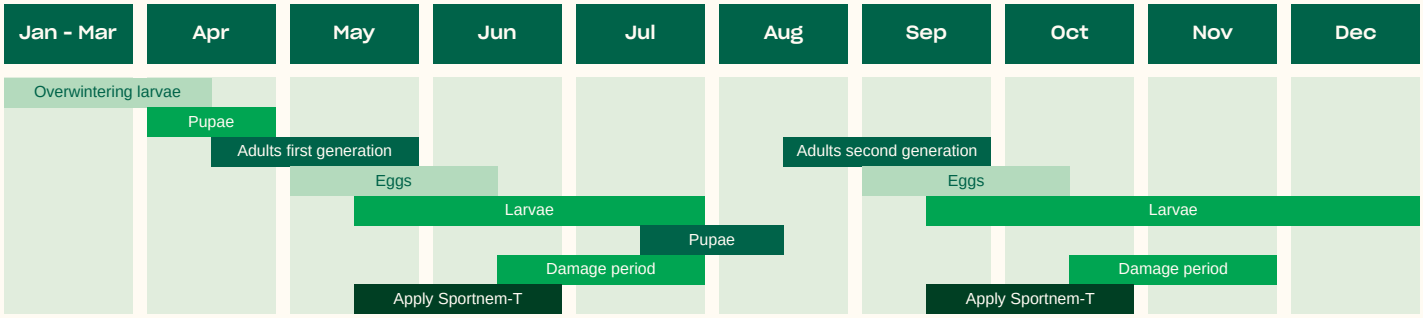
Sportnem-H contains the entomopathogenic nematode *Heterorhabditis bacteriophora*, which is particularly effective in controlling beetle larvae. Sportnem-H can best be applied in the period when young larvae are present, to avoid damage caused by older larvae (see schedule).

Timetable for application of Sportnem-T on crane flies

(based on the nematode *Steinernema carpocapsae*)

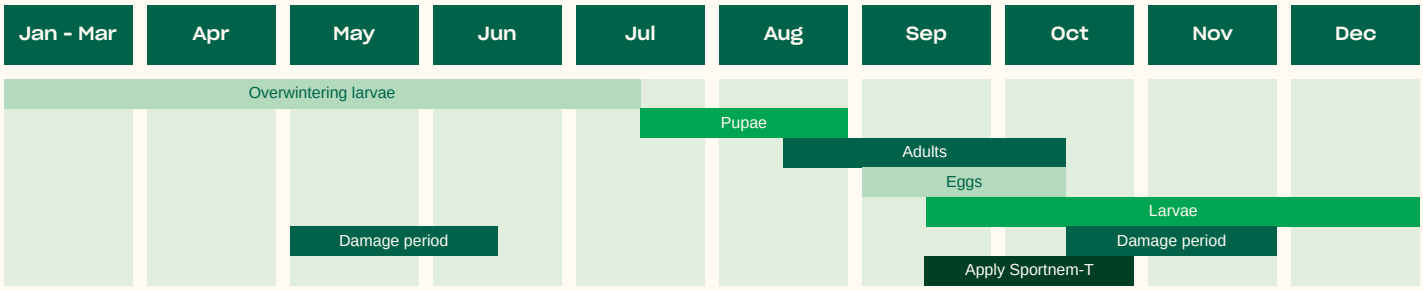
Common crane fly

Tipula oleracea



European crane fly

Tipula paludosa



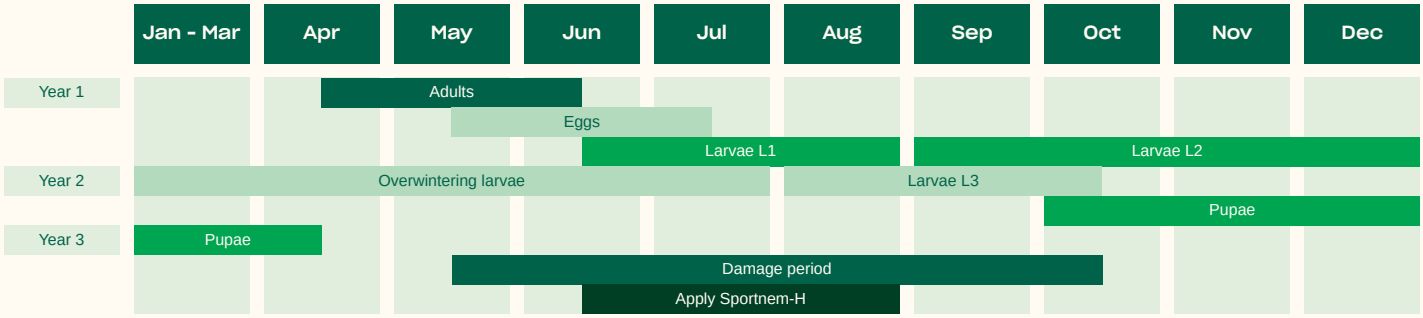


Timetable for the application of Sportnem-H on white grubs

(based on the nematode *Heterorhabditis bacteriophora*)

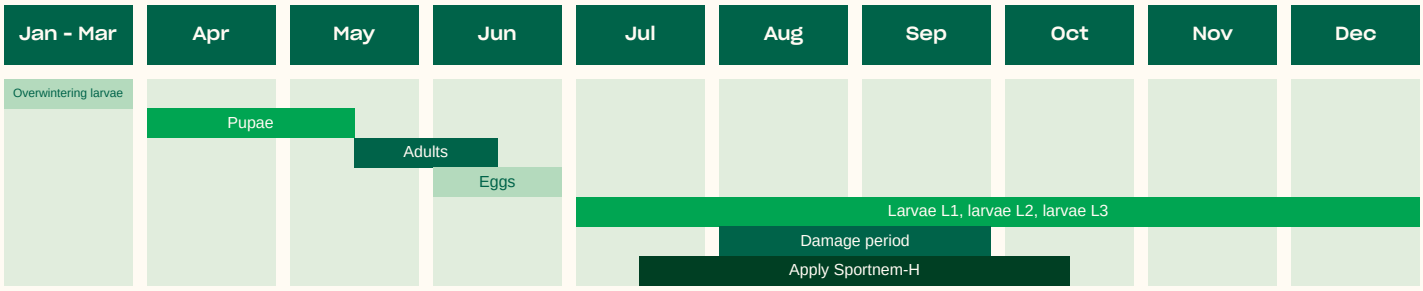
Cockchafer

Melolontha melolontha



Garden chafer

Phyllopertha horticola



Life cycles may vary upon local climates

Dosage	Timing and frequency	For best results
250,000 nematodes per m² 1 box will treat 1 hectare or 10,000 m²	**Sportnem-T:** Apply twice; with 10 to 15 days interval. Applications in September/October or May/June depending on species. **Sportnem-H:** Apply twice; with 10 to 15 days interval. Applications from June to October.	Apply on the turf with 800 to 1000 L of water per ha. Pre and post irrigation requires an adjuvant. A soil conditioner is recommended. When possible, apply soon after a verti-draining operation.

Storage

Immediately after receipt: Remove the product from the shipment parcel and check the expiry date on the package. Store in a dark place at 2-6°C.



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