

Additives

F E E D



Feed additives are substances added to the feed (or water) to enhance the nutritional value of the diet, improve animal health and performance, or modify the characteristics of the feed. They are not essential but can be added to address specific needs.



Acidity regulator

Ammonium chloride is commonly added to feed to change urine pH and help prevent urinary calculi (stone formation) in sheep and goats.

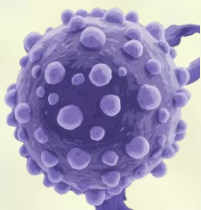
Antibiotics

Chlortetracycline (CTC) is the only antibiotic that can be fed to small ruminants. It is FDA-approved (for sheep) to reduce the incidence of vibronic abortion caused by *Campylobacter fetus* infection. A Veterinary Feed Directive (VFD) is required. Feeding antibiotics for growth promotion is no longer legal. Sulfa antibiotics (Rx) are added to water to treat coccidiosis.



Binders

Binders are often added to pelleted feeds to improve their quality, palatability, and durability. There are binders that can help manage mycotoxins in feed. Common binders include clay products and molasses-based products.



BioWorma®

BioWorma® is a feed-through additive that contains a fungus (*Duddingtonia flagrans*) that kills roundworm larvae in the manure. Continuous feeding reduces contamination of pastures with infective worm larvae.



Rumen buffers

Sodium bicarbonate (baking soda) is a rumen buffer. It can be added to the diet or offered free choice. It stabilizes the pH in the rumen and helps to prevent acidosis when animals are consuming high-grain diets.

Essential oils

Essential oils are highly concentrated plant extracts that are added to feeds to improve health and productivity. They are being evaluated as natural alternatives to antibiotics.



Ionophores and coccidiostats

Ionophores are added to feed, mineral mixes, and milk replacers to help prevent coccidiosis. Lasalocid (Bovatec®) is FDA-approved for confined sheep. Monensin (Rumensin®) is approved for non-lactating goats. Additional benefits include improved gain and feed efficiency. Decoquinate (Decco®) is a non-ionophore coccidiostat that is added to either lamb and goat feed. Amprolium (Corid®) is a medicine that is added to the drinking water to prevent or treat coccidiosis. It is extra label (Rx).

Prebiotics, yeast, and probiotics

Prebiotics, yeast, and probiotics are all used in livestock feed to improve animal health and performance. They are being studied as natural alternatives to antibiotics. Prebiotics act as food for beneficial bacteria in the gut, whereas probiotics introduce beneficial microorganisms directly.

