

Bio-Mos outperforms Avilamycin in multiple field trials in the Czech Republic

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Multiple controlled field trials have been set up in the Czech republic at in total 6 different location to compare Bio-Mos (Alltech Inc., USA) to avilamycine (in total 18 barns versus 13 barns respectively, representing 361550 versus 246970 broilers). Bio-Mos was added at 2 kg/T in the starter (7-10 d), 1 kg/T in grower (till 21-25 d and 0.5 kg/T till slaughter (38 d). End weight and FCR were recorded at the end of the trial, while mortality was recorded daily. At two occasions uniformity of the flocks was assessed at 35 days of age by at random sampling of 75-100 birds using a wire net. Uniformity was expressed as body weight within the average +/- 10%. The results of the technical performance (FCR, end BW) were analysed by Anova.

Overall results indicated a small improved end weight of the Bio-Mos treatment (+ 10 g; 1.86 kg versus 1.85 kg for the control) and a reduced FCR (- 0.03, 1.91 versus 1.94 for the control). Mortality was reduced by 0.76 % (4.02 % versus 4.78 % for the control) (P=0.06). Uniformity was enhanced by 8.4 % and 12.3 % at the 2 set-ups. It can be concluded from this trial that (a) the results of the technical performance are quite similar to the results of the meta-analysis of Hooge (2004; Int. J. Poultry Prod. 3:163-174) and (b) Bio-Mos improved the uniformity of the flock to a large extent.

Keywords: Bio-Mos; AGP; broiler; uniformity; Czech Republic

Introduction

The use of Bio-Mos as an alternative for antibiotic growth promotors has been demonstrated largely in the past in controlled research trial. This effect was due to its ability to bind pathogens as *E. coli* and *Salmonella* but also due to its immune modulating function. Never the less, its efficacy is the best demonstrated in practice with large number of animals involved. The objective of this trial was to evaluate the effect of supplementing Bio-Mos in a feed comparing it to avilamycin.

Material and methods

Multiple controlled field trials have been set up in the Czech republic with 4 different broiler producers at in total 6 different location to compare Bio-Mos to Avilamycine (in total 18 barns versus 13 barns respectively, representing 361550 versus 246970 broilers set-up). Bio-Mos (Alltech Inc., USA) was added at 2 kg/T in the starter (till 7-10 days), 1 kg/T in grower (till 21-25 days) and 0.5 kg till slaughter (36-38 days). Feed was wheat-corn based. Animals were fattened till 36-38 days of age. End weight and FCR were recorded at the end of the trial, while mortality was recorded daily.

At the end of the trial the average end weight for control and Bio-Mos treatment per location was determined from all the data from the barns used for that treatment. As numbers of animals were not equal between the different set-ups at the different locations, the weighed average per location was based on total number of animals in the trial location divided by number of animals delivered to the

slaughterhouse. The average mortality was calculated by counting all the dead animals per treatment over all barns of the location and dividing it by the total number of animals set up for that treatment at that location. The average FCR per treatment at one location was calculated per treatment as the average of the FCR per barn. At two occasions (set-up 1 and 4), uniformity of the flock in the control and the treatment barns was assessed at 35 days of age by at random sampling of 75-100 birds per barn using a wire net. Uniformity was expressed as percentage of animals within the range of 10 % below or above the average weight of flock. The results of the technical performance (FCR, end BW) were analysed by Anova.

Results and discussion

Overall results indicated a small improved end weight of the Bio-Mos treatment (+ 10 g; 1.86 kg versus 1.85 kg for the control) and a reduced FCR (- 0.03, 1.91 versus 1.94 for the control), although not significantly (*Table 1*). Uniformity was enhanced by 8.4 % and 12.3 % in set-up 1 and 4 respectively (*Table 1*). Mortality was reduced by 0.76 % (4.02 % versus 4.78 % for the control), a difference which almost reached a significant level ($P=0.06$, *Table 1* and *Figure 1*).

Table 1 Overall results of the comparative trials conducted at 6 different locations

	Avilamycin	Bio-Mos (2 - 1 - 0,5 kg/T)	Difference
No of barns	13	18	
No of animals	246970	361550	
Live weight (kg)	1.85	1.86	+0.01
FCR*	1.94	1.91	-0.03
Mortality	4.78	4.02	-0.76
Uniformity set-p 1	56.2	64.6	+ 8.4
Uniformity set-up 4	61	73.3	+12.3

*corrected for mortality

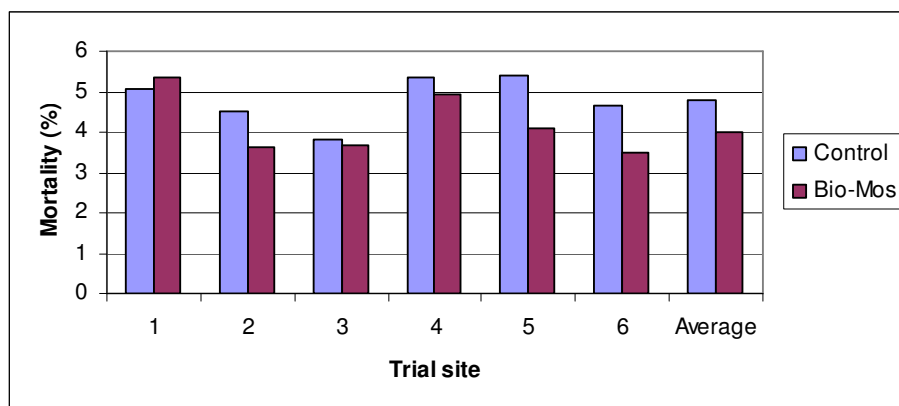


Figure 1 Effect of Avilamycin and Bio-Mos on mortality on the different trial sites

It can be concluded from this trial that (1) the results of the technical performance are quite similar to the results of the meta-analysis of Hooge (2004) and (2) Bio-Mos improved the uniformity of the flock to a large extent.

References

HOOGHE, D.M. (2004). Meta-analysis of broiler chickens pens trials evaluation dietary Mannan oligosaccharide, 1993-2003. *International Journal of Poultry Production* **3**:163-174.