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Popular Article

Feed Additives in Poultry: A Brief Review

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Definition

Feed additives are frequently characterised as non-nutrient compounds that speed up growth, increase feed utilisation effectiveness, or benefit the animal's health or metabolism.

Usually used in micro quantities and requiring careful handling and mixing, feed additives are an ingredient or combination of ingredients added to the basic feed mix or parts thereof to fulfil the specific need. They are used to improve rate of gain, feed efficiency, preventing and controlling disease, and prevention against unfavourable environmental influences.

Types of feed additives

1) **Nutrient feed additives**
   e.g., amino acids, minerals and vitamins
2) **Non nutrient feed additives**
   e.g., antibiotics, hormones, immunomodulators, enzymes, probiotics,

Advantages

- Boost the nutritional value and flavour of feed.
- Boost animal productivity.
- Enhance the finished result.
- It reduces the price of animal protein.

Anti-oxidants

Fats are susceptible to oxidation and the development of rancidity, which decreases their palatability and may result in gastrointestinal and dietary issues. Antioxidants are provided to stabilize fats and fat-soluble vitamins (such as vitamins D and E) and to stop vitamins from being destroyed by oxidation. A good antioxidant for vitamin A, carotene, and fat is vitamin E. The anti-oxidants DPPD (Diphenyl-para phenylene-diamine), BHA (Butylated hydroxy anisole), BHT (Butylated hydroxy toluene), and ethoxyquin are suggested to prevent rancidity of fat.

Antibiotics, arsenicals and nitrofurans:

At effective concentrations, they have been discovered to have bacteriostatic and bactericidal capabilities while having no harmful effects. In addition to being used at low doses as growth promoters, they have also been utilized to assist prevent and control chicken diseases as well as to help safeguard feeds from microbial deterioration.

Bacitracin, chlortetracycline (aureomycin), oxytetracycline (terramycin), procaine penicillin, and Streptomycin are some of the antibiotics that are included in modest levels of feeding, or 5 to 1.0 g per quintal of feed.

Arsenicals include 3-nitro-4 hydroxy phenylarsanic acids, sodium arsenilate, and Arsenilic acid (para-amino hydroxy phenyl arsenic acid).

Anthelmintics

To avoid parasitic infestation, particularly of roundworms, these are the deworming medicatio ns that are periodically added to feed or water.

Example: Benzimidazoles, derivatives of piperazine, avermectins, and pyrazinoquinoline

Antifungals

These are either organic or artificial compounds that stop fungus from growing.

Example: Sorbic acid, sodium propionate, sodium benzoate, etc.

Coccidiostat

These are frequently included in poultry diets to guard against the most deadly illness, coccidiosis.

Examples include sodium Monensin, Lasalocid, Amprolium, and Salinomycin.

Pigments

These carotenoid sources are typically added to feeds to enhance the colour of broilers and egg yolks.

Example: Xanthophyll and other sources of carotenoids.

Pellet binders

These have an impact on the stiffness and texture of pelleted diets.

Ex- Sodium bentonite

Enzymes

These have demonstrated to increase the digestibility of some feedstuffs under specific circumstances.

Hormones

These are occasionally used to change the metabolism of chickens. For example, estrogen is sometimes administered to enhance development and carcass finish; under specific circumstances, thyroactive chemicals are used to enhance egg output, egg shell quality, and to prevent fatty livers.

Example: Stilbesterol, diethylstilbestrol, dienestrol diacetate etc.

Flavoring agents

These have been applied in an effort to make some feedstuffs more palatable.

Example: Sucrose octa-acetate solution

It is impossible to make a general judgement on which non-nutrient feed additive is the most useful, though. In this situation, the nutritionist must determine which feed additives are required under each unique set of conditions.