



Coccivac®-T Field Results in Toms, Heavy Hens and Light Hens

Introduction

Coccivac®-T is a live coccidiosis vaccine containing sporulated oocysts of *Eimeria dispersa*, *E. meleagrimitis*, *E. adenoides* and *E. gallopavonis* that is administered to turkey poults via spray cabinet at 1 day of age. The strains of *Eimeria* in Coccivac-T were isolated prior to common use of modern ionophore and chemical anticoccidial products and are highly sensitive to all in-feed anticoccidials. Researchers have shown that vaccination with Coccivac-T repopulates anticoccidial-resistant turkey facilities with sensitive strains, renewing the efficacy of in-feed anticoccidials in subsequent flocks.¹

The advantages of a coccidiosis vaccination program in terms of product cost, feed mill efficiency and repopulation of the facilities

with anticoccidial-sensitive *Eimeria* are widely known. Pen trials have demonstrated that turkey weight gain and feed efficiency are equivalent between Coccivac-T vaccinates and birds fed ionophore anticoccidials. The following data were collected from a large-scale field trial involving light hens, heavy hens and toms at a large integrator.

Coccivac-T Field Performance

A large, integrated turkey company vaccinated all started hens and toms with Coccivac-T for an 18-week period. Simultaneously, they conducted a paired-house study of 11.5 lb (5.25 kg) light hens to compare the performance of Coccivac-T vaccinates to birds on a conventional ionophore program.

Study Design: Tom Performance Comparison

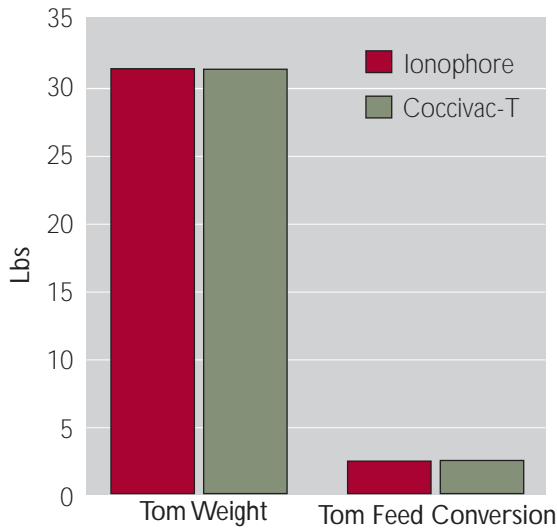
This was not a controlled study. Field results were recorded from all flocks processed on the standard company performance spreadsheets. Field results were difficult to compare, as flocks were processed at highly variable ages. Toms were compared as follows: Feed conversions and weights were compared for similar weight flocks processed just before and just after the transition to Coccivac-T. Individual tom flocks were compared against prior year performance of the same farm in the same season, when paired flocks of comparable age could be matched. Results are summarized in Figures 1 to 3.

Key Points

- Coccivac®-T performance (weight gain and feed conversion) was identical to ionophores at all processed turkey weights:
 - 12 lb light hens
 - 18 lb heavy hens
 - 30+ lb toms
- Coccivac-T is a viable option to ionophores for coccidiosis control in all turkey weights.

Figure 1

Comparison of Tom Weight and Feed Conversion Before and After the Transition to a Coccivac-T Program

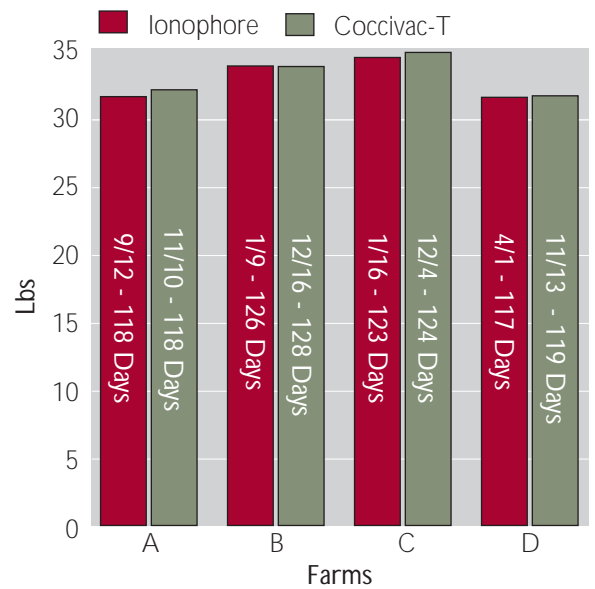


Ionophore: 109,045 toms processed Sept/Oct
Coccivac-T: 122,940 toms processed Nov/Dec

Figure 2

Tom Comparison: Weights (lbs) by Farm (Coccivac-T vs Ionophore in Prior Year)

Figure 2



First number is processing date. Second number is age at processing.

Discussion and Conclusion: Tom Performance Comparison

The overall averages for tom weight gain and feed conversion just before and just after the transition from ionophore to the Coccivac-T program remained identical.

On an individual flock basis, comparing individual farms to prior year performance, the weights and average daily gain were

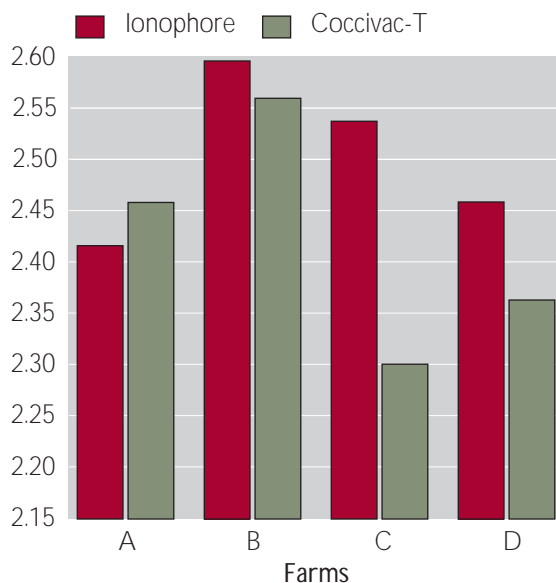
equivalent. Feed conversions were variable, but were lower for Coccivac-T in 3 of the 4 flocks. Since the individual flock parameters are being compared from one year to the next, our conclusion can only be that results are similar for ionophore and Coccivac-T on each of these farms.

Coccivac-T resulted in a performance similar to those of ionophore anticoccidial programs in tom turkeys.

Figure 3

Tom Comparison: Feed Conversion by Farm (Coccivac-T vs Ionophore in Prior Year)

Figure 3



Study Design: Heavy Hen Performance Comparison

This was not a controlled study. Field results were recorded from all flocks processed on the standard company performance spreadsheets. Field results were difficult to compare, as flocks were processed at highly variable ages. Hens were compared as follows: Feed conversions and weights were compared between similar weight flocks processed just before and just after the transition to Coccivac-T (Figure 4). No individual farm data could be compared among hens; the processing age and weights could not be compared to those of the prior year.

Discussion and Conclusion: Heavy Hen Performance Comparison

The overall averages for heavy hen weight gain and feed conversion just before and just after the transition from ionophore to the Coccivac-T program remained identical.

Coccivac-T resulted in a performance similar to that of ionophore anticoccidial programs in heavy hens.

Study Design: Light Hen Performance Comparison

Light hens were directly compared on a single farm with paired houses. All flocks were processed between August and December, with a total of 79,734 birds processed from ionophore programs and 73,036 birds processed from the Coccivac-T program. Results are summarized in Figure 5.

Discussion and Conclusion: Light Hen Performance Comparison

This paired-house study was the most direct comparison of the performances of Coccivac-T and the ionophore program. The flocks were processed from the same farm, on the same rations, in the same season of the year. Coccivac-T flocks had higher weights and

Figure 4

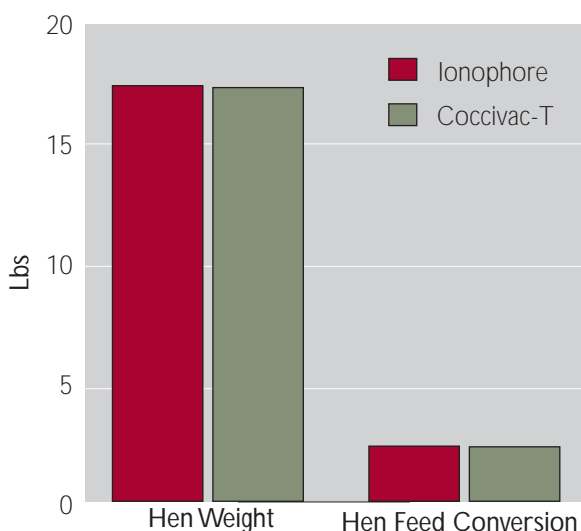


Figure 5

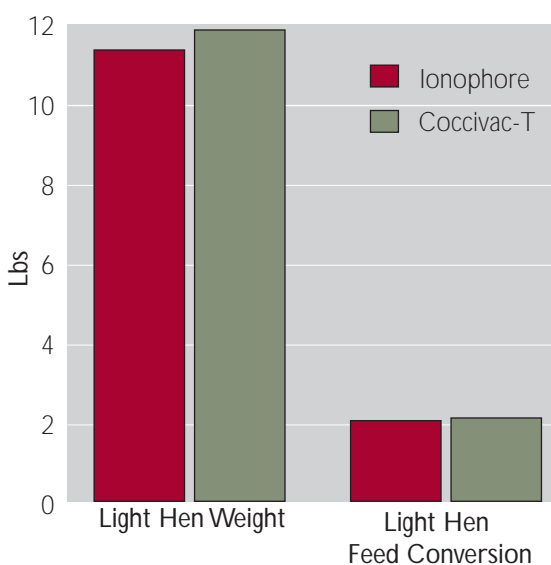


Figure 4

Comparison of Heavy Hen Weight and Feed Conversion Before and After the Transition to a Coccivac-T Program

Figure 5

Comparison of Light Hen Weight and Feed Conversion Before and After the Transition to a Coccivac-T Program

slightly higher feed conversions than the ionophore flocks.

Coccivac-T resulted in a performance similar to that of ionophore anticoccidial programs in light hens.

Final Conclusion

Coccivac-T performance was similar to that of ionophores in each of the turkey sizes: 12 lb light hens, 18 lb heavy hens or 30 + lb toms. There were no significant differences in weight, feed conversion or average daily gain for each of the three turkey sizes as determined by field performance results from this integrator.

Coccivac-T is a viable option to traditional ionophore programs in all turkey sizes. Vaccination can be used as a year-round coccidiosis control program or in a rotational program, as part of a long-term strategy to maintain the efficacy of in-feed anticoccidials.

References

¹ Mathis GF, McDougald LR. Restoration of drug sensitivity on turkey farms after introductions of sensitive coccidia during controlled-exposure immunization. *Coccidia and intestinal coccidiomorphs. Fifth International Coccidiosis Conference*, 1989; 343-399.