

CALIFORNICUS- SYSTEM CALIFORNICUS- BREEDING-SYSTEM

TECHNICAL DATA SHEET



Targets

- Spider mites
- Broad mites
- Cyclamen mites

Crops

- Protected and open field crops
- Vegetable crops
- Soft fruits
- Ornamental crop
- Medicinal cannabis

Registration number

- Österreich: Pfl. Reg. Nr. 3068
- Costa Rica: 009
- Ireland: REG 49 25/2019
- Latvija: reg. No. 0609 – 0610
- Nederland: FFW/BB/2015/004
- Türkiye: 54052
- United Kingdom: NN-BCA-19-12 – NN-BCA-19-13
- Kenya: PCPB (CR) 1879
- España: 300/2012 – 501/2007
- Ελλάδα: 7464/82442/18-7-2016

What is Californicus-(Breeding)-System?

- Predatory mite
- *Neoseiulus (=Amblyseius) californicus*
- Efficient control against a variety of spider mite species
- Can be introduced preventively in absence of prey
- Less sensitive to warm and dry conditions
- Also tolerates colder conditions
- Feed on pollen

Mode of action

- Mainly predate on the two-spotted spider mite (*T. urticae*):
 - o Can consume 5 adults and/or nymphs per day and 10 eggs and/or larvae per day
 - o Female adults predate on all stages
 - o Nymphs prefer eggs and larval stages
- Also feeds on other spider mites, broad mites, cyclamen mite and thrips
- Complement its action with the predatory mite *P. persimilis* (Phytoseiulus-System), the predatory gall midge *F. acarisuga* (Feltiella-System) or the ladybird *D. pusilis* (Delphastus-System)

Product specifications

Product	Package size	Package content
Californicus-System-5.000	500 ml	5.000 predatory mites ⁽¹⁾
Californicus-System-25.000	1 l	25.000 predatory mites ⁽¹⁾
Californicus-Breeding-System-100	100 sachets	100 mites/sachet ⁽²⁾⁽³⁾
Californicus-Breeding-System-500	500 sachets	100 mites/sachet ⁽²⁾⁽³⁾

⁽¹⁾ on vermiculite carrier/⁽²⁾ on bran carrier with factitious prey/⁽³⁾ approx. 1.000 mites walk out over a 4-6 week period

Storage

Use immediately upon receipt. If not possible, product can be briefly stored in a dark room with enough ventilation. Store Californicus-System at 8°C/46°F and Californicus-Breeding-System at 15°C/59°F and 80% RH. Always respect the use-by-date.

Dose rate

Mode	Dosage	Area	Repeat
<i>Californicus-System</i>			
Preventative	5 ind./m ²	Full field On leaves	Every 2 weeks
Low curative ⁽¹⁾	100 ind./m ²	Hotspots and surrounding	2 times 1 week interval
High curative ⁽¹⁾	200 ind./m ²	Hotspots and surrounding	2 times 1 week interval
<i>Californicus-Breeding-System</i>			
Preventative	1 sachet/2 lm ⁽¹⁾⁽²⁾	Full field in plant	Every 4 weeks

⁽¹⁾ lm = linear meter/⁽²⁾ The dose rate of Californicus-Breeding-System is crop dependent. Contact your Biobest advisor for tailored advice.

Instructions of use

Release moment

Use preventative. Release when plants start flowering, even if no spider mites have yet been observed.

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 > 10°C/50°F. Fast development at high temperatures allows *A. californicus* to complete its life cycle in 4 days at 30°C/86°F. That's is twice as fast as its main prey.

A. californicus prefers a relative humidity of > 70%, 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.

Life cycle and appearance

Egg	Larva	Nymph	Adult
<ul style="list-style-type: none"> - Oval shaped - Pale white color - 0.14 mm diameter - Hatch in 1-2 days* 	<ul style="list-style-type: none"> - Pale white to nearly transparent color - 3 pair of legs - Duration: 0.5 day* 	<ul style="list-style-type: none"> - Transparent white color - X-shape mark when fed - 4 pair of legs - Duration: 2 days* 	<ul style="list-style-type: none"> - 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 30°C/86°F.

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.

DISCLAIMER

Use plant protection products safely. Please read the label and product information before use. Please consult the instructions for use to prevent potential harm to people and environment.