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Abstract

The consequences of increased use of plant-based animal feed additives on the organoleptic quality of animal products, on consumer health and on the environment.

Departments

[1] Department of veterinary medicine, Nantes, France
[2]Department of one health, Oniris, Nantes, France

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I. Abstract Body

The ban of growth promoting antibiotics by European commission since 2006 G.C significantly increased the usage of plant-based animal feed additives. The purpose of our survey was to assess the effect of increased usage of the four most common plant-based animal feed additives, phytogenics, (Garlic, cinnamon, thyme and oregano) on the organoleptic property of final animal products (meat, milk, cheese, egg.), on consumer health and on the environment. A review of more than 115 research articles related to our title was performed via various web- search engines such as Google-scholar or pub-med etc.

Most of the results showed an improved growth performance parameter such as weight gain, feed intake and feed conversion ratio, Caracas characteristics and meat quality or sensory parameters such as PH, water holding capacity, lipid peroxidation products, color, texture, tenderness, flavor and overall acceptability of the product. Their effect on the safety of the environment range from having no association (thyme, cinnamon) as they are already abundant in the environment to playing a protective role by decreasing ruminate methane and nitrogen excretion (Garlic and oregano). Studies also show that phytogenics have no negative effect on consumer health despite used at maximal application rate in animal feed. The variability of results can be explained by different doses of the additive used, variability in the concentration of bioactive compounds among different part of the plant used, period of supplementation and animal genotype.

II. Image:







III. Reference:

1, Garlic as a rumen modifier for eco-friendly and economic livestock production: Journal of Applied Animal Research: Vol 40, No 2 [WWW Document], n.d. URL https://www.tandfonline.com/doi/full/10.1080/09712119.2011.607764 (accessed 12.1.19).

2, Leong, J., Morel, P.C.H., Purchas, R.W., Wilkinson, B.H.P., 2010. The production of pork with garlic flavour notes using garlic essential oil. Meat Science 84, 699–705. https://doi.org/10.1016/j.meatsci.2009.11.006

3, Sang-Oh, P., Chae-Min, R., Byung-Sung, P., Jong, H., 2013. The meat quality and growth performance in broiler chickens fed diet with cinnamon powder. J Environ Biol 34, 127–133

4 Rychen, G., Aquilina, G., Azimonti, G., Bampidis, V., Bastos, M. de L., Bories, G., Cocconcelli, P.S., Flachowsky, G., Gropp, J., Kolar, B., Kouba, M., Puente, S.L., López-Alonso, M., Mantovani, A., Mayo, B., Ramos, F., Saarela, M., Villa, R.E., Wallace, R.J., Wester, P., Brantom, P., Dusemund, B., Hogstrand, C., Beelen, P.V., Westendorf, J., Gregoretti, L., Manini, P., Chesson, A., 2017. Safety and efficacy of aryl-substituted primary alcohol, aldehyde, acid, ester and acetal derivatives belonging to chemical group 22 when used as flavourings for all animal species. EFSA Journal 15, e04672. https://doi.org/10.2903/j.efsa.2017.4672

4 Janacua-Vidales, H., Peña-González, E., Alarcon-Rojo, A.D., Ortega-Gutiérrez, J., Aguilar-Palma, N., 2019. Determination of carcase yield, sensory and acceptance of meat from male and female pigs with dietary supplementation of oregano essential oils. Italian Journal of Animal Science 18, 668–678. https://doi.org/10.1080/1828051X.2018.1553507

5, Navid hosseini mansoub, 2011. Assessment on effect of Thyme on Egg Quality and Blood parameters of Laying Hens

IV. Biography:

My name is Alemayehu Bezabih, I am young research intern and master's student, in manimal one health program international scholarship at university of Nantes, France. I graduated in degree of human medicine from Bahir-dar university, north west Ethiopia in 2017.

V. Presenting author details



Full Name: Alemayehu Bezabih
Contact number:+33753167476
Twitter account:---------
Linked In account: https://www.linkedin.com/in/alemayehu-bezabih-b3b3a5194
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