



# VETERINARY MEDICINE COVERAGE IN FSTA®

Trusted by researchers, scientists, students and government bodies in over 150 countries across the globe, **FSTA** is the definitive way to search over fifty years of historic and emerging research in the sciences of food and health.

Covering a wide range of interdisciplinary material, FSTA includes a wealth of international veterinary medicine content including:

## FOOD SUPPLY VETERINARY MEDICINE

All aspects of veterinary medicine of relevance to food production animals that impact on the safety, composition or quality of the resultant animal foods

- Animal breeding
- Rearing and husbandry
- Feeds and fattening
- Livestock health monitoring and treatment
- Animal diseases and vaccination
- Animal welfare and animal stress
- Animal handling and transport
- Cloning of animals for food production

### Use of veterinary drugs

- Withdrawal times and drug residues in animal foods
- Development of antibiotics resistance in animals for food production

### Slaughter practices and inspection

- Lairage and animal stress
- Slaughter techniques, policy and ethics
- Carcass condemnation
- Inspection programs

### Food safety

- Food safety inspection programs
- Food safety outbreaks from animals and animal foods
- Disease transmission from livestock via animal foods and slaughter wastes
- Monitoring of foodborne diseases, and novel microbiological methods
- Prion diseases and transmission
- Analytical methods for drug residues

## AQUACULTURE INDUSTRY

All aspects of aquatic veterinary medicine of relevance to fish farming and generation of other aquaculture products that affect the safety, composition or quality of edible aquaculture products

- Aquaculture feeds and nutrition
- Stocking density and farming practices
- Parasites and other fish diseases

## DOMESTIC PETS

### Pet foods

- Pet food quality and safety
- Novel pet foods and pet food development
- Impact of pet foods on pet health
- Pet food industry development

### Pet nutrition

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## USING FSTA FOR YOUR VETERINARY MEDICINE RESEARCH

### Example search questions

- How does sheep diet affect fatty acid levels in their milk, and hence the flavour of ewe cheese?
- What strategies can reduce antibiotic residue violations in market dairy cows?
- What is the impact of heat stress on the poultry industry and how can it be minimized? (*Sample record on following page*)
- What foods are beneficial for keeping a dog's intestinal microbiome healthy?

## SOURCE EXAMPLES

Veterinary medicine content is drawn from a wide variety of sources including journals, patents, books, reports and more. Here are just some of the many veterinary medicine focused journals included within FSTA, chosen to illustrate the diversity and breadth of content:

- Veterinary Microbiology
- Journal of Dairy Science
- Journal of Animal Science
- Meat Science
- Italian Journal of Animal Science
- World Rabbit Science
- Animal Welfare
- Arquivo Brasileiro de Medicina Veterinaria e Zootecnia

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## SAMPLE FSTA RECORD FOCUSED ON VETERINARY MEDICINE

**Water amino acid-chelated trace mineral supplementation decreases circulating and intestinal HSP70 and proinflammatory cytokine gene expression in heat-stressed broiler chickens.**

**Author:** Baxter, M. F. A.; Greene, E. S.; Kidd, M. T.; Tellez-Isaias, G.; Orłowski, S.; Dridi, S.

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**Source:** Journal of Animal Science, Volume: 98, Issue: 3, Article Number: skaa049

**DOI:** 10.1093/jas/skaa049 **Published:** 2020 **Document Type:** Journal Article

**Abstract:** Heat stress (HS) is a financial and physiological burden on the poultry industry and the mitigation of the adverse effects of HS is vital to poultry production sustainability. The purpose of this study was, therefore, to determine the effects of an amino acid-chelated trace mineral supplement on growth performance, stress and inflammatory markers, and meat quality in heat-stressed broilers. One day-old Cobb 500 male broilers (n=480) were allocated into 12 environmental chambers (24 floor pens) and divided into two groups: one group supplemented with amino acid-chelated trace mineral in drinking water and one control group.

On day 28, birds were subjected to chronic heat stress (HS, 2 wk, 35 °C and 20% to 30% RH) or maintained at thermoneutral condition (TN, 24 °C) in a 2\*2 factorial design. Feed intake (FI), water consumption, and body weight were recorded. At day 42, serum fluorescein isothiocyanate dextran (FITC-D) levels, blood gas, electrolyte, and stress markers were measured. Jejunum samples were collected to measure gene expression of stress, inflammation, and tight junction proteins. The rest of the birds were processed to evaluate carcass traits. HS resulted in an increase in core body temperature, which increased water intake and decreased FI, body weight, and feed efficiency (P< 0.05). HS reduced carcass yield and the weight of all parts (P< 0.05). HS significantly increased levels of circulating corticosterone (CORT), heat shock protein 70 (HSP70), interleukin 18 (IL-18), tumor necrosis factor alpha, C-reactive protein, and nucleotide-binding oligomerization domain leucine-rich repeat and pyrin domain-containing 3 expression. HS significantly increased serum FITC-D levels and the expression of HSP70 and IL-18 in the jejunum. Although it did not affect the growth performance, amino acid-chelated trace mineral supplementation reversed the effect of HS by reducing CORT and FITC-D levels and the expression of stress and proinflammatory cytokines in the circulation and the jejunum. However, it upregulated these parameters in birds maintained under TN conditions.

Together, these data indicate that the amino acid-chelated trace mineral might alleviate stress and inflammation and improve gut integrity in heat-stressed but not thermoneutral broilers. ©The Author(s) 2020. Published by Oxford University Press on behalf of the American Society of Animal Science. All rights reserved.

**Keywords:** CARCASSES; CHICKEN CARCASSES; CHICKEN MEAT; CHICKENS; FEEDS; GENE EXPRESSION; WEIGHT; WT.

## FURTHER INFORMATION

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