

Czech Academy of Agricultural Sciences



Open Access Agricultural Journals

VETERINÁRNÍ MEDICÍNA
VETMED

[home](#) [page](#) [about us](#) [contact](#)



[us](#)

Table of
Contents

**VETMED
2015**

**VETMED
2014**

**VETMED
2013**

**VETMED
2012**

**VETMED
2011**

**VETMED
2010**

**VETMED
2009**

**VETMED
2008**

**VETMED
2007**

**VETMED
2006**

**VETMED
2005**

**VETMED
2004**

**VETMED
2003**

**VETMED
2002**

**VETMED
2001**

**VETMED
Home**

**Editorial
Board**

For Authors

- **Authors
Declaration**
- **Instruction
to Authors**
- **Guide for**

Authors

▪ **Fees**

▪ **Submission**

Subscription

Veterinari Medicina

Protective role of supplemental vitamin E on lipid peroxidation, vitamins E, A and some mineral concentrations of broilers reared under heat stress

Sahin K., Sahin N., Onderci M., Yaralioglu S., Kucuk O.:

Veterinari Medicina, 46 (2001): 140-144

[[fulltext](#)]

An experiment utilizing Cobb-500 male broilers was conducted to evaluate the effects of vitamin E supplementation at various concentrations on malonyldialdehyde (MDA) as an indicator of lipid peroxidation, serum and liver concentrations of antioxidant vitamins and some minerals of broilers reared under heat stress (32°C). One day-old 150 male broilers were randomly assigned to 5 treatment groups, 3 replicates of 10 birds each. The birds received either a basal diet or basal diet supplemented with vitamin E (dl- α -tocopherol acetate) at 62.5, 125, 250, or 500 mg/kg of diet. Increased supplemental vitamin E linearly increased serum vitamin E and A, but

decreased ($P = 0.001$) MDA concentrations. Increasing dietary vitamin E supplementation also resulted in linear increases in liver vitamin E and A concentrations, but linear decreases in MDA concentrations ($P = 0.01$). Increasing dietary vitamin E caused a linear increase in serum concentrations of Fe and Zn ($P = 0.001$), but a decrease in serum concentration of Cu ($P = 0.001$). Results of the present study conclude that in broiler chicks reared under heat stress a 250 mg of vitamin E supplementation can be considered as a protective management practice in a broiler diet, reducing the negative effects of heat stress.

Keywords:

malonyldialdehyde; vitamin A; vitamin E; Fe, Zn, Cu

[[fulltext](#)]

© 2015 [Czech Academy of Agricultural Sciences](#)