

# Maximising poultry output

## Especially in difficult times

Cutting back on feed costs alone are not enough to increase profitability in this tough economic climate with an uptrend in raw materials prices. Instead, the focus should be on reducing per unit feed costs and on monitoring and improving production efficiencies.

The years 2012/13 have been difficult for poultry producers around the world for many reasons—the economic downturn subduing overall growth in the industry, increasing feed raw material prices due to adverse weather conditions which have also resulted in greater-than-average variations in quality, and the age-old problem of feed prices rising faster than returns to the producer. Droughts in North and South America and southern Europe and early droughts followed by a cold wet harvest in northern Europe in 2012 have severely limited the quantity of high quality grains and further exacerbated the pressure on feed raw material prices.

Throughout the world, the traditional and most common response in difficult times is to try to reduce feed costs as much as possible as this represents between 60% and 70% of the total cost of production. This is based on the idea that by reducing input costs, you can improve profitability. But is this the best course of action to sustain a struggling business, even if it helps with the cash flow? A more progressive response would be to look at ways to maximise output by reducing individual unit costs of production.

### The first to go

One of the first casualties at such times are feed additives. Even though they represent only a very small percentage, often less than 1% of the total cost of the feed, feed additives are reduced or removed. But as feed additives were included in the diet for the benefits they bring, why remove them at this time?

Today, veterinary costs are seen as

necessary for the well being of the health of the stock and are often accounted for separately from feed costs. On the other hand, feed costs are often seen as negotiable and when feed prices rise, steps are taken to reduce overall feed costs even if the net effect can be detrimental to the company. In reality, both feed and veterinary costs should be combined rather than kept separate, to better establish the true costs of production.

Unit costs of production can be affected in many ways—through decreases in mortality, increases in growth rates or egg production and feed efficiency along with enhanced intestinal function. Improving immunity or reducing pathogen challenges consequently require much less veterinary intervention. The net result of all or some of these is a reduction in the unit cost of production.

There are also many fixed costs such as heating, labour and depreciation. If productivity increases through the use of additives, this reduces the overall cost of production per unit of fixed costs.

### Feed additives—not for nothing

The main aim of probiotics is to rapidly develop a healthy intestinal microbial balance. This will reduce the risks of pathogen through competitive exclusion for attachment sites on the intestinal lining and/or the production of organic acids and bactericines. It also lowers the overall number of pathogens in the intestine, thereby reducing disease challenges. One of the main benefits is a reduction in dysbiosis or bacterial imbalance in the gut. Reduced dysbiosis is usually accompanied by increases in liveability, growth rate and

Unit costs of production refer to the cost of producing each unit of poultry product, such as an egg or a kilogram weight gain. Higher total costs may be offset by more eggs produced or higher live weight, which translate to lower per unit costs and more profit for the producer. ↙



**Table 1. Economic effect of removing additives from the diet.** These cost calculations were carried out at different times with different feed prices and returns per kilogramme live weight.

Product type	Product	No. birds	Cost saving	Zootechnical performance			Lost Income
				Liveability	Live weight	FCR	
Probiotic /Prebiotic	PoultryStar®	20,000	252.00	+0.30	-160g	+0.10	2,797.33
Organic acids	Biotronic® Top3	41,200	461.13	-0.46	-50g	+0.07	2,240.77
Organic acids	Biotronic® SE forte (L)	10,000	137.81	+1.93	-130g	+0.12	1,477.84
Phytogenic	Digestarom® P.E.P. Poultry	46,600	421.04	-0.40	-10g	+0.07	3,066.44
Phytogenic	Digestarom® Poultry	588,616	6,986.28	+0.07	-171g	+0.04	43,398.90

Source of data: BIOMIN field trials

feed efficiency as birds benefit from improved digestibility.

It has been suggested that in Europe, about 30% of all culling in processing plants can be attributed to lameness and/or bacterial chondronecrosis and osteomyelitis (femoral head necrosis).

Recent trials carried out at the University of Arkansas using a lameness model have shown significant reductions in induced lameness when a multi-species, multi-strain probiotic (PoultryStar®) was included in the diet. Ongoing field trials are attempting to quantify the benefits of lameness reduction under standard commercial conditions.

### Proven results

Phytogenics tend to be included in poultry feed to enhance digestibility and modulate the intestinal microbiota, thereby improving the health of the animal and reducing pathogen challenges. These, in turn, result in improved performance particularly in feed efficiency, growth rates and liveability. Many trials with Digestarom® P.E.P. and Digestarom® Poultry have shown consistent benefits in feed efficiency along with improvements in daily weight gain. When these gains are accompanied by an improvement in economic benefits, where is the sense in removing them from the diet?

In a major field trial with more than one million broilers in the Netherlands with Digestarom® Poultry, the average body weight of the broilers increased by approximately 170g against the standard control group with a saving of 4 points in FCR. This resulted in the production

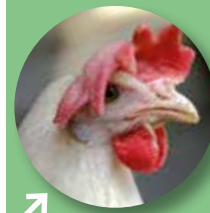
of 50.26 tonnes more live weight and an increased income of €49,256 at €0.98/kg live weight sold. Flock health was also improved as seen by a halving in veterinary treatment costs. This demonstrates the need to combine both feed and veterinary costs in order to determine the true benefit of any additives used.

Organic acids, be they straight acids, protected acids or acids on slow release carriers are designed to have an antimicrobial effect in the feed, the intestine or both, and have been used for many years to control *Salmonella spp.* They also help buffer the feed, thereby enabling improved protein digestion. The net outcomes are improved health and better zootechnical results. If organic acids were added for these reasons, taking them out when feed prices rise will affect overall performance negatively.

### Penny wise, pound foolish

As Table 1 demonstrates, removing feed additives from the diet results in feed cost savings. But the flipside of this is a drop in the performance of the birds and the profitability of the enterprise. The figures are produced from a range of field trials carried out in broilers with BIOMIN products.

The outlook in regard to feed prices is likely to remain high with an increasing world population competing for basic dietary staples, although there may be short periods when prices ease, provided climatic conditions permit universally good harvests. Just cutting feed costs alone will not be enough for companies to survive in this tough economic climate. Efficiencies have to be monitored and improved with a focus on reducing per unit costs of production. ☺



Besides an increase in both growth and feed efficiency, feed additives may also reduce the need for medical interventions. As such, savings in medication costs should also be taken into account. Above all, the appropriate use of feed additives increases poultry revenues for the producer.

# News & Events

Mild relief for US  
soybean and corn output

The EU gives the green light for a multi-species, host-specific **poultry probiotic** more on page 2-6

The BIOMIN **American Nutrition Forum**  
San Antonio, 4-6 Nov 2013

Did you know...

*"that DON targets the brain of animals directly, causing vomiting or anorexia?"*

Discover this mycotoxin Hot Topic in the BIOMIN Mycotoxin Info Blog!



In the Americas **Brazil's** Ag Minister pushes for more poultry exports; lower feed prices bode well for **US** broiler & egg

## BIOMIN news

BIOMIN completes its second facility in Vietnam with a grand opening on 2 Oct 2013. The 4.7 ha **pre-mix facility in Binh Duong** boasts a micro dosing system, state-of-the-art laboratory and technologies complete with "green" features in line with the company's Nutri-Economics® concept.



The **American Nutrition Forum**, sponsored by BIOMIN, brings two full conference days packed with programs that focus on "Reshaping the Future of Animal Production". The program also includes

three breakout sessions for poultry, swine and ruminant. Speakers include a range of industry leaders in the field of animal nutrition. [www.americannutritionforum.info](http://www.americannutritionforum.info)



October. Under the theme "Nutri-Economics®—Balancing Global Nutrition & Productivity", the

BIOMIN brings the biennial **Asia Nutrition Forum** this year to six cities in the region in the month of

Forum discusses issues with a focus on people, performance, profit and planet. <http://anf.biomin.net>



chickens. Marketed in the EU under the umbrella of the globally successful **PoultryStar®** brand, the probiotic feed additive is the first and only feed additive of its kind to achieve a positive scientific opinion. *Source: BIOMIN*

BIOMIN obtained the EU authorisation for its innovative multi-species, host-specific probiotic as a feed additive for fattening