

NUMBER 3

USING ECONOR[®] TO ERADICATE SWINE DYSENTERY

INTRODUCTION The efficacy of Econor[®] (valnemulin) was evaluated for eradication of swine dysentery on a 90-sow Danish farm.¹

Previously, blanket medication with a combination of other antimicrobials, thorough cleaning and removal of fattening pigs failed to eliminate the disease, which is caused by *Brachyspira hyodysenteriae*. Dysentery was controlled by the use of high concentrates of tiamulin (up to 200 ppm).

Hygiene on the farm was a problem. Pigs were fattened in straw-bedded pens, each with about 40 animals. Although dung was pushed from fattening pens into a central channel, straw in pens made thorough removal difficult. Home-reared gilts were housed in straw-bedded, solid-floored pens, but dry sows, boars and sows for service were in pens with slatted areas. In addition, buildings on the farm were old and had numerous cracks that could house disease.

Four-Phase Trial

During Phase 1 of the trial, pigs larger than 15 kg were moved off the farm to reduce contamination and provide a clean area later during the trial where medicated pigs could be housed. Pigs with clinical signs of dysentery were treated with tiamulin injections.

Phase 2 focused on thorough cleaning and disinfecting. Slurry tanks were emptied and their contents were taken off site. Sows, boars and weaned piglets received Econor for 2 weeks at the rate of 5 mg/kg bodyweight. Unweaned piglets received tiamulin injections of 10 mg/kg bodyweight once weekly. At the end of Phase 2, pigs were moved into clean pens that had been free of pigs for at least 2 to 3 weeks.

Cleaning continued during Phase 3 and the dosage of Econor was gradually reduced. Pigs received Econor for 2 weeks at the rate of 2.5 mg/kg bodyweight and then for 3 more weeks at the rate of 1.25 mg/kg bodyweight.

During Phase 4, medication ceased and pigs were periodically monitored for the presence of disease. Follow-up continued for over 1 year.

Results

- > Swine dysentery was not recorded, nor did signs of the disease appear.
- > Further medication with tiamulin was not necessary.
- > Productivity of the sow herd improved. During the pre-eradication period, it was 21.6 pigs per sow per year, compared to 22.7 during the last post-eradication period.

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KEY POINTS

- > Econor coupled with improved farm hygiene and management changes eliminated swine dysentery from a Danish herd.
- > Sow productivity and daily live weight gain improved.
- > Mortality declined among weaned pigs.
- > Medication costs on the farm dropped an astounding 80%.

Table 1
Pre- and Post-Eradication Results

	Pre-Eradication	Post-Eradication	
	1/7/96 to 30/9/96	1/10/96 to 31/12/96	1/1/97 to 31/3/97
No. of pigs produced/sow/year	21.6	22.5	22.7
% mortality after weaning	5.3	2.2	3.2
Daily weight gain	367	374	429
Cost of medicines (D.Kr.) 1/4/96 to 30/6/96	11,058		2,249

> Mortality after weaning dropped from 5.3 during pre-eradication to 3.2 during the post-eradication period.

> Daily live weight gain improved from 367 g during the pre-eradication period to 429 g during the last post-eradication period.

> The cost of medicines previously necessary to control swine dysentery dropped by 80%, from 11,058 to 2,249 D.Kr. (1,437 to 292 EURO).

Researchers' observations: "There is no doubt that the programme successfully eradicated swine dysentery from this farm.

The importance of thoroughness in the disinfection and cleaning process cannot be overemphasized. Removal of older piglets and dung were important factors in reducing potential contamination and reinfection."

SUMMARY The use of Econor coupled with improved hygiene and management changes on a Danish farm successfully eradicated swine dysentery from pigs, yielding improved performance and a dramatic reduction in medication costs.

For more information on this study, please contact your local Novartis Animal Health representative or Dr. Ulrich Klein at ulrich.klein@ah.novartis.com.

REFERENCE

¹ Dall J, Hansen K.K. and Ripley PH. The use of Econor in the eradication of swine dysentery from a farm in Denmark. *The 15th International Pig Veterinary Society Congress*. 1998.