Alternatives to antibiotics in livestock

Most antibiotics in livestock farming are used in aquaculture, but significant amounts are also used in terrestrial livestock species, particularly in poultry and pigs. Approximately 70% of antibiotics in livestock farming are used for non-therapeutic purposes, which can lead to the development of antimicrobial resistance (AMR).

CAB Abstracts supports research seeking alternatives to antibiotic use in livestock farming. It contains a wealth of literature on AMR.

CABI’s CAB Abstracts database comprehensively covers hot topics that matter

CAB Abstracts provides the complete picture on excessive use of antimicrobials in livestock farming, which is a worldwide problem for both animal and human health. Without a drastic reduction in the use of antibiotics in livestock farming, we could be facing a grim post-antibiotic era, for the sake of producing cheap animal products. Modulating the gut microflora in livestock has been shown to be effective in alleviating this problem. Probiotics, prebiotics, synbiotics, phage therapy and enzymes can be used to modulate the gut microflora and CAB Abstracts comprehensively covers literature on their use in livestock, including:

- **Probiotics**: live microorganisms that confer some health benefits to the host
  Weight gain by gut microbiota manipulation in productive animals. *Microbial Pathogenesis, 2017*

- **Prebiotics**: non-digestible food ingredients, usually sugars, which have some health benefits for the host
  The functionality of prebiotics as immunostimulant: evidences from trials on terrestrial and aquatic animals. *Fish & Shellfish Immunology, 2018*

- **Synbiotics and enzymes**: for example, the following paper:
  Alternatives to antibiotics for maximizing growth performance and feed efficiency in poultry: a review. *Animal Health Research Reviews, 2017*

- **Bacteriophages**: viruses that infect bacteria and can protect humans and animals, therefore reducing the need for antibiotics
  Productive performance of weanling piglets was improved by administration of a mixture of bacteriophages, targeted to control coliforms and Clostridium spp. shedding in a challenging environment. *Journal of Animal Physiology and Animal Nutrition, 2017*
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