

LOWER MORTALITY, REDUCED
LUNG LESIONS, INCREASED ROI,
EXCEDE[®] EXPECTATIONS FOR 7 DAYS

EXCEDE



EXPECTATIONS

Comparison of the duration of efficacy of
Excede versus Baytril® 100 in an
Actinobacillus pleuropneumoniae
challenge model in swine

EXCEDE® FOR SWINE
(Ceftiofur Crystalline Free Acid)
Sterile Suspension

IMPORTANT SAFETY INFORMATION: People with a known hypersensitivity to penicillin or cephalosporins should avoid exposure to EXCEDE. Do not use in swine found to be hypersensitive to the product. Pre-slaughter withdrawal time is 14 days following the last dose.

See full Prescribing Information at: https://www.zoetisus.com/_locale-assets/mcm-portal-assets/products/pdf/us_en_x2_compliance.pdf

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EXCEDE EXPECTATIONS



**Bacterial infections can endure for days.
That's where EXCEDE goes the distance and
Baytril® falls short.**

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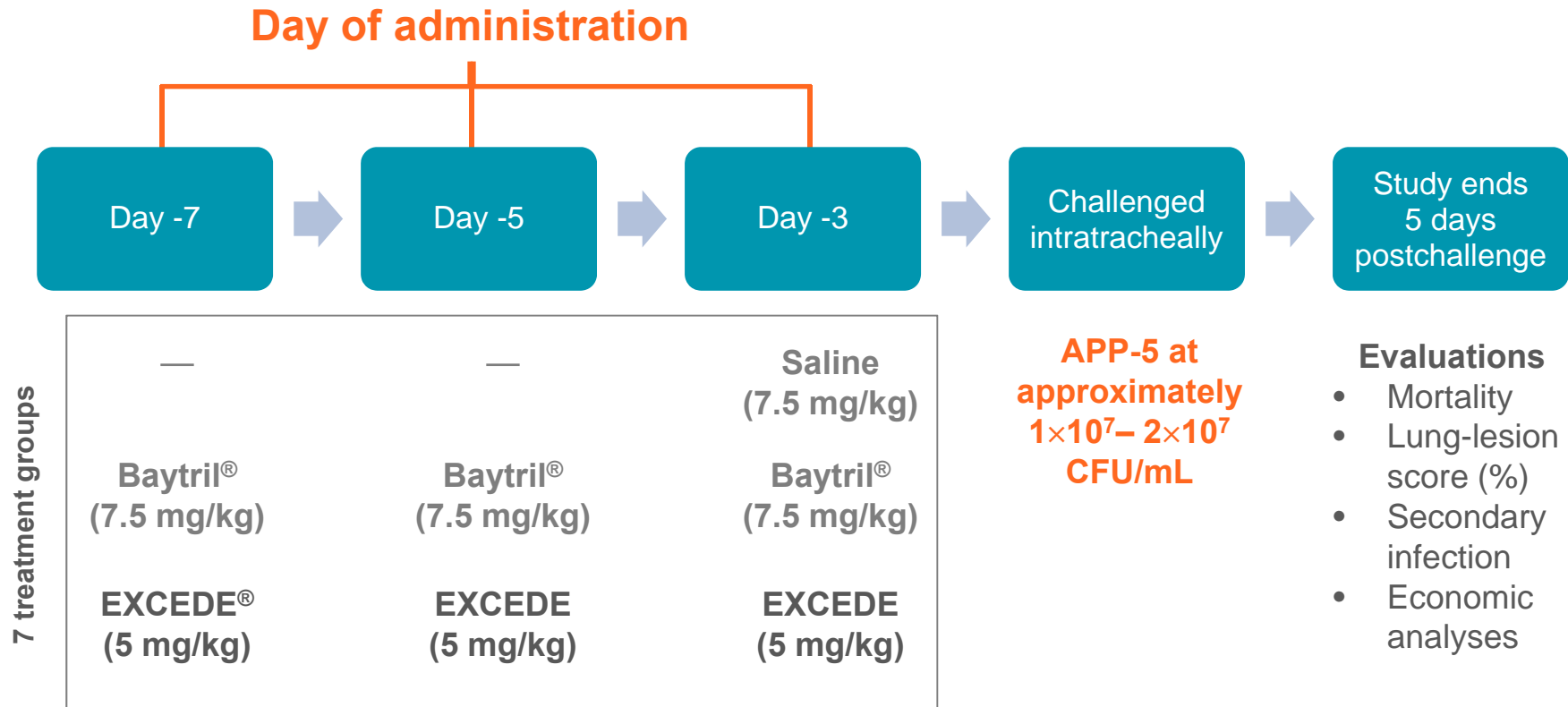
STUDY OBJECTIVE & EVALUATIONS

Objective:

Evaluate duration of efficacy of EXCEDE[®] and Baytril[®] in an *Actinobacillus pleuropneumoniae* serotype 5 (APP-5) intratracheal challenge model in swine

- The APP-5 challenge strain was susceptible to both EXCEDE and Baytril[®]
- Primary assessment variables: mortality and total lung-lesion score (%)
- Additional laboratory assessment: efficacy treating secondary *Streptococcus suis* infection
- Financial analyses: estimation on ROI with treatment

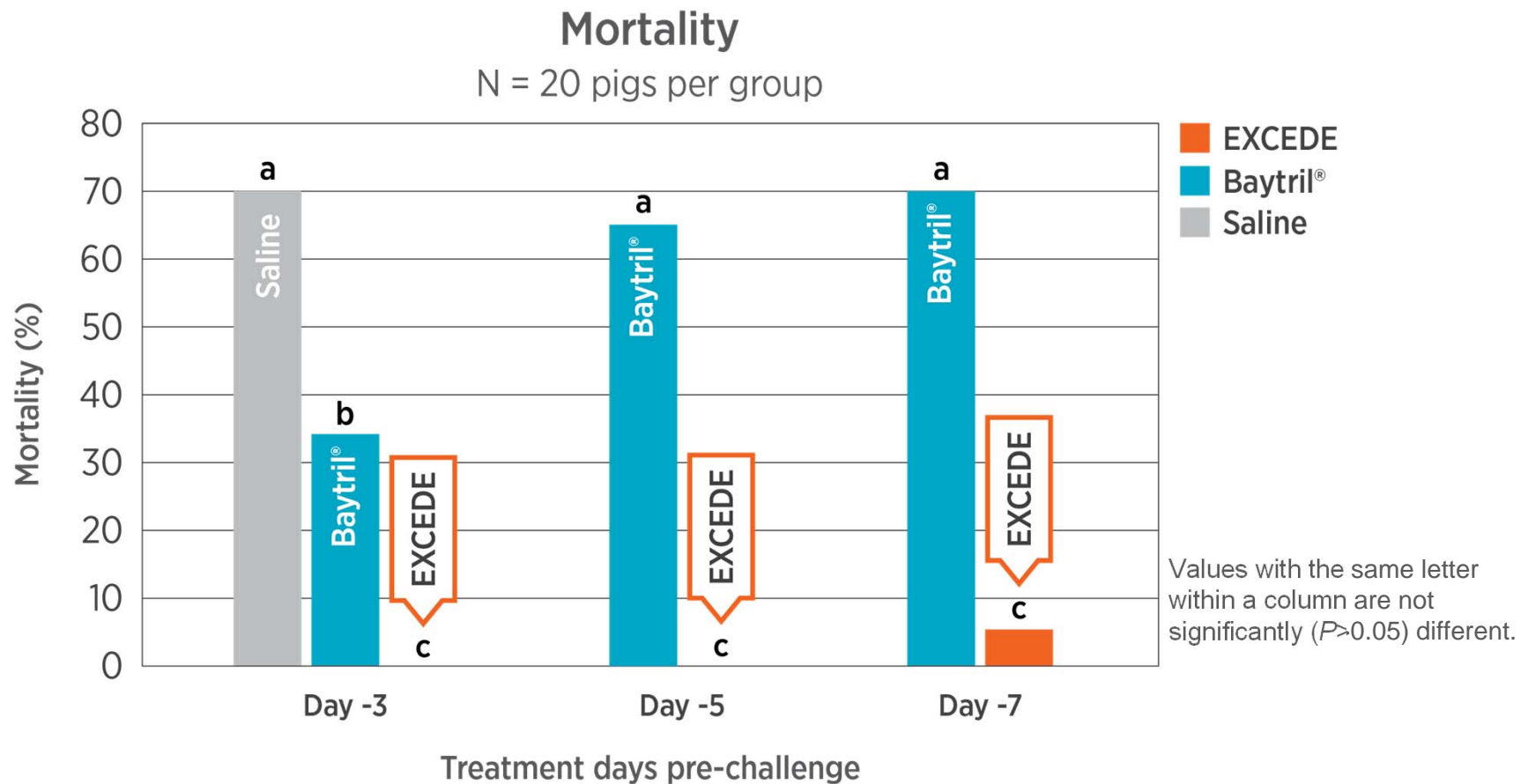
STUDY DESIGN



20 pigs each in the EXCEDE and Baytril® groups treated on Days -7, -5, and -3.
20 pigs in the saline group treated on Day -3.
Each group received a single dose of medication or saline.
All medications were given according to labels.

EXCEDE® EXPECTATIONS WITH... SIGNIFICANTLY LOWER MORTALITY RATES

EXCEDE significantly outperformed Baytril®, providing up to 7 full days of protection

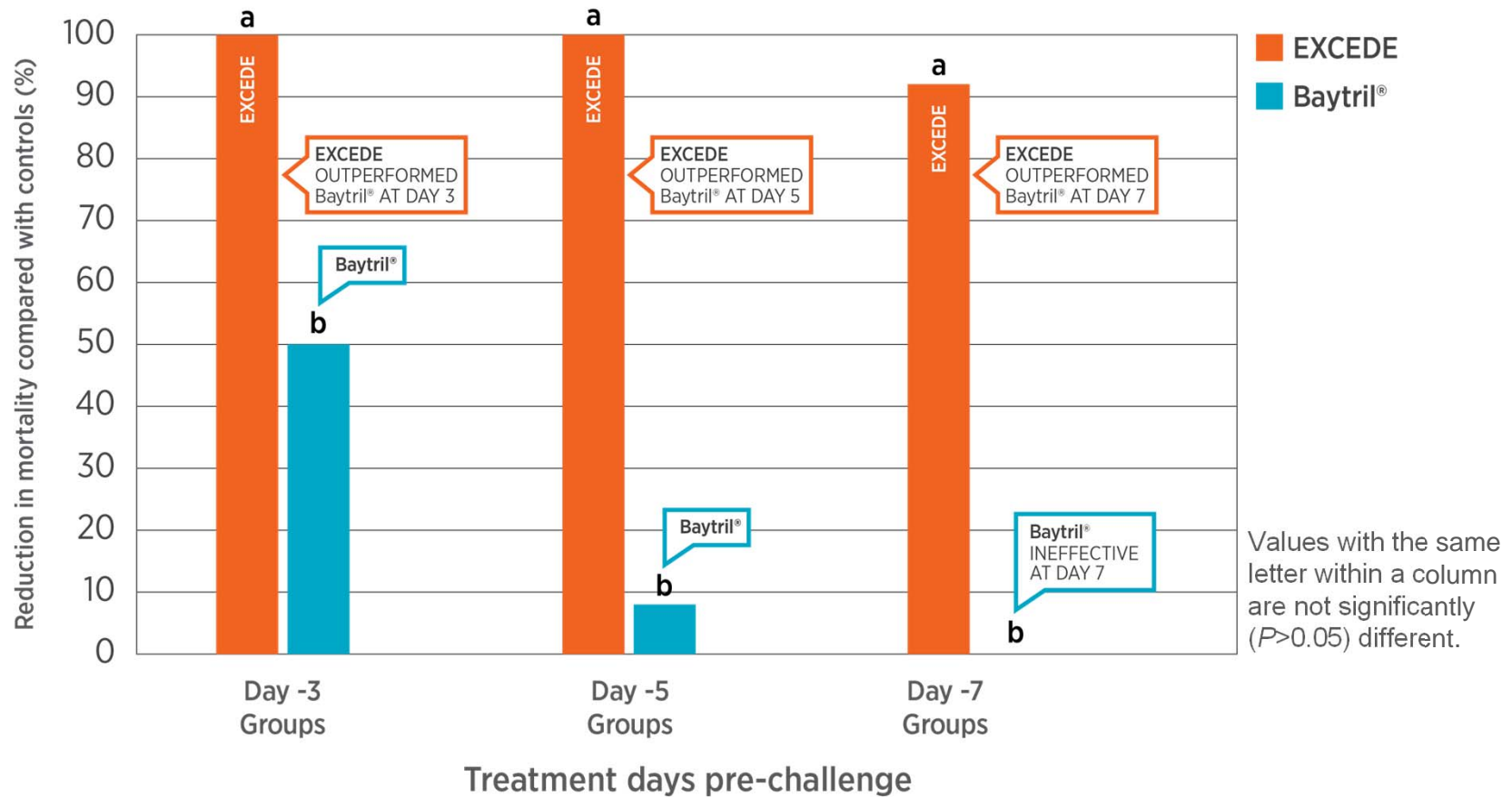


Reference: Data on file: Study report no. ORPORK 2030, Zoetis Inc.

EXCEDE® EXPECTATIONS WITH... SIGNIFICANTLY IMPROVED SURVIVAL vs BAYTRIL®

EXCEDE significantly outperformed Baytril®, providing up to 7 full days of protection

Mortality Reduction



Reference: Data on file: Study report no. ORPORK 2030, Zoetis Inc.

EXCEDE® EXPECTATIONS WITH... SIGNIFICANT REDUCTION IN LUNG LESIONS

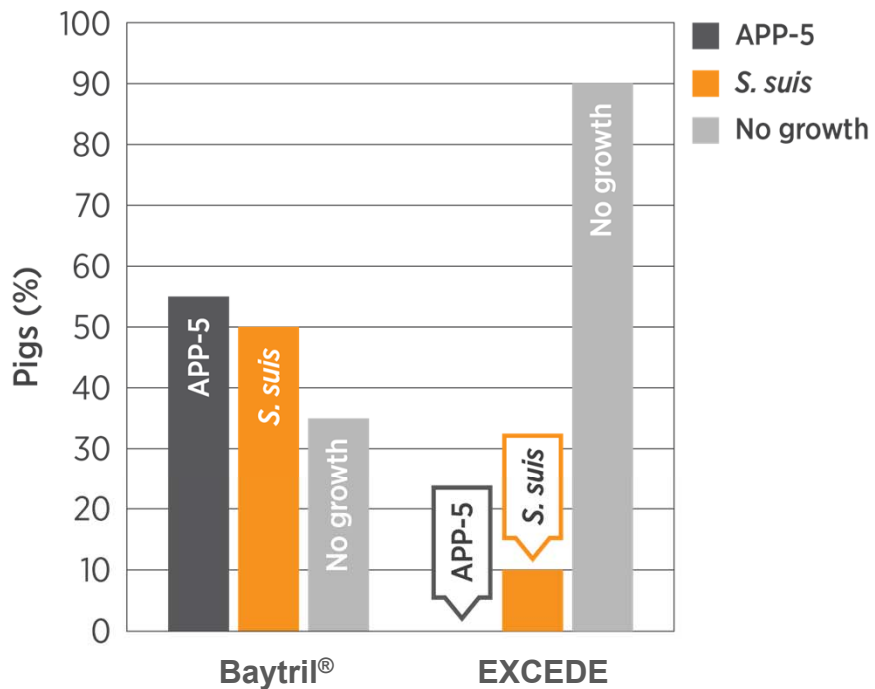
Demonstrated protection
against lung lesions:

- **99.8% reduction relative to Baytril® (Day -3 groups)**
- **99.3% reduction relative to Baytril® (Day -5 groups)**
- **93.4% reduction relative to Baytril® (Day -7 groups)**

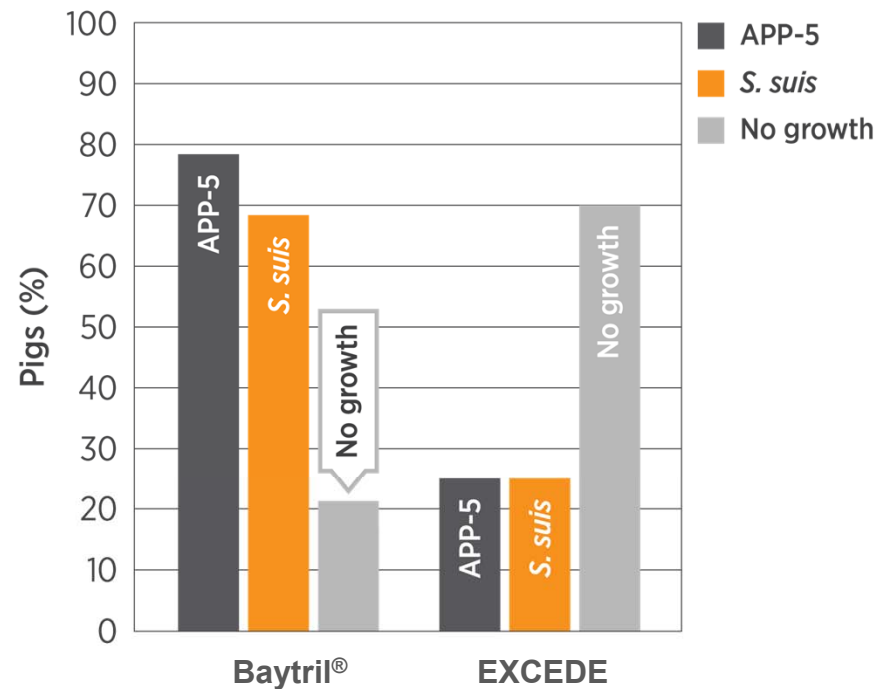
Treatment	Back-transformed mean lung lesion (%)	Reduction compared with controls (%)
Saline-3	31.57%	0.00%
Baytril®-3	17.61%	45.00%
Baytril®-5	39.78%	0.00%
Baytril®-7	38.29%	0.00%
EXCEDE-3	0.03%	99.90%
EXCEDE-5	0.27%	99.00%
EXCEDE-7	2.50%	92.00%

EXCEDE® EXPECTATIONS WITH... SUPERIOR CONTROL OVER APP & *S. suis* FOR 7 FULL DAYS

1 single shot of EXCEDE provided superior protection against bacterial growth, including APP and *S. suis*



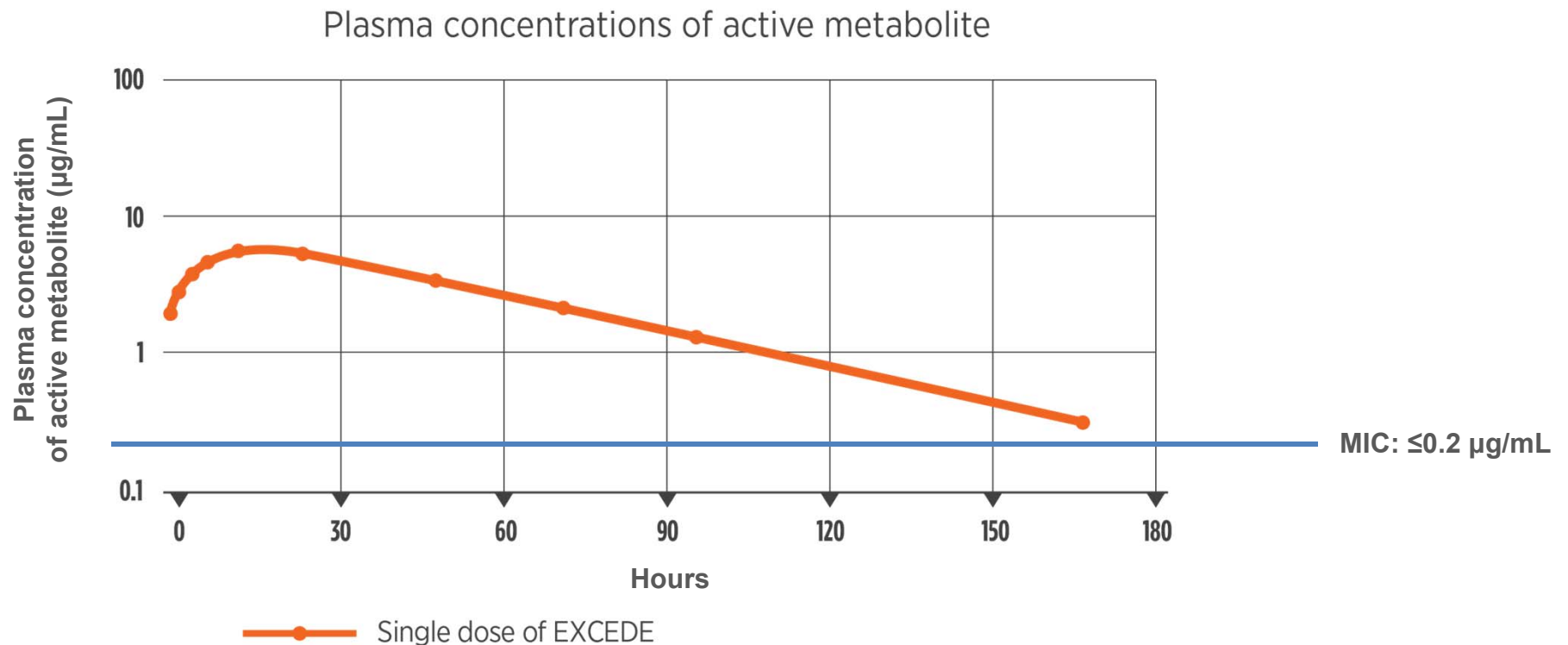
- 10% bacterial growth vs 55% and 50% incidence of APP and *S. suis* with Baytril® (Day -3 Groups)



- ~3x less bacterial growth and ~3x more protection (Day -7 Groups)

EXCEDE® EXPECTATIONS WITH... PLASMA CONCENTRATION REACHED WITHIN 1 HOUR AND LASTING FOR 7 FULL DAYS

EXCEDE has been clinically proven to provide 7 full days of therapeutic plasma levels with a single dose



Reference: Data on file: Study report no. 1121R-60-04-215, Zoetis Inc.

ASSUMPTIONS FOR THE ROI ANALYSIS

1. 1200-head wean-to-finish barn
2. 10% infected with APP (120 at risk for death)
3. Antibiotic treatment for all 1200 head
4. Weaned pig cost = \$35/piglet
5. Feed cost is \$0.15/lb for 10 lb consumed to time of death
6. Lost profit per piglet: \$20
7. Average weight when treated with antibiotic: 32 lb
8. Drug costs at 32 lb:
 - Baytril[®]: \$0.5
 - Used Bayer product in study but used generic pricing for economic analysis
 - EXCEDE[®]: \$1.00
9. Labor cost: \$0.10/injection

EXCEDE® VS BAYTRIL® APP CHALLENGE ROI ANALYSIS

	No Treatment		Baytril®		EXCEDE	
			Day -3	Day -7	Day -3	Day -7
Expected deaths		84	42	90	0	6
Weaned pig losses		\$ 2,940.00	\$ 1,470.00	\$ 3,150.00	\$ -	\$ 210.00
Feed cost losses		\$ 126.00	\$ 63.00	\$ 135.00	\$ -	\$ 9.00
Lost profit		\$ 1,680.00	\$ 840.00	\$ 1,800.00	\$ -	\$ 120.00
Drug costs		\$ -	\$ 600.00	\$ 600.00	\$ 1,200.00	\$ 1,200.00
Labor costs		\$ -	\$ 120.00	\$ 120.00	\$ 120.00	\$ 120.00
Total losses		\$ 4,746.00	\$ 3,093.00	\$ 5,805.00	\$ 1,320.00	\$ 1,659.00

	No treatment loss	Baytril® avg loss	EXCEDE avg loss
	\$4,746.00	\$4,449.00	\$1,489.50
Reduction in losses (%)	0.00%	6.26%	68.62%
Reduction in losses (\$)	\$0.00	\$297.00	\$3,256.50

ROI
Baytril® = 0.5
EXCEDE = 2.7

Comparing best and worse cases for Baytril® and EXCEDE for economics. Day -5 would be in the middle of those groups

Five times greater return on investment than Baytril®

Increase in revenue per marketed pig as compared to controls:
 Baytril® = \$0.33/pig
 EXCEDE = \$3.00/pig

Reference: Data on file: Study report no. ORPORK 2030, Zoetis Inc.



EXCEDE[®] EXPECTATIONS WITH... 7 FULL DAYS OF PROTECTION THAT INCREASES ROI

EXCEDE can help reduce potential loss of profit with 7 full days of protection against a broad range of pathogens. 1 single shot can provide:

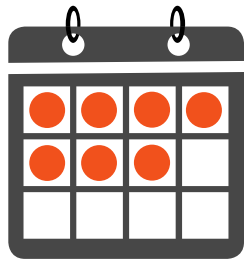


Reference: Data on file: Study report no. ORPORK 2030, Zoetis Inc.

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EXCEDE® EXPECTATIONS WITH... SUPPORT THAT PROTECTS AND PROPELS YOUR BUSINESS

What can you expect from EXCEDE?



- 7 full days of protection—significantly superior to Baytril®



- 1 single shot, with effective plasma levels within 1 hour



- Reduced mortality and increased ROI

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- Support from industry-leading Zoetis technical service experts, with diagnostic tools to help you propel your business

References: Data on file: Study report no. ORPORK 2030, Zoetis Inc. Study report no. 1121R-60-04-215, Zoetis Inc.

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