



Stinging nettle (*Urtica dioica*) in broiler nutrition

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SUMMARY

Stinging nettle (*Urtica dioica*) represents a plant with traditional utilisation in medicine in many countries. Despite its potentials stinging nettle is considered by intensive agriculture as a weed, but its biological properties, availability, together with simple processing technology can make it excellent dietary supplement on poultry farms. Nettle supplemented in broiler diets exerts positive effects regarding production performance. Nettle provides nutrients and bioactive components, which stimulate growth and feed utilisation, modulate metabolic processes and support immune system in broilers. This review analyses published literature sources investigating the use of stinging nettle in broiler nutrition, which provided sufficient data to confirm its high potential for dietary application in broiler industry. Future research is needed in regard to clarifying and standardisation of its phytochemical potential and nutritional value, as it depends on numerous factors, such as climate, vegetative stage, soil, harvesting time and processing technology.

KEYWORDS

Nettle; broiler; nutrition; performance

Introduction

The growth promoting effects of antibiotics led to their regular use as feed additives in animal feed at prophylactic, sub-therapeutic doses. Beneficial effect for animal health and productivity has increased antibiotic consumption that turned to be a factor of selection and distribution of antibiotic-resistant varieties of pathogens. Therefore, the discovery and development of an effective alternative to antibiotics became the subject of research and permanent debate for more than three decades.

As global consumption of poultry grows rapidly (Revell 2015), developing viable alternatives to in-feed antibiotics that preserves achieved productivity level, becomes a process of great importance, especially after the ban of antibiotics within the EU countries, that compromised productivity, animal welfare and finally, increased the veterinary use of therapeutic antibiotics (Wierup 2001; Casewell et al. 2003; Dibner and Richards 2005; Lillehoj and Lee 2012).

Many antibiotic alternatives with growth promoting effect, attracted research attention, including probiotics, prebiotics, synbiotics, organic acids, essential oils, medicinal plants or their parts (Samardžić et al. 2011; Pesic et al. 2011; Toghyani et al. 2015; Omerovic et al. 2016).