Beneficial Insects
TECHNICAL DATA SHEET

biobest SUSTAINABLE CROP MANAGEMENT

DISTRIBUTED BY PLANTPRODUCTS®

CALIFORNICUS-SYSTEM
and
CALIFORNICUS-BREEDING-SYSTEM
Amblyseius californicus

Predates on various spidermite species, including the two-spotted spider mite (*T. urticae*). They can consume 5 adults and/or nymphs per day and 10 eggs and/or larvae per day. Female adults predate on all stages. Nymphs prefer eggs and larval stages. Also feeds on other spider mites, broad mites, cyclamen mite and thrips.

Product Specifications

Commercial name	Specifications
Californicus-System - 5,000	• 250 ml bottle: 5,000 mites • Carrier: vermiculite
Californicus-System - 25,000	• 1 L tube: 25,000 mites • Carrier: vermiculite
Californicus-Breeding-System - 100	• 100 breeding sachets • Carrier: bran and factitious prey
Californicus-Breeding-System - 500	• 500 breeding sachets • Carrier: bran and factitious prey

Storage

Use immediately upon receipt. If not possible, product can be briefly stored in a dark room with enough ventilation. Store Californicus-System at 46˚F (8˚C) and Californicus-Breeding-System at 59˚F (15˚C) and 80% RH.

Rates

Mode	Dosage	Area	Repeat
Californicus-System			
Preventative	5-30 ind./m	Full field on leaves	Every 2 weeks
Low Curative	30-100 ind./m	Hotspots and surroundings	As needed at 1 week interval
High Curative	100-200 ind./m	Hotspots and surroundings	As needed at 1 week interval

Features

- Predatory mite
- Efficient control against a variety of spider mite species
- Can be introduced preventively in absence of prey
- Less sensitive to warm and dry conditions, tolerates colder conditions
- Feeds on pollen

Targets

- Spider mites
- Broad mites
- Cyclamen mites

Crops

- Protected and open field crops
- Vegetables / Herbs
- Soft fruits
- Ornamentals
- Cannabis / Hemp

PP_TS_V02_200722_Californicus_System

CALIFORNICUS-SYSTEM and CALIFORNICUS-BREEDING-SYSTEM

Rates

Mode	Dosage	Area	Repeat
Californicus-Breeding-System			
Preventative	1 sachet / 2 m^2	Full field hung on plants	Every 4 weeks

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

Instructions

Release moment

Use preventatively. Release bulk material when plants start flowering, or use breeder sachets in non pollen bearing crops. This should be done before the presence of pests.

Release method

Bulk material: Gently rotate the bottle horizontally to ensure homogenous distribution. Press the lid to open the sprinkler cap. Sprinkle the content on the horizontal leaves. Leave the bottle in the crop to allow remaining predators to come out. Breeding sachet: Hang the sachets inside the canopy of the crop, protected from direct sunlight. Pinching the sachets may damage the predatory mites. Handle the sachets by the cardboard hook. Do not perforate the sachet or tear it open, as the sachets already have a small exit hole.

Release conditions

Year round releases are possible when temperatures are >50˚F (10˚C). Fast development at high temperatures allows A. californicus to complete its life cycle in 4 days at 86˚F (30˚C). That's is twice as fast as its main prey.

A. californicus prefers a relative humidity of >60%, but can also withstand a lower humidity compared to other predatory mites. In crops where temperatures and humidity can change dramatically, A. californicus will perform better than P. persimilis. A. californicus can survive on a diet of pollen. This predatory mite is most efficient in cases of low pest densities, it can even starve for about 2 weeks.

Monitoring

- Due to its small size and white to nearly transparent color A. californicus is difficult to spot in the crop. However all mobile stages can be found underneath the leaves. Eggs are laid on leaf hairs near the junction of veins.
- Adults may also be found in flowers, feeding from its pollen.
- The establishment will be faster in pollen bearing crops and with sufficient prey level.
- The efficacy can be checked by observing a reduction in pest population, reduced webbing and hotspots, and new healthy growth free of damages.

Life cycle and appearance

Egg	Larva	Pupae	Adult
• Oval shaped • Pale white color • 0.14 mm diameter • Hatch in 1-2 days*	• Pale white to nearly transparent color • 3 pair of legs • Duration: 0.5 day*	• Transparent white color • X-shape mark when fed • 4 pair of legs • Duration: 2 days*	• Oblong shaped • Transparent to yellow color • X-shape mark when fed • 0.5 mm long • Female adults lay 2-4 eggs/day for 2 weeks* • Lifespan: 20 days*
			

*In the case of an average temperature of 86˚F (30˚C).