

Review Article

New antibiotic replacements as growth and health promoters

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Abstract

Antibiotics usage in domestic animals, as antibiotic growth promoters (AGPs) was considered from middle of 1950 onwards. Antibiotic feed additives as growth promoters have long been supplemented to animal food in very low amounts (5 to 20 ppm) to stabilize the intestinal microbial flora, improve the general performances, and prevent some specific intestinal pathogens. The widespread use of antibiotics as AGPs is playing a significant role in the emergence of resistant bacteria. The resistant bacteria in animals due to antibiotic exposure can be transmitted to human through the consumption of their products, from close or direct contact with animals, or through the environment and consequently, the increased concern about the potential for antibiotic resistant bacteria was led the European Union and the United States regulations banning the use of AGPs in animal food since 2006. Various studies always look for a suitable replacement antibiotics to substitute to preserve the valuable role of these compounds. Extensive efforts on these alternatives have been started in last decades and some of these alternatives such as probiotics, prebiotics, synbiotics, ionophores, acidifier, organic acids, medicinal herbs and phytogenic can be pointed out. Hence, the aim of this review is to evaluate the antibiotic replacement strategy particularly medicinal herbs and their mechanisms as new growth and health promoters.

Keywords: Antibiotic, Growth and health promoters, Herbal plants, Phytogenic, Probiotic

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