SUSTAINABLE CROP MANAGEMENT

TECHNICAL DATA SHEET

AMBLYSEIUS-SYSTEM

AMBLYSEIUS-VERMICULITE-SYSTEM
and
ABS-SYSTEM

Amblyseius cucumeris

Amblyseius cucumeris is a small predatory mite of thrips, broad mites, cyclamen mites and spider mites. Females mate several times, and then lay eggs on the underside of leaves, attached to leaf hairs and close to the veins. Young larvae emerge from the eggs. They have six legs and do not it. They then become nymphs and start feeding. The two nymphal stages and the adults have 8 legs. They pierce and then feed on their prey. They mainly attack the first instar larvae of thrips, later stages are too big and can defend from the predators. For best results combine with other thrips enemies (Insidiosus-System, Swirskii-System and Degenerans-System) especially late in the spring and summer. A. cucumeris feed on pollen so they can be used preventatively in pollen bearing crops. It is also available as a breeder material (ABS) for preventive application in non-pollen bearing crops or before flowering. ABS comes mixed with a food source to ensure long-term reproduction and slow release into the crop. A. cucumeris also comes as a sprinkler material (Amblyseius-System, Amblyseius-Vermiculite-System) for curative application.

Features
- Pear shaped and mobile predatory mite
- Effective in the control of thrips larvae, broad mites and cyclamen mites
- Complements primary predators of spider mites
- Also feeds on pollen, enabling survival without prey, making it ideal for preventative control

Targets
- Thrips
- Broadmites
- Cyclamen mites
- Spider mite

Crops
- Cannabis / Hemp
- Fruit crops
- Herbs / Vegetables
- Ornamentals
- Tree and shrubs

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AMBLYSEIUS-SYSTEM, AMBLYSEIUS-VERMICULITE-SYSTEM and ABS-SYSTEM

Product Specifications

Commercial name	Specifications
Amblyseius-System - 20,000	• 1 L tube: 20,000 mites • Carrier: bran with factitious prey
Amblyseius-System - 250,000	• 5 L bucket: 250,000 mites • Carrier: bran with factitious prey
Amblyseius-Vermiculite-System - 20,000	• 1 L tube: 20,000 mites • Carrier: mixture of vermiculite (min. 80%) and bran with factitious prey
Amblyseius-Vermiculite-System - 50,000	• 1 L tube: 50,000 mites • Carrier: mixture of vermiculite (min. 80%) and bran with factitious prey
Amblyseius-Vermiculite-System - 250,000	• 5 L bucket: 250,000 mites • Carrier: mixture of vermiculite (min. 80%) and bran with factitious prey
ABS - 100,000 - Breeding System	• 5 L bucket: 100,000 mites • Carrier: bran with factitious prey • High ratio prey mites to predatory mites
ABS-System-Hook - 500	• ABS-sachets: 500 sachets with hook • Carrier: bran with factitious prey
ABS-System-Hook - 1,000	• ABS-sachets: 1,000 sachets with hook • Carrier: bran with factitious prey
ABS-System-Stake - 500	• ABS-sachets: 500 sachets with stake • Carrier: bran with factitious prey
ABS-System-Stake - 1,000	• ABS-sachets: 1,000 sachets with stake • Carrier: bran with factitious prey

Storage

Use immediately upon receipt. If not possible, product can be briefly stored, horizontally, in the dark, at a temperature of 59°F (15°C) and RH >85%.

Rates

Mode	Dose	Area	Repeat
Amblyseius-System / Amblyseius-Vermiculite-System			
Preventative	100 ind./m^2	Full field on leaves	Weekly or bi-weekly
Low curative	100-200 ind./m^2	Hotspots and surroundings	Weekly in combination with ABS sachet and other thrips predators/mass trapping
High curative	200-400 ind./m^2	Hotspots and surroundings	Weekly until controlled
ABS-Mini (stake or hook)			
Preventative	• 1 mini sachet/pot or hanging basket • 1 mini sachet/tray in propagation or small pot production • 1-2 sachets/linear meter (in strawberries/lettuce/others) • 3-4 sachets/m^2 (in veggies), or potted ornamentals	Full field	Replace every 4-6 wks

*The dose rate of ABS-System is crop dependent. Contact your Biobest advisor for tailored advice.

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Instructions

Timing of application

A. cucumeris mainly feeds on the first larval stage of thrips, therefore preventative releases are recommended early in the crop cycle before the arrival of the pest. Can be used curatively when pest is detected in high numbers.
Complement its action with pirate bugs (Insidiosus-System) and other Biobest tools such as BugScan® Blue cards and sticky rolls with thrips pheromone lures (ThriPher) to control older thrips stages.

Release method

Loose bulk material (Amblyseius-System and Amblyseius-Vermiculite-System)

Gently rotate the bottle or bag horizontally to ensure homogenous distribution. Press the lid to open the sprinkler cap or open the top of the bulk bag. Sprinkle the content on the flat leaves. Leave the empty bottle in the crop to allow any remaining predators to walk out.

Breeding material sachets hook or stake (ABS-System)

Hang the sachets inside the canopy of the crop, protected from direct sunlight. If using sachets on stake, place the stake into the growing medium, keeping a space equivalent to the width of 1 finger between the end of the sachet and the surface of the substrate.
Pinching the sachets may damage the predatory mites. Handle the sachets by the cardboard hook. The sachets have a small exit hole. Do not perforate the sachet or tear it open, as this can cause the sachet to quickly dehydate.
If using Bulk ABS-System, make breeder piles, equivalent to 1 teaspoon per release point.

Release conditions

The average temperature should be higher than 59°F (15°C) for at least some hours of the day to give the mites an opportunity to warm up and feed. Relative humidity should be above 65%, a low RH prevents egg hatching and causes sachet contents to dry out. The predatory mite is not susceptible to diapause and therefore remains active all year round in greenhouses.

Life cycle and appearance

Egg	Larva	Nymph	Adult
• Oval shaped • Around 0.1-0.14 mm • White to translucent color • Duration: 2-3 days*	• 3 pairs of legs • Do not feed - Duration: 2 days*	• 4 pairs of legs • Paler color than adult mites • Highly mobile on plant • Duration: 7 days*	• Pear shaped • Pale brown to tan color • 0.5 mm long • Avg. 1-3 eggs per day • Lifespan up to 3 weeks*
			

*At an average temperature of 59°F (15°C).

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Monitoring

- A. cucumeris adults, juveniles and eggs can be spotted in the crop, on the undersides of leaves. Eggs are laid on leaf hairs near the junction of veins. Mobile stages walk along veins and aggregate on the underside of leaves, in between the leaf hairs at the juncture of the midrib and the veins.
- Adults may also be found in flowers, feeding on pollen and on thrips larvae.
- Because A. cucumeris feeds on immature thrips stages a decrease in adult thrips populations will not occur for 2 to 3 weeks (depending upon initial pest population and climate conditions) and will require assistance of other tools or thrips predators.
- The efficacy can be checked by observing a reductionin pest population, reduced spreading, lower number of discolored flowers and new healthy growth free of damages.
- The use of Bug-Scan® traps in combination with ThriPher (thrips pheromone lures) is recommended to continually monitor the populations of thrips in the crop.
- Use Bug-Scan® rolls and ThriPher for mass trapping thrips adults (females and males) to reduce thrips populations.