



Véto-pharma

Committed to apiculture



Oxybee®
Trickling treatment with oxalic acid



Innovative varroa mite treatment, suitable for organic beekeeping¹, and based on oxalic acid combined with sucrose and glycerol.

- ▶ Application by trickling method.
- ▶ Second varroa treatment to be registered in EU through a centralized authorization.

1 - Oxalic acid is approved by the EMA (European Medicines Agency) as an active ingredient for organic varroa treatments.

Please contact your local organic certifier if you have any question related to the use of your mite treatment.



INNOVATIVE
FORMULATION



APPLICATION BY
TRICKLING METHOD

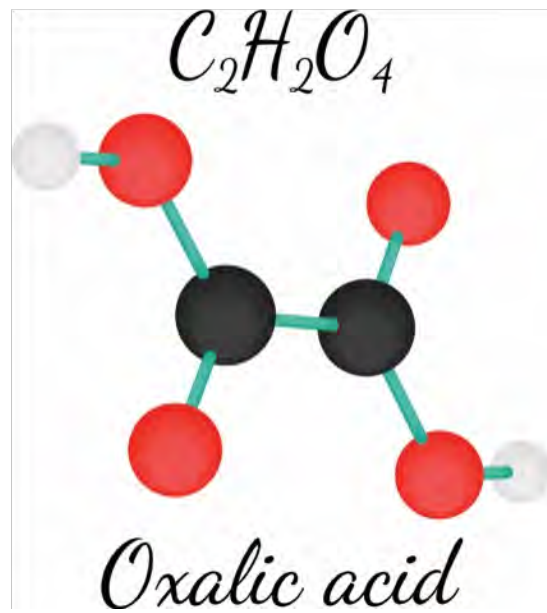


REGISTERED IN THE
EUROPEAN UNION
Made in Germany



INGREDIENTS

Oxalic acid dihydrate



Glycerol



Sucrose



Anise and eucalyptus essential oils



PACKAGING



1 box of 1000g (888ml) contains:

- ▶ 1 bottle of 750g containing 35g of oxalic acid dihydrate + glycerol.
- ▶ 2 sachets (125g x 2) of sucrose powder with Anise and Eucalyptus essential oils.

Treatment for 15 to 30 hives

5 to 6 ml between the frames with bees.
Maximum of 54ml / hive.

Advantages of Oxybee

Innovative formulation of oxalic acid combined with sucrose and glycerol



Increased efficacy

The formulation of oxalic acid in combination with sucrose and glycerol increased the mortality of varroa mites in laboratory tests.¹⁻²



The formation of small droplets of solution that last longer in the colony (increased hygroscopy) is assumed to be the cause of this effect, enabling a **better distribution of oxalic acid solution in the hive.**¹⁻²

1 - CVMP assessment report for Oxybee (EMA/V/C/004296/0000) – 2017

2 - Milani (2001) - Activity of oxalic acid and citric acids on the mite Varroa destructor in laboratory assays - Apidologie 32 (2001) 127–138 © INRA/DIB-AGIB/EDP Sciences, 2001

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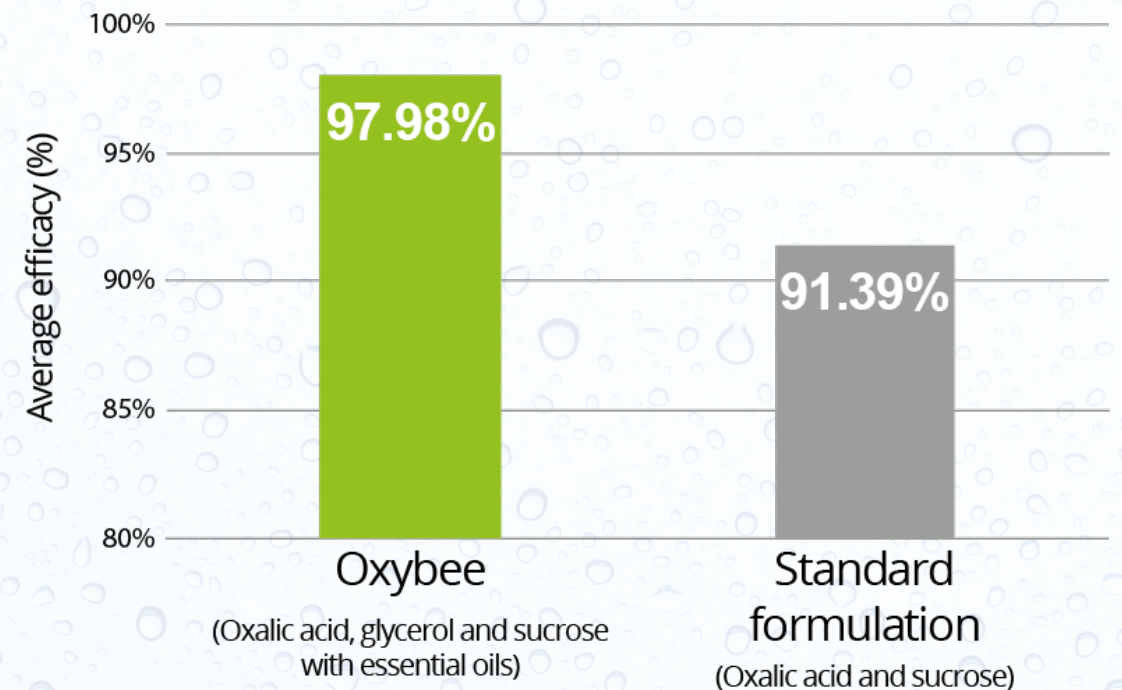
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3 - Poster G. Braun et al., DVG-Fachgruppentagung "Parasitologie und parasitäre Krankheiten", Hannover, Germany, Juni 12-14, 2017.

Field assay (Germany)

Field trials have shown a higher efficacy of Oxybee compared to the standard formulation of oxalic acid and sucrose.³



Zoom: Comparative study (Germany)

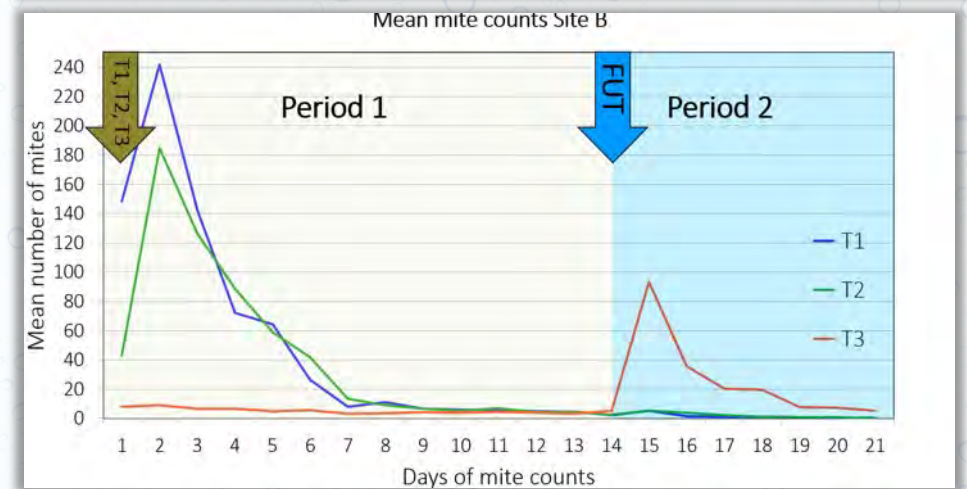
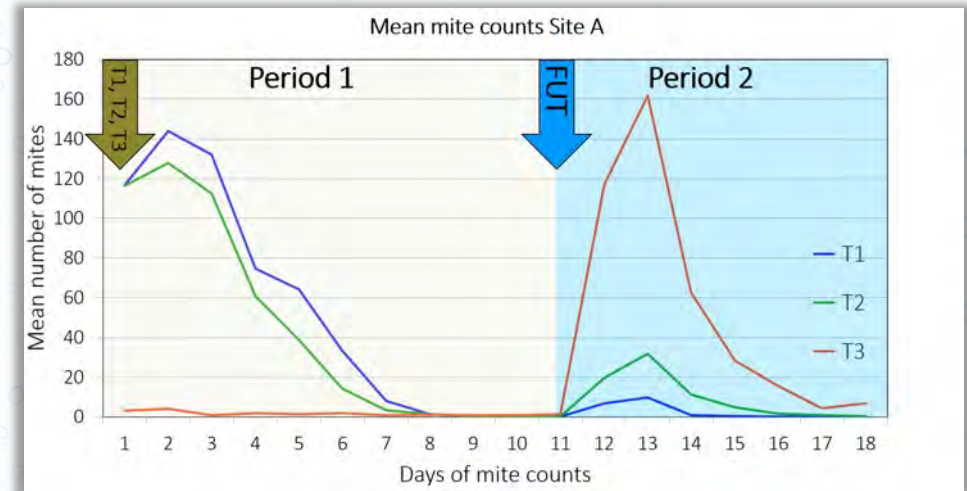
2 apiaries (1 in Northern Germany, 1 in Southern Germany)

Hive types:

- ▶ Deutsch Normalmaß (Northern Germany)
- ▶ Dadant (Southern Germany)

Treatment group	Name of product	Active ingredient	Number of colonies	Target dose
T1	Period 1	Oxybee®	15	6 ml / seam
T2		Ecoxal®	15	50 ml / colony
T3		0.9% NaCl	N/A	15
FUT*	Period 2	Perizin®	45 (all)	25 ou 50 ml / colony

*Follow up treatment



The mite count reduction of 97.98% shown for **Oxybee®** clearly exceeded the threshold of 90% stipulated in guideline EMA/CVMP/EWP/459883/2008.

Zoom: Comparative study (Germany)

The mean % mite count reduction was 97.98% in T1 (Oxybee) and 91.39% in T2 (Ecoxal).

Colony strength between Oxybee treated hives did not differ from placebo hives and Ecoxal hives.

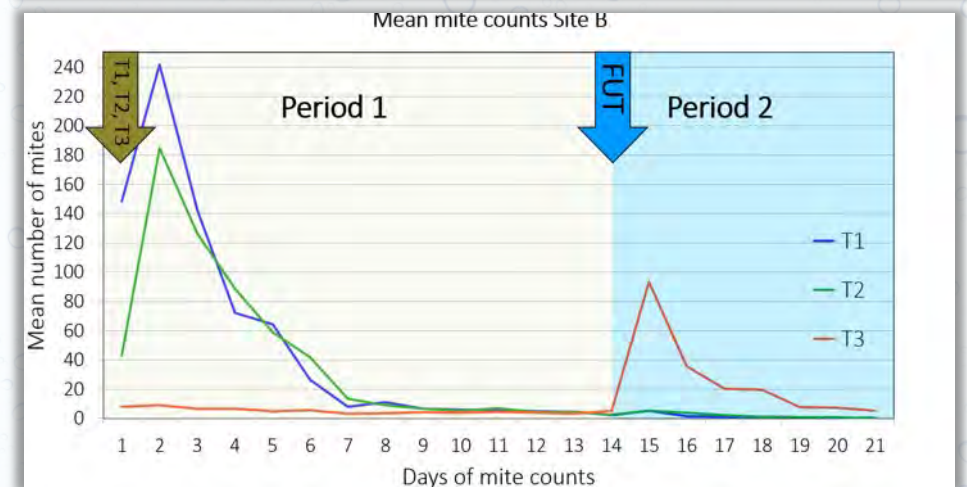
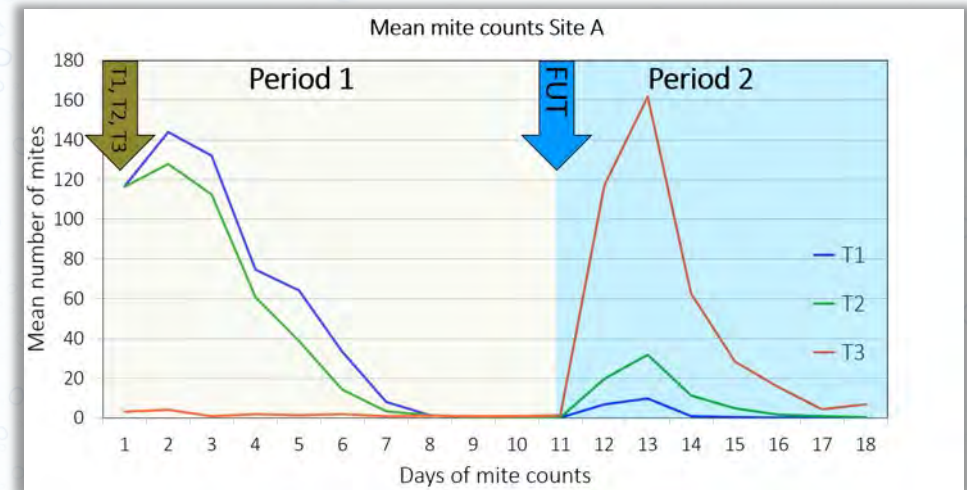
The development of open, capped and drone brood in the following spring was not significantly different for all three stages of brood in all treatment groups at overall comparison.

In one of the apiaries, the mean dm² of open brood was significantly higher in Oxybee treated colonies compared with the Ecoxal and the placebo groups.

In conclusion, Oxybee did not damage bees or brood.*

**Oxybee shall be applied in brood free colonies only*

References: Poster G. Braun et al., DVG-Fachgruppentagung "Parasitologie und parasitäre Krankheiten", Hannover, Germany, Juni 12-14, 2017.



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Advantages of Oxybee

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Increased efficacy

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3 - Veterinario Asociación Cacereña de Apicultores, Spain (2018) - Ensayo de eficacia de campo del producto antiparasitario Oxybee.

Field assay (Spain)

Oxybee® field trial conducted in Spain in Nov/Dec 2018³

Mean efficacy 97.94%

- Product applied in compliance with instructions.
- Study conducted on 10 Layens hives.
- Complete brood removal
- 1 application (trickling) in December 2018

Advantages of Oxybee

Innovative formulation of oxalic acid combined with sucrose and glycerol



Increased efficacy

Efficacy of Oxybee® across all tested colonies (79)¹

Average efficacy (%)	-95% CI*	+95% CI*	Median efficacy (%)
91.31 %	88.99 %	93.64 %	94.64 %

¹ – Efficacy of Oxybee® as a Winter Treatment of Varroosis in Honey Bees (*Apis mellifera*) in CZ - 2018

* Confidence Interval

Field assay (Czech Republic)

Oxybee® field trial conducted in the Czech Republic in Dec 2018¹

Apiaries across the whole country

- Product applied in compliance with instructions.
- Study conducted on 79 Langstroth and Czech hives of 5 beekeepers.
- Brood-free colonies due to brood break in winter.
- 1 application (trickling) in December 2018.

Advantages of Oxybee

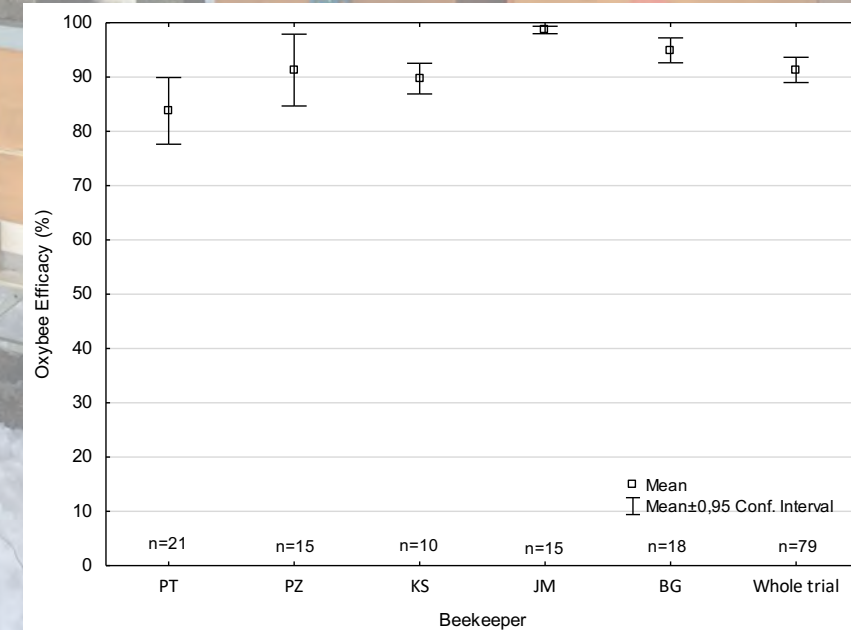
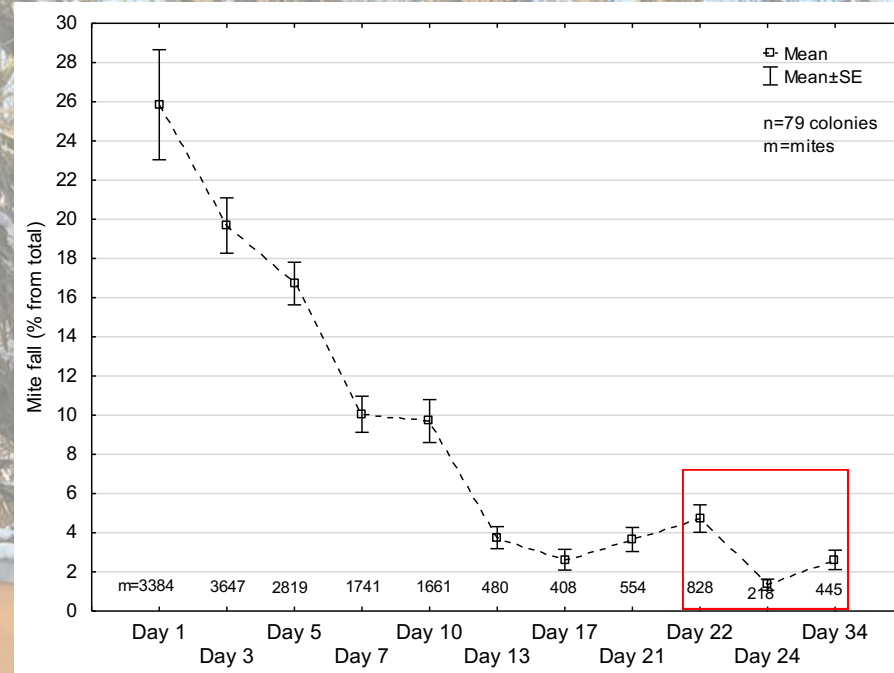
Innovative formulation of oxalic acid combined with sucrose and glycerol



Convenient and efficient winter application by trickling in naturally brood-free colonies



Field assay (Czech Republic)



Advantages of Oxybee

Innovative formulation of oxalic acid combined with sucrose and glycerol



Economical

Oxybee offers the best storage option compared to the other registered products with oxalic acid:¹

- ▶ Before opening: 2 years after manufacturing
- ▶ After mixing: 1 year in the fridge (2 to 8 °C)²⁻³

1 - Other registered products without glycerol

2 - If mixing has been carried out according to instructions (c.f 6.3 of the Oxybee SPC)

3 - Keep away from food



Advantages of Oxybee

Innovative formulation of oxalic acid combined with sucrose and glycerol



Safe for the user, the bees and the hive products

- ▶ No need to wear a respirator mask: protective clothes (pants, long sleeves, shoes), acid-proof gloves and safety glasses are sufficient, as the beekeepers is not directly exposed to the oxalic acid powder.
- ▶ No risk of wrong mixing ratio.¹
The oxalic acid is already dosed.

1 - If mixing has been carried out according to instructions (c.f 6.3 of the Oxybee SPC)



Advantages of Oxybee

Innovative formulation of oxalic acid combined with sucrose and glycerol



Easy to use

- ▶ You only have to mix the powder with the liquid solution of the bottle.¹
- ▶ No need to prepare a separate syrup.



¹ - Read the instructions before use

How to use Oxybee®?



KEY RULES TO APPLY YOUR TREATMENT



Oxybee must be applied in brood free colonies only.

- ▶ *Either during a natural brood stop (winter or very high temperatures in summer),*
- ▶ *Or by an artificial brood stop (queen caging, complete brood removal, splitting colonies).*



The outside temperature during treatment with Oxybee should be at least 3°C.

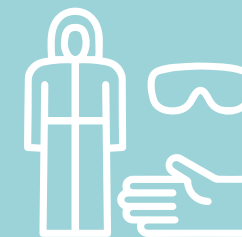
DO NOT treat when honey supers are on.



Respect the dosage (5 to 6 ml per occupied bee space).

Do not exceed the recommended dosage (54ml per colony).

1 treatment per bee generation.



Wear personal protective equipment:

- ▶ Acid-proof gloves,
- ▶ Safety glasses
- ▶ Protective clothes

No need to wear a respirator mask.

PREPARATION

1

Write the date of opening on the bottle.

2

Place the bottle with oxalic acid dihydrate solution in lukewarm water (30-35°C) to warm up the liquid

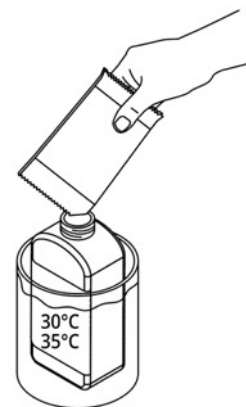
3

Open the sachets of sucrose powder and pour into the oxalic acid dihydrate solution bottle.

A funnel can be helpful!

4

Close the bottle tightly and shake it until the powder is fully dissolved.



APPLICATION

1

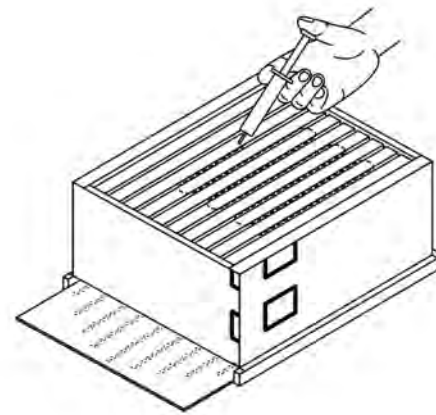
Open the hive and remove wax bridges so you can easily see the bees and reach them.

2

Use a syringe with a blunt plastic tube or a drenching gun to apply the solution.

Administer 5-6ml of the ready-to-use solution per occupied bee space.

Do not exceed 54ml per colony.



STORAGE

1

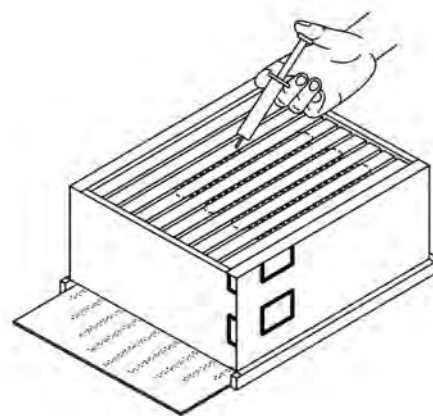
Oxybee can be stored
for one year
in a refrigerator
(2°C – 8°C).

(Keep away from food)

2

Before every use:

- ▶ Shake the bottle well
- ▶ Place the bottle in a lukewarm water container (30 - 35 °C) to warm the solution and make it more pleasant for the bees.



Advantages of Oxybee

Innovative formulation of oxalic acid combined with sucrose and glycerol



- ▶ Increased efficacy
- ▶ Economical
- ▶ Safe for the beekeeper, the bees and the hive products
- ▶ Easy to use





Merci !
Thank you!
Danke!
¡Gracias!

www.veto-pharma.com
info@vetopharma.com

Legal notices

OXYBEE powder and solution for 39,4 mg/ml bee-hive dispersion for honey bees. Composition: 1 ml of mixed bee-hive dispersion contains 39,4 mg of oxalic acid dehydrate. **Indication(s) for use :** For the treatment of varroosis (*Varroa destructor*) of honey bees (*Apis mellifera*) in brood free colonies. **Withdrawal period(s) : Honey:** zero days. Do not use during honey flow. **Special precautions :** This veterinary medicinal product is highly acidic and could have irritating and corrosive effects on the skin, eyes and mucous membranes. Personal protective equipment consisting of protective clothing, acid-proof gloves and safety glasses should be worn. **Marketing authorisation holder:** Dany Bienenwohl GmbH, Geyerspergerstr. 27, 80689 Munich, Germany. **Distributed by:** Vété-pharma, 12-14 avenue de la Croix Martre 91120 Palaiseau, France. **V0119**

Oxybee is a veterinary medicine. Please ask advice to your veterinarian, pharmacist or sanitary organization. In case of persistence of clinical signs, consult with your veterinarian. Read carefully the instructions on the product label before use.