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Stress Reduction and Performance Improvement in Turkeys

The Effect of a standardized natural essential Oregano Oil

Oregano Oil in Turkeys

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 primary goal is to avoid diseases through optimal housing management and preventive health care such as vaccination or vitamin supplementation.

Natural feed additives can be an alternative to non-necessary medicinal treatments. Oregano essential oil has proven antimicrobial, immunostimulant and antioxidant properties. Over 50+ different effective components are responsible for the synergistic biological activity of oregano oil. “For this reason, it is important to make sure to use an all-natural, but also highly standardized oregano oil like DOSTO® Oregano, which was used in the trials shown below. Only in this way, a consistent composition of the effective components and thus a uniformly high quality and mode of action can be guaranteed.”, says Anna-Lena Beckmann, product manager at DOSTOFARM.

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 feed. A scientific trial in Poland (2020) showed that the addition of oregano oil led to improved profitability in a ratio of additional feed costs with an ROI of 12:1 (as of November 2022). Oregano oil successfully minimized the negative consequences caused by stress during the different production phases.

Eimeria

Coccidiosis, one of the economically most significant diseases in livestock is caused by the protozoan species Eimeria spp. A direct effect of natural oregano

essential oil against Eimeria has been proven in several studies. In a feeding trial at North Carolina State University (Raleigh USA), at day 14 post vaccination and compared to the infection control group the number of Eimeria oocysts per gram of feces in the infected animals receiving oregano oil was reduced by about 50 %. In addition, the animals reached higher live weights and significantly improved feed conversion.

Trichomonadida

Trichomonads include genera such as Tetratrichomonas & Chochlosoma spp. which manifest in the cloaca, colon and caeca of turkeys and cause severe intestinal inflammation. Consequences include reduced feed conversion, severe weight loss and increased susceptibility to secondary infections, as well as higher herd mortality.

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 22,5 grams of oregano oil per ton of feed. By day 28 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. The mortality rate of the infected animals receiving oregano was lower compared to the infected control group. With the addition of 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.

Histomonas meleagridis

Histomonads are the causative agents of blackhead disease in poultry. Infection often occurs via ingestion of eggs of the worm Heterakis gallinarum and leads to severe problems, including lesions in liver and cecum. The mortality rate in turkeys can reach up to 100%.

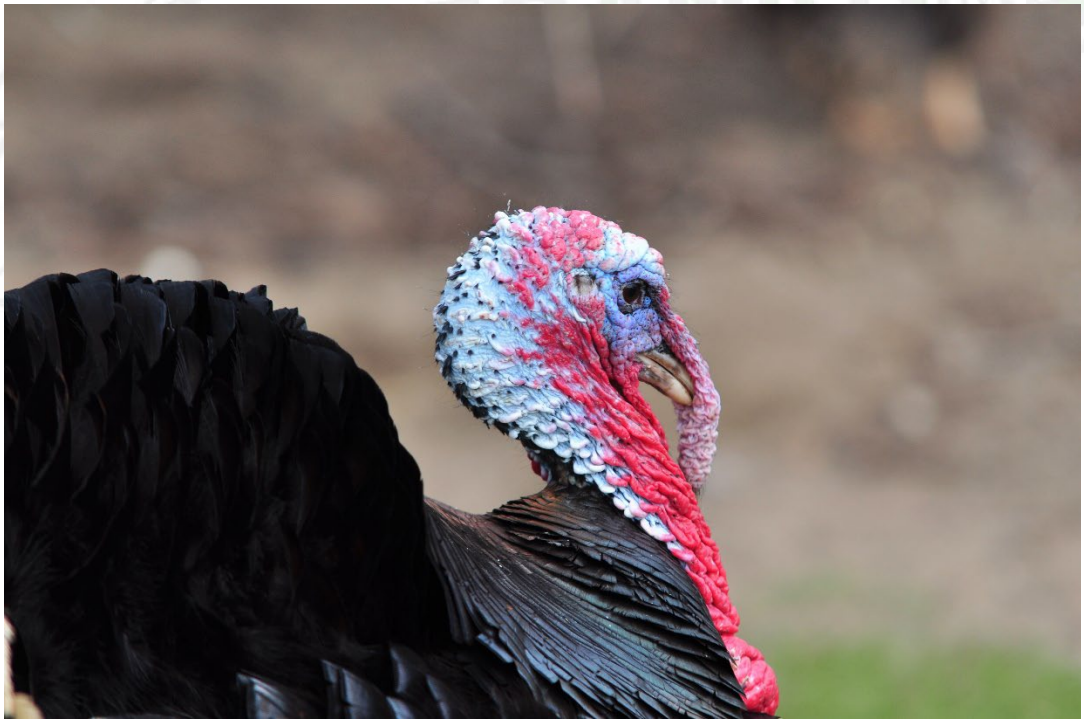
At the North Carolina State University (2022), in a feeding trial one group of turkey poults was infected with Histomonas meleagridis on day 14 of life and fed either

22,5 g, 37,5 g or 150 g Oregano oil per ton of feed. The infected group was compared with the uninfected control group.

Oregano oil improved the live weights of the turkeys infected with Histomonas and resulted in better feed conversion compared to the infected control group. Fewer lesions were observed during resection of the ceca and livers of the infected animals receiving Oregano. The mortality rate of the oregano group was reduced by 10 % compared to the control group.

Conclusion

The antimicrobial, antiprotozoal and antioxidant properties of Oregano oil directly affect turkey health by reduction of protozoan oocysts in the intestine and less severe tissue lesions in liver and cecum. The reduced stress leads to more efficient use of feed, reduced mortality and consequently an increase in profitability. In contrast to coccidiostats oregano oil can be administered without any withdrawal period.



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Press Contact

DOSTOFARM GmbH
Nina Bandelow
Marketing Manager
+49 4488 8459 23
nina.bandelow@dostofarm.de