

International experiences with in-ovo IBD vaccine

At the recent successful Merial Avian Forum in Rome six speakers from around the world shared their field experiences of Vaxxitek HVT+IBD – an IBD vector vaccine based on HVT, which is administered in the hatchery.



Egypt

Ali Hussein Ahmed Hussein from Cairo University reported on a study in Egypt that evaluated the merits of using Vaxxitek HVT+IBD on a broiler farm with a history of Gumboro and Marek's diseases with complicating respiratory infections. In this study 155,000 broilers were vaccinated and compared to a similar number of broilers using the company's classic IBD intermediate vaccination programme over three cycles. The results are shown in the table below. Economically, the broilers receiving Vaxxitek HVT+IBD showed a benefit of 1.419 EGP per kg of liveweight.

EGYPT	Intermediate vaccine	Vaxxitek HVT+IBD
Condemnations (%)	1.90	1.42
Livability (%)	93.92	93.88
Average body weight (g)	1,596	1,594
Average kill age (days)	35.08	34.23
FCR	1.87	1.82
EPI	231	241



France

Isabelle Devaud from Merial France reviewed the blind positive controlled study that compared the vaccine to a classical programme using an intermediate vaccine in which two groups of approximately 300 Hy-Line pullets received identical treatment in a large commercial farm. Both groups had similar body weights at 4-5 weeks of age, but the pullets receiving the Vaxxitek HVT+IBD had improved body weights at 10 and 15 weeks.

The laying results are summarised in the table below. The Vaxxitek group produced 3.88 more eggs per hen over 47 weeks of lay and these eggs were almost 1g heavier. Antibody titers were similar in both groups.

FRANCE	Intermediate vaccine	Vaxxitek HVT+IBD
Total eggs	65,564	66,464
Laying rate (%)	87.89	89.07
Mean egg weight (g)	62.78	63.77
Eggshell breaking force (N)	38.049	38.861



China

Hui Wei Xi from the Lihua Group in China reported on his company's evaluation of Vaxxitek HVT+IBD in coloured chickens which are slow growing – achieving 1.5-1.6kg in 50-55 days. Their evaluation was conducted in two divisions of the company and the results are summarised below. In the Siji division profit per bird improved by 0.36 RMB and in the Wujin Division it improved by 0.64 RMB per bird.

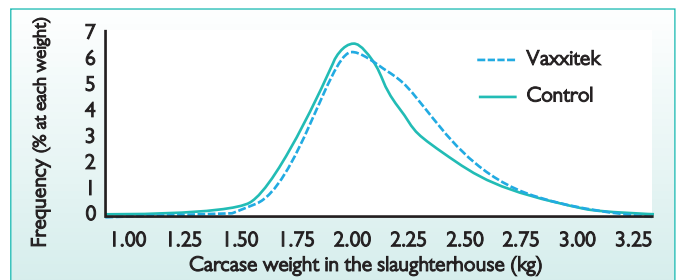
CHINA	Siji division			Wujin division		
	Control	Vaxx.	Variance	Control	Vaxx.	Variance
Livability (%)	94.1	95.2	+1.1	92.3	93.4	+1.0
Liveweight (kg)	1.57	1.61	+0.04	1.42	1.52	+0.10
FCR	2.30	2.30	-	2.34	2.30	-0.04
ADG (g/day)	29.39	30.27	+0.88	26.42	28.56	+2.14
EPI	123	128	+5	107	118	+11
Total medication cost (RMB)	0.43	0.25	-0.18	0.39	0.25	-0.14



Spain

Carlos Garcés reported on the effects of Vaxxitek HVT+IBD on production and quality parameters in Spanish broilers. The results indicated that the use of this vaccine resulted in better productivity than when the intermediate vaccine was used. This was reflected in better FCR and growing time to reach a similar weight at slaughter and it was thought that this was a consequence of positive effects on the bursae of Fabricius. Farms using Vaxxitek had better livabilities. The results are summarised in the table below and the distribution of slaughter weights is shown in the graph.

SPAIN	Intermediate vaccine	Vaxxitek HVT+IBD
No. of broilers	402,400	362,200
EPI	272.8	296.1
Age at kill (days)	47.02	44.92
Liveweight at kill (g)	2,800	2,731
ADG (g)	59.52	60.82
FCR	2.01	1.93
Mortality (%)	7.55	6.00



United Kingdom

Neville Pennington from Oaklands Farm Eggs Ltd described a situation on his 2.0 million layer operation in which chick quality and uniformity, clinical IBD and Marek's disease and variable egg production were issues of concern.

Vaccination with Vaxxitek HVT+IBD started in March 2010 and since then bird stress in rearing has been reduced as four live on farm vaccinations have been removed. Good, even body weights above breed standard have been achieved and overall bird health has improved. In lay productivity of >95% has been consistently achieved in the new enriched colony cage system which is well above breed target and at 67 weeks the flock's egg production is still above breed target.



Brazil

Irineu Dantes Peron from Copacol shared his experiences on the use of Vaxxitek HVT+IBD in Brazil. Copacol kills 96 million broilers a year from some 900 independent producers. Previously they had used two doses of intermediate IBD vaccine at seven and 14 days of age. Field vaccination had several drawbacks including defining the ideal age for vaccination, transportation and storage of vaccination and management of vaccination on the farm, whereas in ovo vaccination gave the company better control over the vaccination process, earlier immunity and lower risk of vaccination faults. However, this came at the cost of a greater investment being needed. In a comparative trial, Copacol evaluated Vaxxitek HVT+IBD in 3.6 million broilers against two doses of intermediate vaccine. The benefits achieved are shown in the table.

BRAZIL	Benefit
Mortality (%)	-0.087
FCR	-0.007
Daily weight gain (g)	+0.58
EPI (points)	+5