

# Technical Bulletin

## Comparison of the performance of coccidiostat programs in coccidiosis challenged broilers

### Focus

Floor pen trial conducted at IMASDE, Spain (2013).  
Comparison of the performance of different commercial coccidiostat programs in broilers when challenged with coccidiosis.

### Factbox

- 5 treatments, 9 replicate pens each with 22 birds (ROSS 308).
- Besides the control groups (Uninfected Untreated Control and Infected Untreated Control) 3 different coccidiostat programs were compared:
  - Program 1. **Sacox®** (salinomycin, 60 ppm) from day 1- day 33
  2. EU registered **narasin/nicarbazin** (50/50 ppm) from day 1- day 21, followed by EU registered **narasin** (70 ppm) from day 22- day 45
  3. EU registered **narasin/nicarbazin** (50/50 ppm) from day 1- day 21, followed by **Coxidin®** (monensin, 100 ppm) from day 22- day 33
- Birds were experimentally infected at the age of 15 days with coccidiosis isolates of *Eimeria acervulina* and *E. tenella* from a Spanish integration (collection of strains in 2013).
- Parameters evaluated: mortality, weight gain and FCR from day 1-day 45, lesion scores according to Johnson and Reid 6 days and 14 days after challenge.

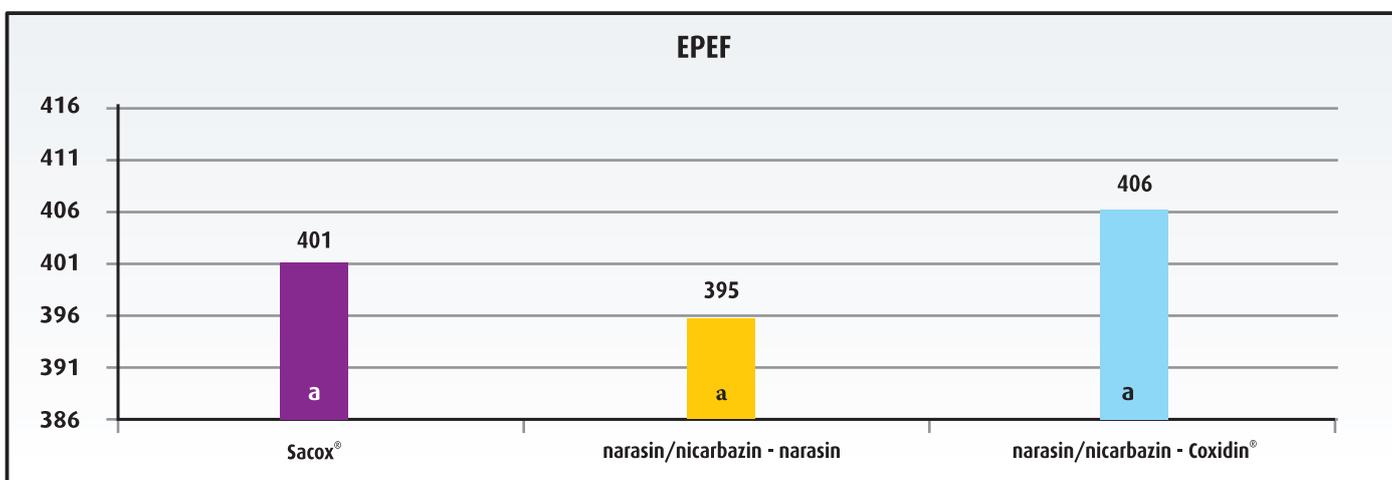
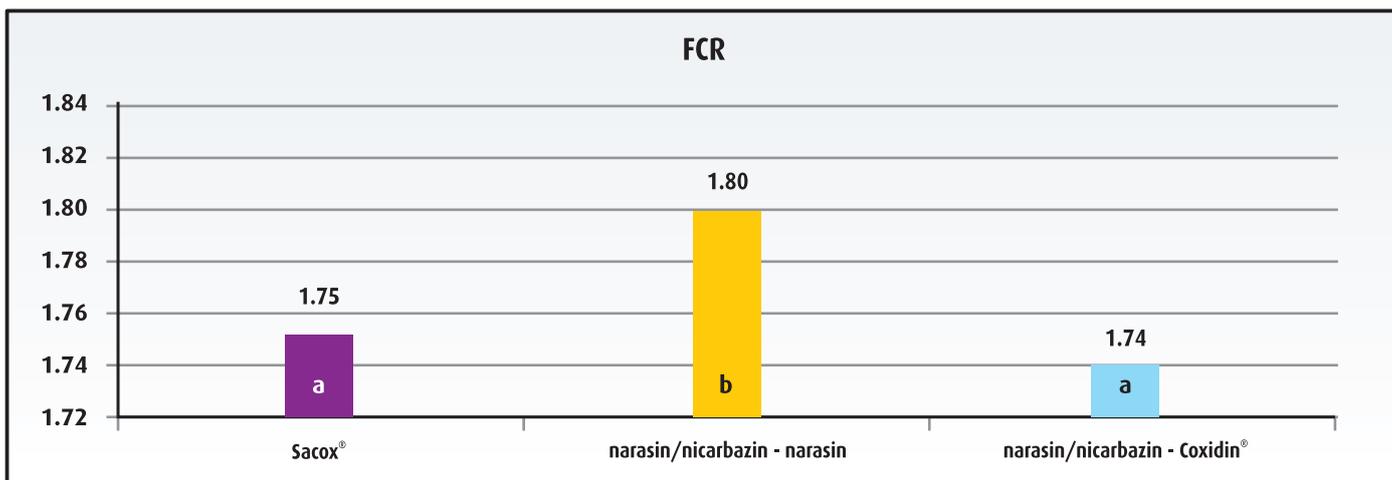
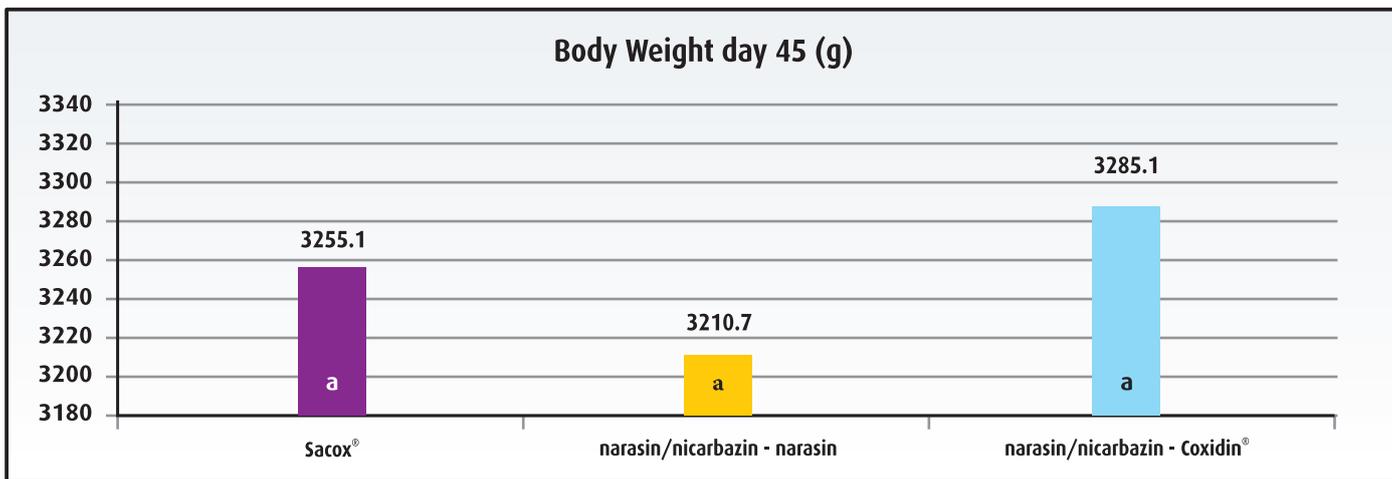
### Results

- Experimental challenge resulted in significant lower weight, higher feed conversion and higher coccidiosis lesions in the Infected Untreated Control group compared to the Uninfected Untreated Control group.
- Total Mean Lesion scores were, both on day 21 and day 28, low (<1) in all groups receiving coccidiostats in the feed.

Group	Body weight at d45 (g)	FCR d1-d45	EPEF**
<b>Sacox® (1-33)</b>	<b>3255.1<sup>a</sup></b>	<b>1.75<sup>a</sup></b>	<b>401<sup>a</sup></b>
narasin/nicarbazin (1-21)- narasin (22-45)	3210.7 <sup>a</sup>	1.80 <sup>b</sup>	395 <sup>a</sup>
narasin/nicarbazin (1-21)- Coxidin® (22-33)	3285.1 <sup>a</sup>	1.74 <sup>a</sup>	406 <sup>a</sup>

$$\text{*European Poultry Efficiency Factor} = \frac{\text{liveweight (kg)} \times \text{liveability (\%)} \times 100}{\text{age at slaughter (days)} \times \text{FCR}}$$

\* Different letters indicate significant differences with p<0.01.



### Conclusions

- The 3 tested commercial coccidiostat programs were able to control coccidiosis, but clear differences in performance were noticed between the different programs with:  
 narasin/nicarbazin (1-21)- Coxidin® (22-33) > Sacox® (1-33)  
 > narasin/nicarbazin (1-21) - narasin (22-45)
- Despite a 12 day longer inclusion of narasin in the finisher feed, the program Sacox® (1-33) shows, in comparison with the program narasin/nicarbazin (1-21) - narasin (22-45):
  - \* a numerical better final weight and EPEF
  - \* a significant lower FCR (5 points)
- Using Sacox® in starter and grower feed only is a safe and economical way to control coccidiosis and increase farm profitability.