



THE OREGANO PEOPLE

DOSTOFARM[®]

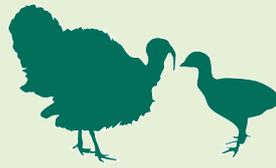


focus on
DOSTO

Stress Management and Performance Improvement in Turkeys

The Effect of natural DOSTO[®] Oregano Oil

DOSTO® Oregano Oil for Turkey



Intensive turkey farming can be extremely challenging. As turkey fattening lasts significantly longer than for broilers and is associated with much higher management and feed costs, preventive health care plays an even more important role in avoiding premature losses during the fattening process. The most common health problems in turkey farming concern the respiratory system and the digestive tract of the birds. As the preventive or routine use of antibiotics is increasingly limited or banned, the primary goal is to avoid diseases through optimal housing management and preventive health care such as vaccination or vitamin supplementation.



Natural feed additives with health-promoting effects can be an alternative to non necessary medicinal treatments. **DOSTO® Oregano essential oil** has proven antimicrobial, immunostimulant and antioxidant properties. The immunostimulatory effect of **DOSTO® Oregano oil** supports turkey health. Negative consequences caused by stress during the different production phases can be successfully minimized.



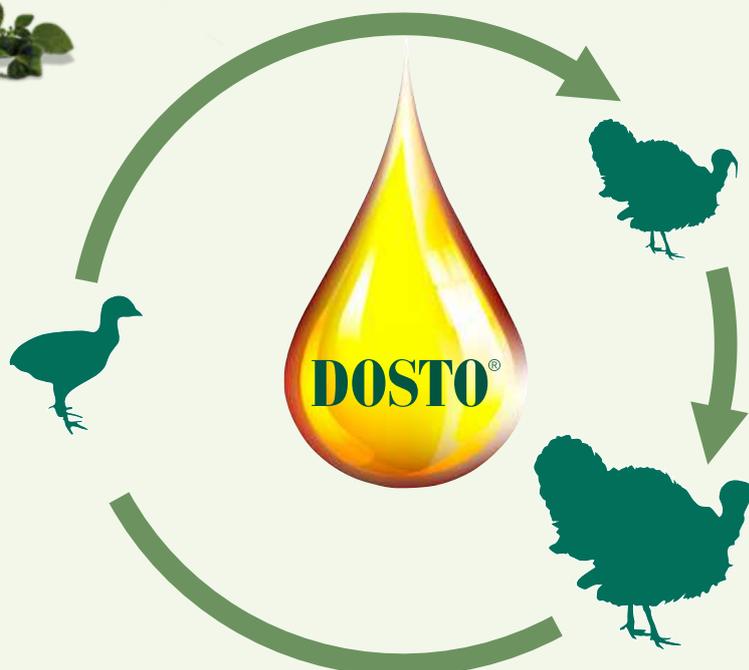
Rearing

until the 6th week

Critical phase until full feathering

CHALLENGES:

- Vaccinations & coccidiostats
- Risk of coccidiosis
- Cannibalism and feather pecking
- Clostridia
- Bloody enteritis



Fattening

from the 7th week until the end

Transfer to the fattening pen

CHALLENGES:

- Reorientation and stress due to rehousing
- Straw eating
- Coccidiosis and snuff
- Footpad inflammations
- Vaccinations

Improvement of Efficiency through DOSTO® Oregano-Öl



In the first 12 weeks of life, turkeys are particularly susceptible to various diseases. Therefore it is important to support the animals and their immune system through optimal management and nutrient-rich feeding.

A trial with fattening turkeys in 2020 at the University of Warmia and Mazury in Poland showed that the administration of 75 g DOSTO® Concentrate 500 / mt of feed in the first 12 weeks of fattening significantly improved feed conversion over the entire period of 20 weeks (Fig. 1). The mortality of the animals could also be reduced by the addition of oregano compared to the control group (Fig. 2). The addition of DOSTO® oregano oil led to improved profitability in a ratio of achieved yield to additional feed costs with an ROI of 7:1 (as of June 2022).

The administration of natural DOSTO® oregano oil is 100% safe and requires no withdrawal period.

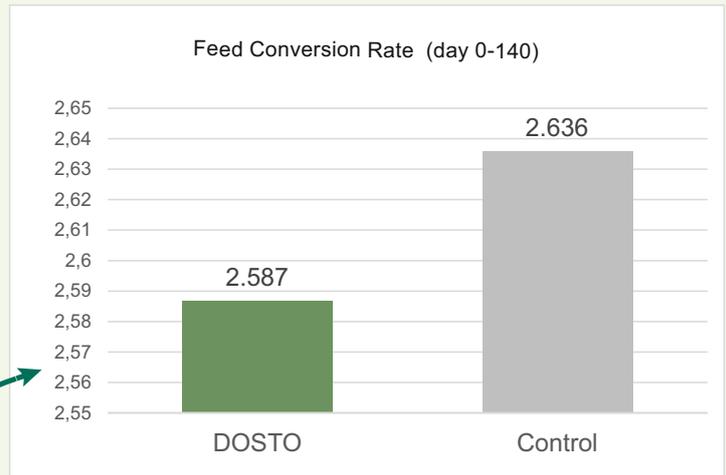


Fig. 1: DOSTO® Oregano improves the feed conversion.

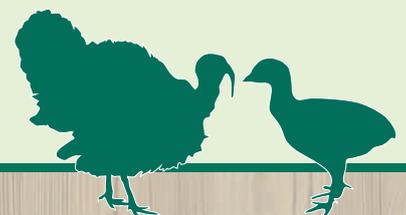


Fig. 2: DOSTO® Oregano reduces the mortality.



Protozoan Infections in Turkeys i

Intestinal diseases caused by bacteria, viruses or protozoa can have an enormous impact on turkey health. Especially infections with protozoa are widespread. Very often, their habitat is the intestinal tract of the animals. Protozoa are capable of severely reducing immunity, making poultry more susceptible to secondary infections and as a consequence negatively affecting performance and profitability. Especially *Histomonas meleagridis*, *Tetratrichomonas gallinarum* and *Cochlosoma anatis* are a major problem for turkey farming, as there are currently no approved medicines available for prevention or treatment. This treatment gap makes alternatives increasingly important in turkey farming.





Eimeria

- Economically most important protozoa
- Cause coccidiosis
- Mainly young animals are affected
- Massive destruction of the intestinal mucosa
- Reduced feed efficiency
- Increased morbidity and mortality
- High financial losses
- Favouring infestation with secondary infections

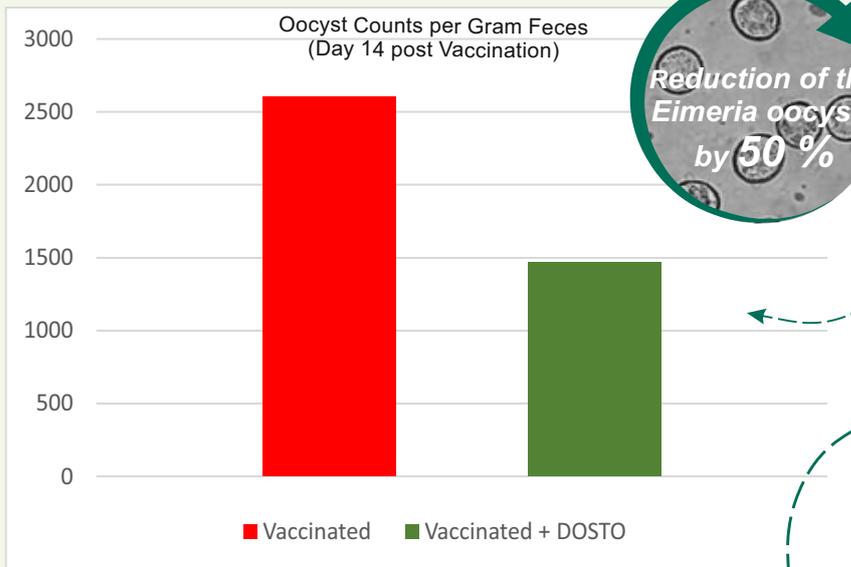


While in many countries coccidiostats are utilized in poultry production, some countries prohibit their use either by governmental regulations or due to production systems, that try to avoid the use of any antimicrobials. One possible approach is to vaccinate animals with Eimeria live vaccines. However vaccinated animals are subject to performance depression, as with natural coccidiosis, caused by a high Eimeria load. Since the proliferation of Eimeria in the intestinal epithelial cells impairs the absorption capacity of nutrients, a reduction in the number of Eimeria may be beneficial for the animal. A direct effect of natural oregano essential oil against Eimeria has been proven in several studies as well as in our own feeding trials.

Improvement of Feed Conversion and Reduction of Eimeria Oocysts



In a feeding trial at North Carolina State University (Raleigh USA), non-vaccinated turkey poults treated with a coccidiostat were compared with a group of live-vaccinated poults and live-vaccinated birds that also received Oregano oil (50 g DOSTO® Concentrate 500) on Eimeria excretion and performance.



Results

- Already on the 7th day of life, on average 10% less Eimeria oocysts per gram of feces
- On the 14th day of life oocyst numbers reduced by about half (Fig. 3)
- Higher live weights
- Significantly improved feed conversion (Fig. 4)

Fig. 3: DOSTO® Oregano reduces the Eimeria oocyst counts in feces.

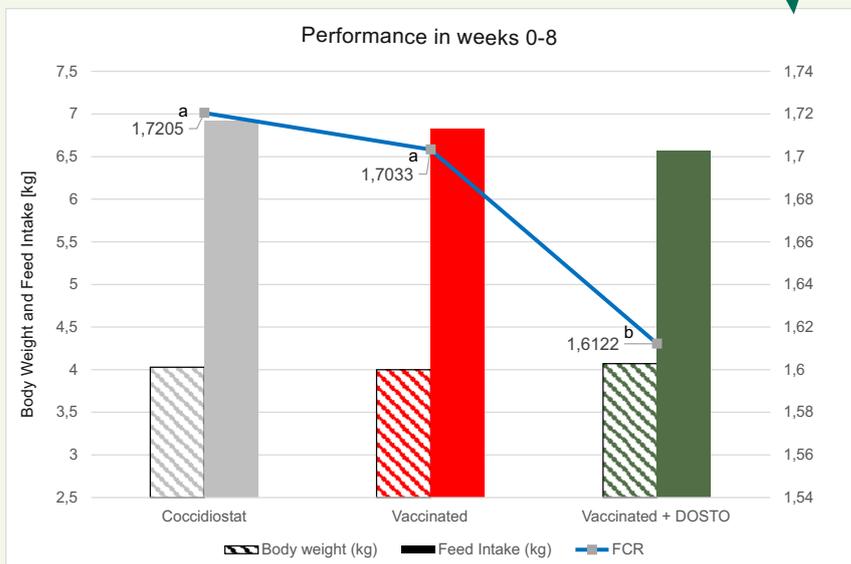


Fig. 4: DOSTO® Oregano improves performance of the animals. (a, b differ significantly (p < 0,05))

Reduction of Eimeria Oocysts

Significantly improved Feed Conversion



Trichomonadida

- Genera: e.g. *Tetratrichomonas* & *Chochlosoma* spp.
- Manifests in cloaca, large intestine an caeca of turkeys
- Cause severe intestinal inflammations
- Increased mortality of the flock
- Significant decrease in body weight
- Reduced feed efficiency
- Higher susceptibility to secondary infections
- Especially critical with already manifested coccidiosis

Improvement of Performance and Reduction of Mortality and Cochlosoma Cells



In a feeding trial at North Carolina State University in the USA (2022), *Cochlosoma anatis* infected turkey poults were compared with an uninfected control group and infected animals fed 45 grams of DOSTO® Concentrate 500 per ton of feed for 28 days on performance parameters, mortalities and Cochlosoma cells in the small intestine.

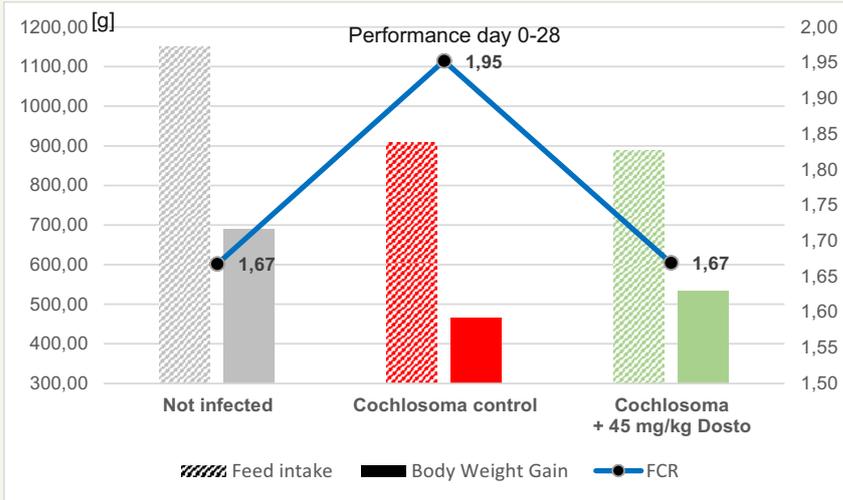


Fig. 5: DOSTO® Oregano improves weight development and feed conversion during infection with Cochlosoma.

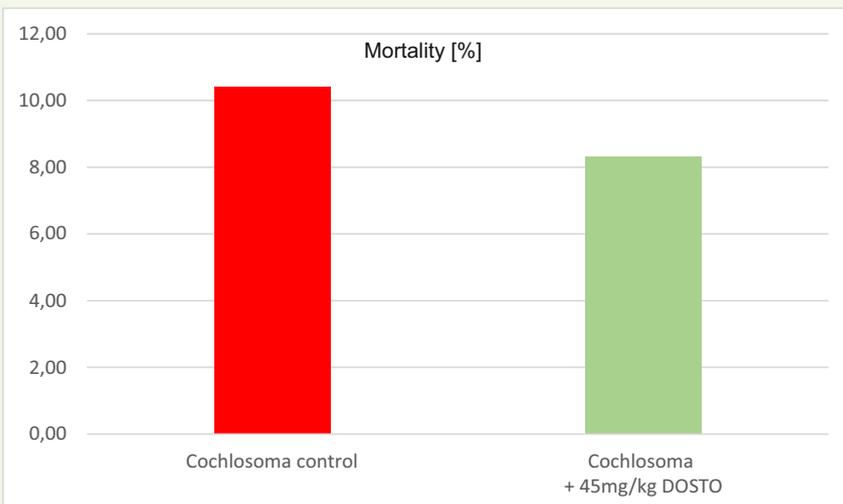


Fig. 6: DOSTO® Oregano reduces the mortality rate in case of infection with Cochlosoma.

Results

DOSTO® Oregano oil could compensate for the reduction in weight gain and feed conversion rate, caused by the Cochlosoma infection and was comparable to the non-infected group of animals (Fig. 5). Further the mortality rate of the infected animals receiving oregano was lower compared to the infected control group (Fig. 6). With the addition of DOSTO® oregano oil, the reduction of Cochlosoma cells in the small intestine correlated with the improvements in performance and health compared to infected, non-treated animals (Fig. 7).

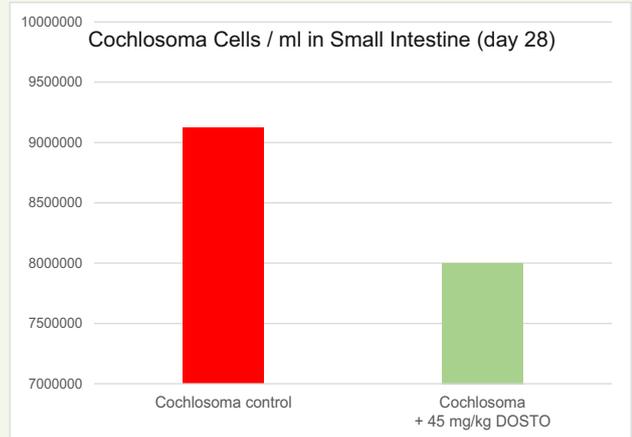


Fig. 7: DOSTO® Oregano reduces the number of cochlosoma cells in the small intestine.

Better Feed Conversion

Lower Mortality Rate

Reduction of Cochlosoma Cells



Histomonas meleagridis

- Causative agent of blackhead disease
- Enters the caecum by ingestion of eggs and larvae of *Heterakis gallinarum* and consecutive penetration of other organs, like the liver; infection via the cloaca is also possible
- Causes lesions in the Caecum and liver
- Infection predominately in the first 6-12 weeks of life
- severe health impairments
- Mortality rates of up to 100 %

Improvement of the Performance and Reduction of Histomonas-induced Tissue Damages



At the North Carolina State University (2022), a feeding trial was conducted to determine possible beneficial effects of DOSTO® Oregano oil on turkey poults infected with *Histomonas meleagridis*. The animals were infected with *Histomonas* on day 14 of life. The uninfected group was compared with the infected control group and infected turkeys fed either 45 g, 75 g or 300 g of DOSTO® Concentrate 500 per ton of feed. Feed intake, live weights, feed conversion, mortality and lesions in caeca and liver were examined.

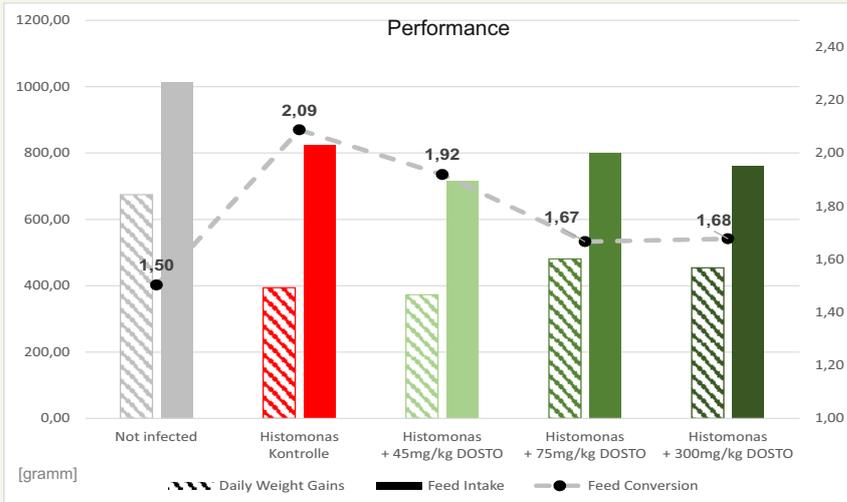


Fig. 8: DOSTO® Oregano improves feed conversion in the case of *Histomonas* infection

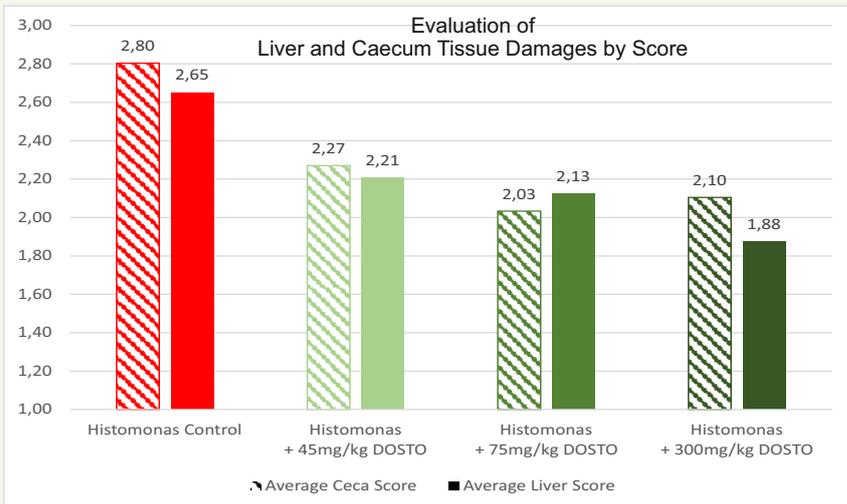


Fig. 9: DOSTO® Oregano reduces liver and Caecum lesions during *Histomonas* infection.

Results

DOSTO® Oregano oil improved the live weights of the turkeys infected with *Histomonas* and resulted in better feed conversion compared to the infected control group (Fig. 8). In addition, fewer lesions were observed during resection of the caeca and livers of the infected animals receiving DOSTO® Oregano (Fig. 9). The mortality rate of the two oregano groups was also reduced by 10 % compared to the control group (Fig. 10).

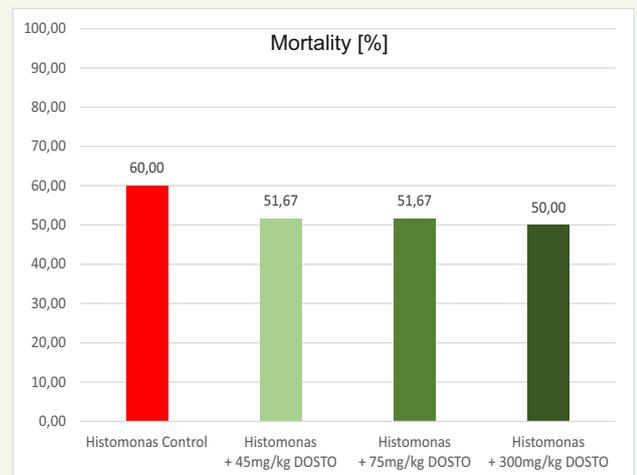


Fig. 10: DOSTO Oregano reduces the mortality rate in case of *Histomonas* infection.



Better Feed Conversion



Reduction of Liver-/ Intestinal Lesions



Lower Mortality Rate



Healthier Turkeys, better Performance

The antimicrobial, antiprotozoal and antioxidant properties of DOSTO® Oregano have a direct effect on turkey health and performance:

- Improvement of feed conversion
- Increasing profitability
- Reduction of protozoan oocysts in the intestine
- Reduction of tissue lesions in liver and intestine
- Reduction of the mortality rate
- No withdrawal period

Do you have questions about the use of DOSTO® Oregano in turkey feeding?

Contact us! mail@dostofarm.de

References are available on request.

