

Food additives

1. Food additives are administered to the animal to improve the effectiveness of nutrients.
2. Antibiotics reduce the number of bacteria in the gut and increase the availability of nutrients to the animal. The widespread use of antibiotics has resulted in populations of bacteria that are resistant to many antibiotics, and in several countries their use for growth promotion is restricted or forbidden.
3. Probiotics are live microbial supplements that benefit the animal by improving the intestinal microbial balance. The beneficial microorganisms displace pathogenic bacteria and produce enzymes that complement the digestive ability of the host.
4. Oligosaccharides may be fermented by favourable bacteria, thereby shifting the population towards such microorganisms and away from harmful species. They also interfere with the attachment of harmful bacteria to the gut wall.
5. Exogenous enzymes are added to the animal's food to supplement its own digestive enzymes and to break down antinutritive fractions in foods.
6. The diets of young pigs may include organic acids, which reduce gut pH, with beneficial effects on protein digestion and control of the gut microflora.
7. Spray-dried plasma is a palatable source of digestible amino acids for newly weaned piglets. Its immunoglobulin content enhances gut health.
8. Products that are used to modify rumen fermentation include buffers, which regulate rumen pH and favour the activity of cellulolytic bacteria, compounds to suppress methane production, and bloat-preventing compounds,
which prevent the build-up of gas trapped in foam in the rumen fluid.