



## Entegard® IMPROVES THE HEALTH AND GROWTH PERFORMANCE OF LIVESTOCK

### ➤ GUT BENEFITS

- Entegard® IMPROVES GUT VILLI HEIGHT
- Entegard® IMPROVES GUT CRYPT DEPTH
- Entegard® IMPROVES GUT BARRIER FUNCTION
- Entegard® IMPROVES NUTRIENT ABSORPTION
- Entegard® IMPROVES GUT SURFACE AREA
- Entegard® SUSTAINS A HEALTHY SMALL INTESTINE MICROBIOTA

### ➤ ADVANTAGES

- ANTIBIOTIC-FREE
- HIGHER ACCEPTANCE FROM CONSUMERS, HIGHER PRICE PAID
- KEY ACTIVE INGREDIENT IS NATURAL SOURCE LYSOZYME
- LYSOZYME FOR ENTEGARD® IS PRODUCED UNDER EUROPEAN STRICT QC & QA
- ACCESS PREMIUM MARKETS
- EXPORT TO EUROPE WHERE IMPORTS MUST BE RWA<sup>2</sup>
- MARKET OF RWA<sup>2</sup> MEAT IS GROWING IN ASIA RAPIDLY
- ENTEWARD® WS DELIVERS WATER ACIDIFICATION TO OPTIMUM LEVELS

### ➤ BENEFITS IN SWINE PRODUCTION

- HEALTHY, AND STRONG RWA<sup>2</sup> SWINE IN ABF ENVIRONMENT:
- ENHANCES PIGLETS GROWTH PERFORMANCE
- IMPROVES FEED EFFICIENCY BY 7-8%
- TREATS AND PREVENTS PIGLET DIARRHEA
- REDUCES PATHOGEN SHEDDING AND BLOOD UREA LEVELS
- IMPROVED GROWTH RATE AND WEIGHT GAIN PERFORMANCE
- INCREASED LITTER SIZE AND BIRTH WEIGHT
- INCREASED SOW MILK PERFORMANCE
- INCREASED SEMEN PRODUCTION
- INCREASED TOP QUALITY RWA<sup>2</sup> MEAT PRODUCTION

1. Feed Conversion Ratio  
2. Raised without antibiotics / antibiotic-free

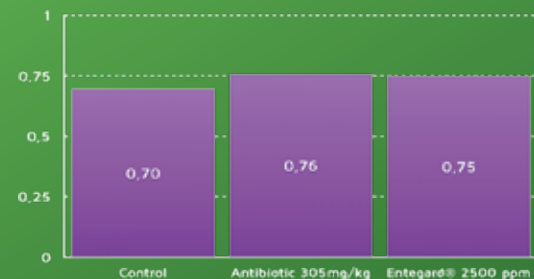
### ➤ GUT CRYPT DEPTH IMPROVEMENT



### ➤ ACTIVITY IN VITRO

BACTERIA	MIC - PPM3
Escherichia coli ETEC	78-312
Escherichia coli K883	78-312
Clostridium perfringens type C	31-62.5
Pasteurella multocida	250
Bordetella bronchiseptica	250
Actinobacillus pleuropneumonia	125
Clostridium difficile	31

### ➤ FEED EFFICIENCY | Entegard®





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### ➤ ANTIBACTERIAL ACTIVITY

Entegard® provides activity against bacterial challenges in standard or ABF operations:

Entegard® BREAKS DOWN THE CELL WALL OF BACTERIA

Entegard® INFLUENCES AND REDUCES BACTERIAL POPULATION

Entegard® IS THE IDEAL ALTERNATIVE TO ANTIBIOTICS



### ➤ IMMUNOMODULATOR ACTIVITY

Entegard® improves overall swine health preventing antibiotic resistance risk:

Entegard® Lyses the cell wall of bacteria

Entegard® Promotes clearance of microbial debris

Entegard® Reduces gut inflammation in swine

### ➤ EASY TO USE THROUGH WATER OR FEED, PRODUCT FORMS:

Entegard® WS |   
 WATER SOLUBLE

Entegard® PLUS |   
 FEED



Source: Letters in Applied Microbiology 42 (2006) 138-145

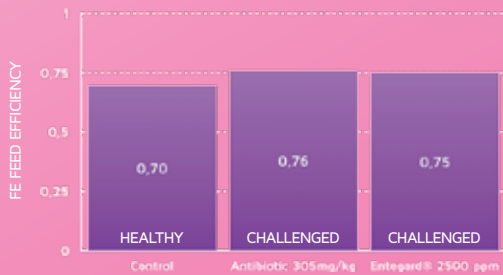




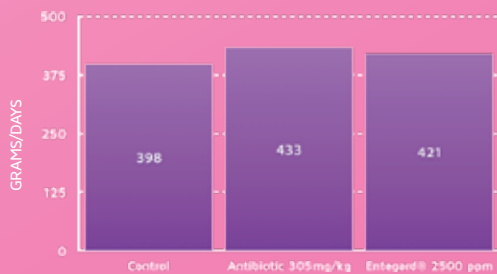
# Entegard® IMPROVES THE HEALTH AND GROWTH PERFORMANCE OF LIVESTOCK

## ► TRIALS EVIDENCE I

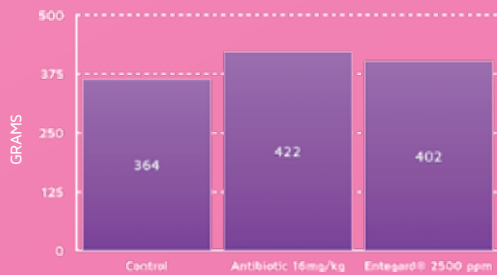
### SIMILAR FEED EFFICIENCY ENTEGARD® VS ANTIBIOTICS



### STRONG AVERAGE DAILY WEIGHT GAIN 24-52 days

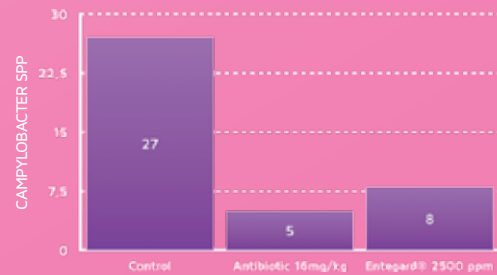


### FAST AVERAGE DAILY GAIN | Grams

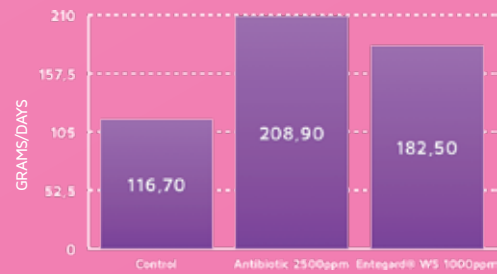


## ► TRIALS EVIDENCE II

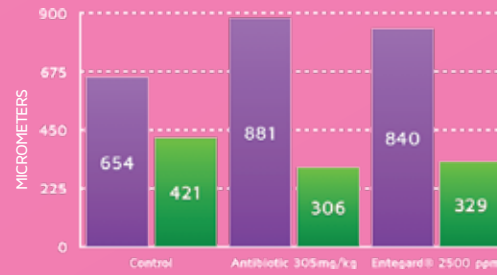
### CAMPYLOBACTER SPP REDUCED BY 60%



### AVERAGE DAILY WEIGHT GAIN (g/day)



### VILLI HEIGHT & CRYPT DEPTH





# Entegard® IMPROVES THE HEALTH AND GROWTH PERFORMANCE OF LIVESTOCK

## STOCK SOLUTION PREPARATION

### ➤ MIX INTO DRINKING WATER

Entegard® WS | 




 WATER SOLUBLE

 COLOUR WHITE  FORM POWDER  MAX TEMPERATURE **65°C**

Mix thoroughly with water from the same normal source for the barn  
 Mix until there is no sediment, some suds/foam will be produced  
 Start with a 20L bucket and a 40L bucket for and beyond the 3rd week  
 Connect the stock solution to the medicator pump through a normal hose

#### RECOMMENDATIONS:

Throw out remainder of the solution from past day. Avoid temperatures above 35°C  
**SHELF LIFE:** Up to 24 months at ambient temperature when stored in original packaging and protected from moisture

Water Liters	Entegard® WS    grams	RECOMMENDED DAILY DOSAGE	
5	640	SWINE	ppm
10	1280	Healthy	1000
15	1940		
20	2560		
25	3200		

Entegard® is produced in The Netherlands according to FAMI-QS standards

 bioseutica™

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