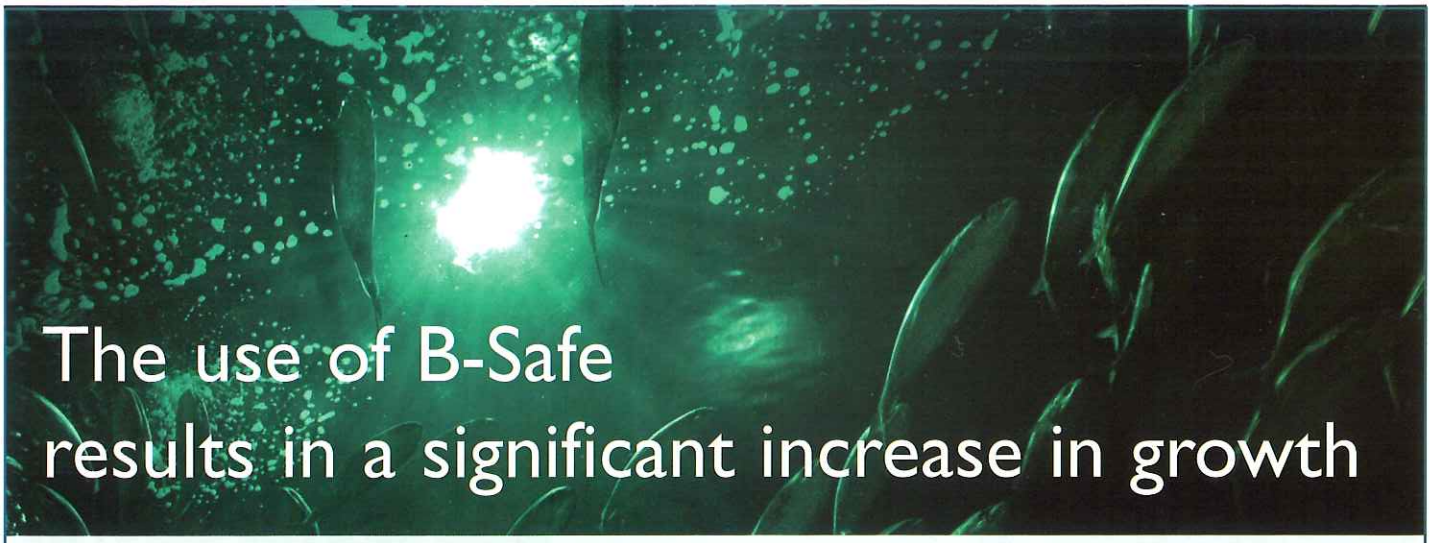

The use of B-Safe results in a significant increase in growth

In a study carried out at In Vivo NSA research centre in Vietnam near Ho Chi Minh City, the use of B-Safe resulted in a significant increase in growth – from between +9.5 and +10.8% and generated a significant reduction in the feed conversion ratio from between -11% and -12%.

Despite the additional cost of B-Safe, feed cost to produce one tonne of fish was reduced by about 10 percent using two doses, demonstrating a return on investment (ROI) of using B-Safe at 1/10! The results below were presented at the World Aquaculture Society Congress (Natal, Brazil in June 2011).

B-Safe: Zootechnical and economical interest in growing tilapia

Interest of a patented cation exchanged clay (B-Safe) on zootechnical performances of growing tilapia fish

by Pascal Boisot*, Phong Huy Dao, Gaëlle Benzoni and Alain Guyonvarch, Néovia, Talhouët, Saint Nolff, France

The use of antibiotic growth promoter factors in feed for terrestrial or aquatic animals is either banned - for example in Europe - or heavily criticised due to the potential increase in bacterial resistance.

Cation exchanged clays have been reported to be an effective antibacterial material and its interest as a growth promoter factor has been reported in terrestrial species such as poultry. To our knowledge, the interest of cation exchange clays has never been studied in fish species.

The purpose of this trial was to test the interest of a patented cation exchanged clay (B-Safe) at two different doses on the zootechnical performances of growing tilapia fish.

This study was carried out at In Vivo NSA research centre in Vietnam near Ho Chi Minh City.

1920 fish (Oreochromis Niloticus* Oreochromis Mosambicus) of average initial weight of 27.2+2.6g were divided in three groups of 640 fish. Each group was subdivided in eight cages of 2.5m3 (80 fish/cage).

Cages were placed in a fresh water pond. Fish were fed to apparent satiety for 38 feeding days with a commercial type feed (protein: 31%, fat: 4.5%, fibres: 4.5% and starch: 20%) with or without a patented cation exchanged clay: Group 1 (control), Group 2 (2kg/T of B-Safe SD), Group 3 (3kg/T of B-Safe SD).

Individual body weights were controlled at the start and at the end of the study. Daily feed consumption and daily mortality per cage was also recorded. Data were analysed by analysis of variance.

Main zootechnical results are presented in Table 1.

Death rates were quite low on this trial and no significant differences among treatment were observed. The use of B-Safe resulted in a significant increase in growth (+9.5 to +10.8%) in link with a significant reduction of feed conversion ratio (-11% to -12%) with no significant dose response effect.

Despite the additional cost of B-Safe, feed cost to produce one tonne of fish was reduced by about 10 percent at the two doses.

In conclusion, results of this study demonstrate that B-Safe can have a zootechnical and economical interest in growing tilapia and that a dose of 2kg/tonne was optimal in the environmental context of this study.

Table 1: Main zootechnical results (mean+ standard deviation)

	Group 1: Control	Group 2: Bsafe SD 2kg/t	Group 3: Bsafe SD 3kg/t	P-Value
Initial weight (g)	27.3 ± 2.6	27.0 ± 2.7	27.2 ± 2.6	ns
Final weight (g)	129.0 ± 20.8a	138.3 ± 22.2b	139.4 ± 21.6b	<0.001
Daily weight gain (g/day)	2.08 ± 0.15a	2.28 ± 0.10b	2.31 ± 0.13b	<0.001
Death rate (%)	2.03 ± 1.48	1.72 ± 1.33	1.09 ± 1.24	ns
Daily feed consumption per fish (g)	3.50 ± 0.10	3.45 ± 0.10	3.46 ± 0.09	ns
FCR	1.71 ± 0.11b	1.53 ± 0.08a	1.51 ± 0.08a	<0.001
Feed cost to produce one tonne of fish (Euro)	537	483	481	

ns: non significant
a,b: means with common upper scripts are not significantly different from each other at the five percent level

MORE INFORMATION:

Sandrine Durox
Marketing Manager
NEOVIA, BP 394
56 009 Vannes cedex
France
Tel: +33 2 97485383
Fax: +33 2 97485385
Email: neovia@invivo-nsa.com