



FEED CONVERSION RATIO

The cost of feed is about 70-80 percent of the total cost of broiler production. It is also a route for administration of antibiotic growth promoters (AGPs), which effect productivity. Feed conversion ratio (FCR) is one of the key measures of cost of production.¹ It indicates the amount of feed consumed by a broiler chicken to gain one kg of weight. For example, an FCR of 1.8 means that for every 1 kg of broiler weight, 1.8 kg of feed was consumed. Poultry farmers across the world aim to reduce FCR to decrease the cost of production. AGPs in feed are known to increase feed utilisation thereby reducing the FCR.

FEED CONSTITUENTS

The poultry feed contains feed ingredients and feed additives. As per Bureau of Indian Standards (BIS) poultry feed specifications, 2007², the ingredients which could be added into feed include:

- Grains and seeds such as jowar, bajra
- Grain by products such as maize bran, wheat bran, maize gluten
- Oilcakes and meals such as groundnut oil cake, cottonseed oil cake
- Animal products such as fish meal, blood meal
- Minerals and vitamins such as bone meal, vitamins (mineral stabilized)

Non-nutritive feed additives include prebiotics, probiotics, feed enzymes, anticoccidials, antibiotic growth promoters, flavours etc. Nutritive additives are those which are essential for growth such as vitamins, trace minerals and amino acids.

As per BIS poultry feed specifications, both prebiotics and probiotics are known to favour non-pathogenic microbial balance in the gut and can be used as growth promoters. BIS recommends not using antibiotics as growth promoters.

FEED PREMIX AVAILABLE FOR BROILERS

Several feed premix comprising feed supplements and AGPs are available. Farmers buy these premix whose labels clearly mention growth promoters, depending upon several factors including age of the broiler chicken (pre-starter, starter and finisher) and farm conditions (see Table 1). Veterinary prescription is not required for this. These are mixed with feed at the farms.

FEED MIXED WITH AGPs

Feed mills prepare the feed by mixing premix supplements and sell it to poultry farms. Feed can also be customised depending upon the choice of the farmer. Feed manufacturers do not make feed without AGPs.

Table 1: Examples of feed premix with AGPs for broilers

Company	Brand Name	Antibiotic present	Information on label
Venky's	Bamylate	Bacitracin	For increased weight gain and improved feed efficiency
	Tylomix	Tylosin	A growth promoter. In broilers it provides uniformity in growth
	V-FUR 200	Furazolidone	V-Fur 200 is an ideal growth promoter for adult birds
Biomir Venture LLP	LINCO-MIR	Lincomycin	Helps to increase the growth, body weight with Colistin sulphate economical FCR in broilers
	CO-MIR	Doxycycline Colistin sulphate	Helps to increase growth and body weight in broiler Improves feed consumption efficiency. Act as best performance booster
	CON - MIR	Lincomycin Neomycin	Helps to increase the growth, body weight with economical FCR in broilers
Vetline India	Furavet	Furazolidone	An essential growth promoter. Ensures better growth, weight gain and feed conversion
	Progrovet	Doxycycline Colistin sulphate	Better feed conversion hence increased weight gain in broilers
Ayugen Pharma Pvt. Ltd.	Lincomax	Lincomycin Metranidazole Colistin sulphate	Improves weight gain and F.C.R in broilers Helps in improving growth and performance

Source: Respective websites of Venky's, Biomir Venture LLP, Vetline India and Ayugen Pharma Pvt. Ltd.

ALTERNATIVE HERBAL FEED SUPPLEMENTS

There is an increasing trend to use herbal feed supplements, particularly among big farmers (see Table 2). However, they are largely used to complement AGPs instead of substituting it in the feed for reasons such as higher cost and limited effectiveness.

Table 2: Examples of herbal feed supplements for broilers

Company	Brand Name	Information on label
Venky's	Biospark-V	Better growth and production. Better FCR.
Crown Herbal Products	Grofit	Herbal feed supplement for better weight-gain in broilers. Increases food conversion.
Cifal Herbal	Cifaliv	Helps broilers attain better FCR, body weight and growth
Arosol Chemicals Private Limited	LIV - 100 powder/liquid	Improving FCR, Promoting growth, weight gain and production.
Revival Remedies Ltd.	HYMU	Antibiotic-free. HYMU and Delcox are unique poultry products that efficiently trigger a bird's immune system and help in preventing coccidiosis
Vinayak Ingredients (India) Private Limited	VIN NUTRI-C HERBAL	Improves FCR & weight gain in broilers.
	VIN Methionine	For maintaining optimum growth, F.C.R. protein and energy utilization in poultry.
Mridul Manure	Herbal Lysine	Improves body weight & FCR. Optimizes protein synthesis and energy utilization
	Herbal Methionine	Better performance in terms of live weight gain. Improvement in FCR.
Petrus Pharmaceuticals	NUTRIBION	Better FCR and faster growth in Boilers. Better- feed utilization.
Vetline India	LIVTON Herbal Liquid	To enhance growth, weight gain, FCR & livability. To maintain proper feed intake, digestion, absorption of nutrients.

Source: Respective websites and pamphlets of Venky's, Crown Herbal Products, Cifal Herbal, Arosol Chemicals Private Limited, Revival Remedies Ltd., Vinayak Ingredients (India) Private Limited, Mridul Manure, Petrus Pharmaceuticals and Vetline India

References

1. Primary research and discussion with poultry farmers, veterinarians and feed manufacturer
2. Poultry feeds – specifications – fifth revision, BIS 1374, 2007