



Coccivac®-B vs. Nicarb + Narasin / Narasin: A Multi-farm Paired House Field Trial

Comparing the performance of Coccivac®-B directly to anticoccidial programs under true field conditions is problematic. Vaccinated birds must receive non-medicated feed while unvaccinated birds get feed with anticoccidials. At many integrators, the difficulties inherent in providing different feeds to birds on the same farm can doom a field trial to failure.

Fortunately, one top-ten integrator has successfully completed a multi-farm, paired-house trial comparing the performance of Coccivac-B to a nicarb + narasin/narasin shuttle program in heavy (7.5 lb) broilers. The trial involved four, 4-house farms for a

total of 16 houses. The integrator vaccinated two houses on each farm with Coccivac-B, and fed the remaining houses a nicarb + narasin/narasin anticoccidial shuttle (a standard company program).

Study Design

The integrator conducted the field trial on four 4-house broiler farms with standard house design and equipment. Ration formulation for the two treatments was consistent except for the following shown in Table 1.

Vaccination programs and field management protocol followed standard company guidelines. The integrator conducted this trial during the fall of 2002.

The integrator pooled results from the two houses comprising each treatment and processed each treatment separately. The processing plant reported standard performance parameters for each treatment. Table 2 summarizes the detailed processing report.

Post-Mortem Exam

Veterinarians from Schering-Plough Animal Health Corp. and a feed additive company conducted posting sessions on the 16 test houses at 4 weeks and 7.5 weeks of age. Lesion scores are summarized in Figure 1 and Figure 2.

All *E. maxima* scores were based upon microscopic observation. Most of the lesions were mild (+1 and +2) scores.

Key Points

- A top-ten integrator compared Coccivac®-B to a nicarb + narasin/narasin shuttle program in heavy broilers in a multi-farm, paired-house study.
- Coccivac-B-vaccinated flocks demonstrated better performance across all major production parameters compared to controls.
- The results clearly demonstrate that Coccivac-B can be successfully utilized in the long-term management of coccidiosis.

Table 1: Ration formulation: Coccivac®-B vs. control

	Starter	Grower	Finisher
Coccivac-B	Virginiamycin 20 g	Bacitracin Methylene Disalicylate 50 g 3-Nitro 34.5 g	Virginiamycin 10 g
Control	Nicarb+Narasin 62 g Bacitracin Methylene Disalicylate 50 g	Narasin 63 g 3-Nitro 22 g	Narasin 54 g 3-Nitro 22 g

Results and Discussion

Birds that received Coccivac-B and the ionophore shuttle program both demonstrated mild coccidial lesions at 4 weeks of age. The lesions had resolved by the second post-mortem exam, conducted at 7.5 weeks of age.

Vaccination did not appear to affect either the 7-day mortality or the overall livability compared to controls that received anticoccidials.

Coccivac-B-vaccinated flocks demonstrated better performance across all major production parameters compared to controls. Vaccinated birds demonstrated improvements in weight, feed conversion, caloric conversion and total cost per pound on an

averaged basis. When compared to controls, the vaccinated birds had:

- An average weight 9.6 points higher
- An average feed conversion 1.6 points lower
- An average caloric conversion 11 calories lower
- An adjusted caloric conversion 33 calories lower
- A standard cost per pound 0.17 cents lower

On a farm-by-farm basis, the Coccivac-B flocks outperformed (3 of 4) or were equivalent (1 of 4) to the performance of flocks that received anticoccidials for all significant parameters.

Figure 1

Figure 1: Lesion scores birds 25-29 days

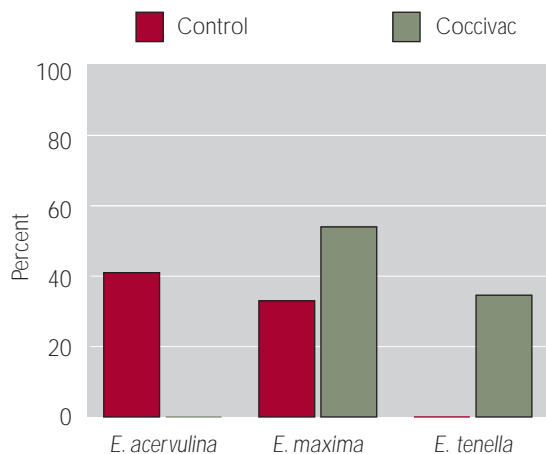
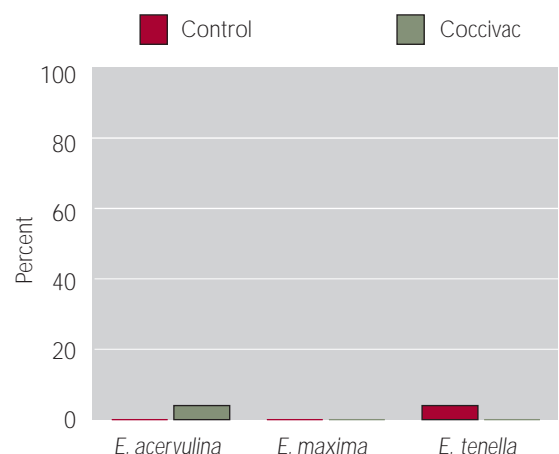


Figure 2: Lesion scores birds 51-55 days

Figure 2



Coccivac-B

Farm (1&2)	Date Sold	Age (days)	No. Started	7-Day Mort	% Liv	Gross lbs Sold	Avg. Weight	Feed Conv.	Cal Conv.	Cal Conv.*	ADG	Cost per lb
A-hs	11/18/02	60	44,400	0.586	97.31	330,170	7.642	2.057	2966	2932	0.127	.2053
B-hs	11/19/02	60.1	37,400	0.450	97.49	271,340	7.442	2.165	3122	2932	0.124	.2156
C-hs	11/19/02	60	37,400	0.969	96.62	284,406	7.871	2.125	3066	3139	0.131	.2110
D-hs	11/21/02	59	37,400	0.740	97.90	275,993	7.538	2.046	2950	2942	0.128	.2041
Total or average		59.8	156,600	0.681	97.33	1,161,909	7.623	2.096	3022	2994	0.128	.2088

Table 2: Summary of performance: Coccivac-B vs. control

Nicarb + Narasin/Narasin

Farm (3&4)	Date Sold	Age (days)	No. Started	7-Day Mort	% Liv	Gross lbs Sold	Avg. Weight	Feed Conv.	Cal Conv.	Cal Conv.*	ADG	Cost per lb
A-hs	11/18/02	60	44,400	0.578	97.40	321,390	7.432	2.079	2996	3012	0.124	.2078
B-hs	11/19/02	60.1	37,400	0.426	97.23	268,035	7.371	2.168	3126	3158	0.123	.2161
C-hs	11/19/02	60	37,400	0.772	97.34	286,506	7.870	2.124	3067	2978	0.131	.2108
D-hs	11/21/02	59	37,400	0.644	97.92	272,893	7.452	2.082	2950	2962	0.126	.2080
Total or average		59.8	156,600	0.604	97.47	1,148,824	7.527	2.112	3033	3027	0.126	.2105
Coccivac Advantage		0	0	0.077	-0.14	13,085	0.096	-0.016	-11	-33	.002	-.0017

Conclusion

This multi-farm, paired-house study clearly demonstrates that Coccivac-B can be successfully utilized in the long-term management

of coccidiosis with comparable or improved performance as compared to an ionophore anticoccidial program.

