Grow-Finish Solutions

FULL VALUE PORK™

A portfolio of potential

	PRODUCTS	Baytril 100 (enrofloxacin)	celluTEIN	Denagard 50 PREMIX	Denagard +CTC	Denagard LC	FeedAID	Lipinate
	KEY ATTRIBUTES	Quick. Reliable. Effective.	Versatile. Effective. Support.	Dependable. Effective. Treatment.			Resolve. Preserve. Quality.	Supplement. Flexible. Finish.
	ACTIVE INGREDIENT	enrofloxacin	dried yeast, L-Arginine, L-Leucine	tiamulin hydrogen fumarate			sodium metabisulfite, bentonite, mineral oil	vegetable oil, methyl ester of conjugated linoleic acid
	PAGE NUMBER	4	5	6-7		8	9	10
RESPIRATORY AND REPRODUCTIVE	PATHOGEN / INDICATION							
	Actinobacillus pleuropneumoniae (APP) — Control	Feed						
	Actinobacillus pleuropneumoniae (APP) — Treat	Feed				Water		
	Pasteurella multocida — Control	Feed						
	Pasteurella multocida — Treat	Feed			Feed			
	Glaesserella parasuis (*Haemophilus parasuis*) — Control	Feed						
	Glaesserella parasuis (*Haemophilus parasuis*) — Treat	Feed						
	Streptococcus suis — Control	Feed						
	Streptococcus suis — Treat	Feed						
	Bordetella bronchiseptica — Control	Feed						
	Bordetella bronchiseptica — Treat	Feed						
	Mycoplasma hyopneumoniae (*M. hyo*) — Control	Feed						
	Mycoplasma hyopneumoniae (*M. hyo*) — Treat	Feed						
	Porcine reproductive and respiratory syndrome virus (PRRSv) — Control							
	Porcine reproductive and respiratory syndrome virus (PRRSv) — Treat							
ENTERIC	*Escherichia coli* (*E. coli*) — Control	Injectable*						
	Escherichia coli (*E. coli*) — Treat				Feed			
	Swine Dysentery (SD) — Control			Feed	Feed			
	Swine Dysentery (SD) — Treat			Feed		Water		
	Ileitis — Control			Feed				
	Ileitis — Treat							
	Salmonella Choleraesuis — Control				Feed			
	Swine Arthritis — Treat							
	Productivity							
	β-Mannans breakdown							
	Immune support		Feed					
	Carcass Fat Composition							Feed
	Anti-caking agent						Feed	
	DOSAGE	3.4 mL / 100 lbs	Up to 1% of complete feed	35-200 g / ton	35 g / ton	1 L / day / 1,786 pigs	1-8 lbs / ton	2-5 lbs / ton
	MEAT WITHDRAWAL (days)	5		2 - 7	2	3 - 7		

	PRODUCTS	Prodalex (pradofloxacin)	Pulmatil AC (tilmicosin phosphate)	Pulmotil (tilmicosin)	Skycis (narasin)	Swine Awake (dried *Bacillus licheniformis*, dried *Lactobacillus casei* fermentation product and citric acid)	Tylan Injection (tylosin)	Tylan (tylosin phosphate)	Tylan Soluble (tylosin tartrate)
	KEY ATTRIBUTES	Quick. Dual action. Convenient.	Quick. Effective. Easy.	Quick. Flexible. Effective.	Efficiency. Performance. Profitability.	Awaken. Support. Improve.	Effective. Multi-disease. Control.	Consistent. Dependable. Control.	Quick. Easy. Effective.
	ACTIVE INGREDIENT	pradofloxacin	tilmicosin phosphate	tilmicosin	narasin	dried *Bacillus licheniformis*, dried *Lactobacillus casei* fermentation product and citric acid	tylosin	tylosin phosphate	tylosin tartrate
	PAGE NUMBER	11	12	13	14-15	16	17	18	19
RESPIRATORY AND REPRODUCTIVE	PATHOGEN / INDICATION								
	Actinobacillus pleuropneumoniae (APP) — Control			Feed					
	Actinobacillus pleuropneumoniae (APP) — Treat								
	Pasteurella multocida — Control		Water	Feed					
	Pasteurella multocida — Treat	Injectable					Injectable		
	Glaesserella parasuis (*Haemophilus parasuis*) — Control		Water						
	Glaesserella parasuis (*Haemophilus parasuis*) — Treat	Injectable							
	Streptococcus suis — Control								
	Streptococcus suis — Treat	Injectable							
	Bordetella bronchiseptica — Control								
	Bordetella bronchiseptica — Treat	Injectable							
	Mycoplasma hyopneumoniae (*M. hyo*) — Control		Water						
	Mycoplasma hyopneumoniae (*M. hyo*) — Treat	Injectable							
	Porcine reproductive and respiratory syndrome virus (PRRSv) — Control								
	Porcine reproductive and respiratory syndrome virus (PRRSv) — Treat		Water*						
ENTERIC	*Escherichia coli* (*E. coli*) — Control								
	Escherichia coli (*E. coli*) — Treat								
	Swine Dysentery (SD) — Control							Feed	Water
	Swine Dysentery (SD) — Treat						Injectable	Feed*	Water
	Ileitis — Control							Feed	
	Ileitis — Treat								
	Salmonella Choleraesuis — Control								
	Swine Arthritis — Treat						Injectable		
	Productivity				Feed				
	β-Mannans breakdown								
	Immune support					Water			
	Carcass Fat Composition								
	Anti-caking agent								
	DOSAGE	1.7 mL / 100 lbs	200 mg / L	181-363 g / ton	13.6-27.2 g / ton	1 pk /day / 1,200 pigs	1 mL / 12.5 lbs (50 mg) 1 mL / 25 lbs (100 mg)	40-100 g / ton	250 mg / gal
	MEAT WITHDRAWAL (days)	2	7	7			14		2

Feed Additive · Water Additive · Injectable · Vaccine

*Only for *M.hyo* in the presence of PRRS
•Colibacillosis associated with *E. coli*

□Bacterial enteritis caused by *E. coli*
• Immediately after medicating with Tylan Soluble

Injectable Baytril® 100 (enrofloxacin)

THE RELIABLE SRD SOLUTION

1 Respiratory disease occurrence and severity is affected by factors such as weaning, handling, temperature and ventilation.[1] Baytril® 100 helps manage swine respiratory disease (SRD) and *Escherichia coli* challenges that can be exacerbated by environmental stressors, allowing producers to optimize Full Value from start to finish.

2 Baytril is highly bioavailable, reaching the lungs quickly* for effective treatment. Baytril's active ingredient, enrofloxacin, binds to DNA gyrase, making it bactericidal and concentration-dependent, which differentiates it from cephalosporins and macrolides.

3 Early SRD intervention is critical to assure good nursery pig health and to support the subsequent profitability in the finishing phase. Baytril treats and controls six SRD pathogens that are commonly part of the nursery SRD complex.

Fights against **6 SRD pathogens**

Effective **bactericidal** mode of action

1 dose treatment

*Clinical relevance unknown.

[1]Brockmeier SL, Halbur PG, Thacker EL. Porcine Respiratory Disease Complex. Polymicrobial Diseases. Washington (DC): ASM Press: 2002. Chapter 13. Accessed January 2021.

celluTEIN PURETEIN™

SUPPORT IMMUNITY, SUPPORT GROWTH

1 A feed supplement developed with proprietary bioactive protein compounds, celluTEIN™ stimulates the mTOR pathway, which is responsible for protein synthesis and muscle cell hypertrophy reactions in pigs.[1]

2 Through mTOR pathway stimulation and increased physiological support, celluTEIN supports immunity benefits, which may lead to better feed efficiency and growth rates in nursery pigs.[1]

3 Early immune support is foundational in the health of pigs and can strengthen their value through the grow-finishing period. One study found that feeding celluTEIN through the grow-finishing period showed increases in growth performance.[2]

[1]Elanco Animal Health. Data on File. [2]Elanco Animal Health. Data on File.

Elanco Denagard™ 10 PREMIX

Elanco Denagard™ +CTC

RELIABLE ENTERIC DISEASE TREATMENT

1 Denagard® 10 Premix effectively controls swine dysentery (SD) associated with *Brachyspira hyodysenteriae*, a highly contagious, difficult-to-control and slow immunity-generating disease,[1] and ileitis associated with *Lawsonia intracellularis*, a leading enteric disease in the U.S.

2 Denagard and chlortetracycline (CTC) control SD associated with *B. hyodysenteriae* susceptible to tiamulin, and treat swine bacterial enteritis caused by *Escherichia coli* and *Salmonella Choleraesuis* sensitive to chlortetracycline and bacterial pneumonia caused by *Pasteurella multocida* sensitive to CTC.

3 With both SD and ileitis, impacts on growth can be significant. In addition to treatment costs and mortality, reductions in growth and average daily gain (ADG) can lead to production losses.[1] Mitigate these disease challenges with whole-herd treatment through pulse dosing or continuous medication.

DENAGARD® + CTC TRIAL RESULTS[2]

Study: Effects of different antibiotic feeding programs

A commercial population of approximately 1,150 growing pigs averaging approximately 75 lbs with a known history of swine pneumonia and bacterial enteritis was used to understand the effects of different antibiotic programs. Confirmation of the disease-causing bacterial agents (*P. multocida*, *E. coli* and *Salmonella Choleraesuis*) was determined using laboratory diagnostics.

STUDY DESIGN

9-WEEK-OLD PIGS
averaging approximately 75 lbs were placed and acclimated in the barn for
7 DAYS

TOTAL	PIGS	PENS	REPLICATES
	1,150 (approximately 25 per pen)	**46** single-gender pens	**23** per treatment

Weights were recorded on **DAYS 0, 7, 21, 49, 61, 89** and at the time of marketing

DATA COLLECTED	
Live weight, average daily gain (ADG), average daily feed intake (ADFI), feed to gain (calculated) and gain to feed (calculated)	Live weight, hot carcass weight (HCW) and carcass yield
BY PEN	**BY TREATMENT**

Treatment groups

Treatment 1 = Negative Control
Treatment 2 = Denagard 35 g/ton + 400 g/ton CTC from days 7 to 20 and days 49 to 62

Disease incidence from Day 0 to study end

	DIETARY TREATMENT			
	Control	Denagard + CTC	S.E.M.	*P*-value
No. of pens	23	23	—	—
Dry cough (no. observations/pen)	32.09	29.26	1.753	0.10
Diarrhea (no. observations/pen)	0.83	0.39	0.172	0.08
Lameness (no. observations/pen)	74.43^{x}	63.04^{y}	5.378	<0.0001
Respiratory	0.83	0.65	0.179	0.50
Diarrhea	0.13^{x}	0.00^{y}	0.003	<0.001

Because of the lowered disease incidence, performance was improved and additional antibiotic intervention in pens treated with Denagard + CTC was avoided.

Pens treated with Denagard + CTC performed better overall than the control group:

	Control	Denagard + CTC	Improvement	*P*-value
Heavier final weights	310.8 lbs	314.3 lbs	3.50 lbs	0.02
Better ADG	2.21 lbs	2.24 lbs	0.03 lb	0.01
Improved ADFI	6.18 lbs	6.30 lbs	0.12 lb	0.005
Heavier HCW	236.7 lbs	239 lbs	2.30 lbs	0.05

[1]Harms et al. Practitioner experience with swine dysentery. AASV : 2011; 459-460. [2]Data on file. Elanco Animal Health.

Elanco Denagard™ LC

REDUCE THE IMPACT OF RESPIRATORY DISEASES

1 Denagard® LC treats swine pneumonia caused by *Actinobacillus pleuropneumoniae* (APP), a highly contagious disease often characterized by sudden onset, short clinical course, high morbidity and high mortality.[1]

2 Survivors of the disease often remain carriers and exhibit chronic coughing and slow growth due to lung adhesions and abscesses that form in recovered lungs.[1]

3 Adding Denagard LC to water for treatment for five consecutive days can help reduce mortality and the overall impact of APP.[1]

DEPENDABLE. EFFECTIVE. TREATMENT.

[1]Iowa State University. *Actinobacillus pleuropneumoniae* (APP). Available at: https://vetmed.iastate.edu/vdpam/FSVD/swine/index-diseases/actinobacillespleuropneumoniae.

Elanco FeedAID™

PRESERVE FEED QUALITY

1 FeedAID™ preserves and prevents caking in swine feed, reducing lumps and the occurrence of fungal metabolites, which can maintain feed quality and feeding efficiency.

2 FeedAID is a unique blend of sodium metabisulfite (SMB) and a specifically selected clay that targets a wider range of feed mycotoxins.

3 Resolve poor flowing, feed variations, batching size and other feed issues that impact mill management and, ultimately, animal productivity.

RESOLVE. PRESERVE. QUALITY.

Elanco

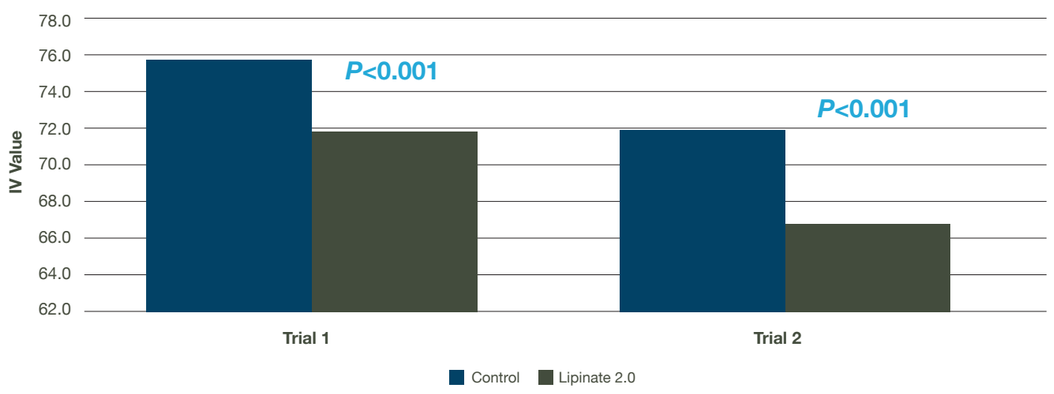
Lipinate™

MAXIMIZE PORK QUALITY

1. Lipinate™ manages carcass fat composition to improve fat quality in finishing swine by reducing iodine values.[1,2,3]
2. With global swine demand continuing to rise, pork fat quality is critical to remain competitive in the export market.
3. A source of fatty acids, Lipinate's formulation offers the stability to be used in pelleting, allowing flexibility in diet implementation.

IODINE VALUE OF CARCASS FAT[3]

With a rising need to manage carcass fat quality in a competitive global market, feeding Lipinate allows producers to continue using feed ingredients with unsaturated fatty acids, while still managing iodine values at the packing plant.



[1]Elanco Animal Health. Data on File. [2]Elanco Animal Health. Data on File. [3]Elanco Animal Health. Data on File.

Elanco™

Pradalex™ (pradofloxacin injection)

SRD POWERHOUSE

1. Pradalex™ is an SRD antibiotic treatment that reaches twice the concentration in a third of the time[1,2] — achieving peak activity in the serum within 45 minutes after injection.
2. Featuring a unique molecular structure and mode of action, Pradalex simultaneously blocks two enzymes responsible for bacterial replication, leading to improved potency and broad-spectrum efficacy relative to other injectable antibiotics.
3. Pradalex is a convenient, one-shot, low-volume antibiotic with a 2-day withdrawal period, offering SRD treatment protocols flexibility from nursery to finish.

HOW PRADALEX WORKS

1

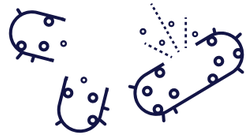
2

In bacterial replication, the enzyme DNA gyrase unfolds the bacterial DNA for replication by DNA polymerase. Afterward, the enzyme topoisomerase IV separates the identical DNA copies into sister cells.

3

Pradalex works by simultaneously binding and inactivating both DNA gyrase and topoisomerase IV, inhibiting bacterial replication.

4



This causes the chromosome to fragment and results in rapid cell death.

Pradalex uniquely has an equal affinity to both DNA gyrase and topoisomerase IV leading to increased potency relative to other fluoroquinolones.

*clinical relevance unknown.
[1]Elanco Animal Health. Data on File. [2]Blondeau JM. The Mutant Prevention Concentration- A Strategy to Optimize Therapy for Bacterial Infections in Cattle & Swine. Steps to Antimicrobial Therapy. 2011:1-218

Elanco

Pulmotil® AC
tilmicosin phosphate™

PRRS-INDUCED SRD CONTROL FROM THE START

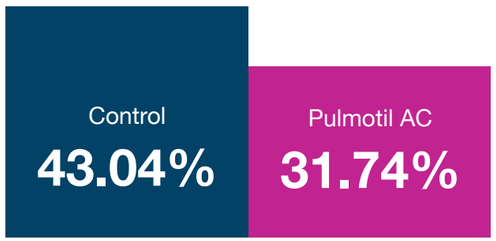
1 Pulmotil® AC quickly and effectively controls swine respiratory disease (SRD) associated with *Mycoplasma hyopneumoniae* (*M. hyo*) in the presence of porcine reproductive and respiratory syndrome virus (PRRSv) without the need to formulate new rations, or invest the additional time and labor associated with individual pig injections.

2 PRRS impairs natural disease-fighting macrophages, increasing susceptibility to other bacteria. Pulmotil's unique mode of action concentrates in pulmonary macrophages, slowing the effectiveness of the PRRSv replication process and killing bacteria associated with SRD.[1, 2]

3 Pulmotil AC is the only FDA-approved aqueous concentrate that controls SRD associated with *M. hyo* in the presence of PRRSv, in groups of swine in buildings where a respiratory disease outbreak is diagnosed.

EFFECTIVENESS IN PRRSv AND *M. HYO* CO-INFECTION[3]

Co-infections with PRRSv and secondary bacterial pathogens exacerbate SRD outbreaks.



P=0.0004

Lung lesion percentage results, following 5-day Pulmotil AC treatment.

Treatment group
Co-infection (*M. hyo* + PRRSv)

[1]Blais L, and S Chamberland. 1994. Intracellular accumulation of tilmicosin in primary swine alveolar macrophages. IPVS Congress.
[2]Rossow, K.D. 1998. South Dakota State University. Porcine reproductive and respiratory syndrome. The American College of Veterinary Pathologists 35: 1-20.
[3]Freedom of Information Summary. 2014. NADA 141-361.

Elanco

Pulmotil®

FLEXIBLE SRD CONTROL, NO INJECTIONS

1 Pulmotil® sets a foundation for health management by controlling swine respiratory disease (SRD) associated with *Actinobacillus pleuropneumoniae* and *Pasteurella multocida.*

2 Its unique mode of action delivers the active ingredient rapidly to the site of infection, and works with the pig's immune system, concentrating at high levels throughout the respiratory tract to help pigs fight off respiratory pathogens.[1,2]

3 Attached lungs, caused by respiratory disease lesions, remain even after the pig recovers — leading to performance losses and packer penalties.[3*]

ESTIMATED LOSS FROM RESPIRATORY DISEASE[4]

Normal Lung
Effected / Severity: 1-10%
ADG Reduction: 3%

Pneumonia
Effected / Severity: 21-30%
ADG Reduction: 15%

Severe Pneumonia
Effected / Severity: 41-50%
ADG Reduction: 24%

*Based on calculations by E. Stevermer. 1987. Respiratory diseases cut profits.
[1]Almond, G., Eads, K. and Keffaber, K. 2006. "Assessment of the Therapeutic Effect of Tilmicosin in Lactation Feed." Proc. 19th IPVS Congress: 523. [2]Blais L, and S Chamberland. 1994. Intracellular accumulation of tilmicosin in primary swine alveolar macrophages. IPVS Congress. [3]Data on file. Elanco Animal Health. [4]Keenliside, J. 2005. Preventing carcass losses. The Pig Site. Retrieved from: https://thepigsite.com/articles/preventing-carcass-losses. Accessed Sept 20, 2019.

Elanco Skycis®

MANAGE PERFORMANCE FOR PROFITABILITY

1 Skycis® is indicated for increased rate of weight gain and improved feed efficiency in growing-finishing swine when fed for at least four weeks.

2 As an ionophore, Skycis balances the bacteria in the pig's digestive system, improving efficiency of foregut digestion and hindgut fermentation, that ultimately increases energy availability for growth.[1]

3 Landing a majority of pigs on the grid requires minimizing distribution and variation to target a more profitable weight for the entire population. Skycis can help by increasing the growth rate of lightweight pigs to improve profitability potential.[2]

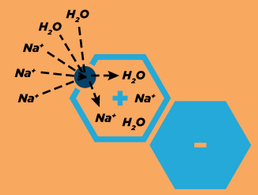
IONOPHORE MODE OF ACTION

Narasin, the active ingredient in Skycis, changes the intestinal microbiota, increasing energy availability for growth — here's how:

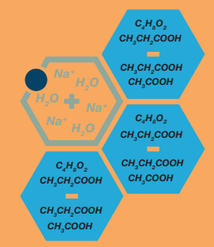
1 Attaches to gram-positive bacteria

2 Creates influx of sodium and water

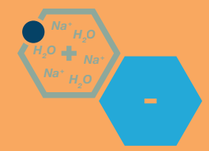
Cell spends energy to maintain osmotic balance.



3 Gram-positive bacteria cell dies



4 Gram-negative bacteria concentration increases; resulting propionic acid production becomes greater relative to acetic and butyric acid



This change in intestinal microbiota alters carbohydrate fermentation and the resulting volatile fatty acid (VFA) production

Energy efficient propionic acid production is increased and carbon dioxide and methane production are reduced

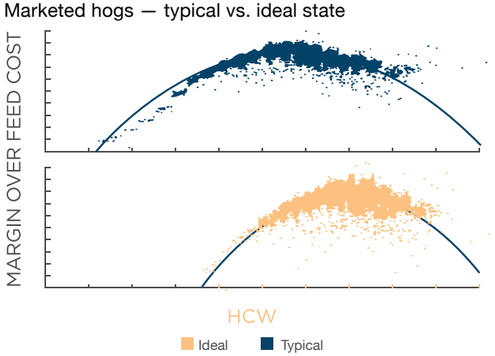
● = Skycis

MINIMIZE VARIATION. MAXIMIZE PRODUCTIVITY.

Reducing variation targets a more profitable weight for the entire population. Operational choices should be selected that minimize distribution and maximize the return where the majority of the pigs land on the grid.

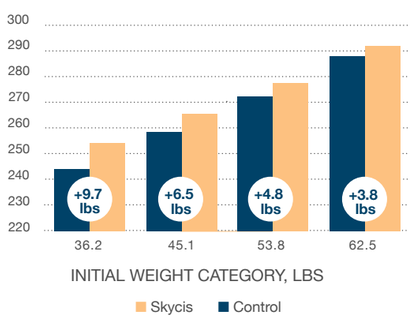
Weight Distribution Model[2]

Marketed hogs — typical vs. ideal state



Managing Weight Variation[2]

After 90 days vs. start weight



SKYCIS TRIAL RESULTS[3]

Effects of Skycis Extended (>65 days) feeding on growth and performance of finishing pigs were collected and summarized to construct a mathematical model to predict expected performance responses.

VALID DATA FROM **2013–2021** | **21 STUDIES** | CONTROL AND NARASIN DIET TREATMENTS | **308** OBSERVATIONS CONSISTING OF GROWTH PERIOD AND OVERALL DATA | CALCULATED PERCENT CHANGE OF EACH RESPONSE CRITERIA

1.40% ADG

1.40% FCR

0.31% UNITS YIELD

[1]Elanco Animal Health. Data on File. [2]Elanco Animal Health. Data on File. [3]Elanco Animal Health. Data on File.

Elanco

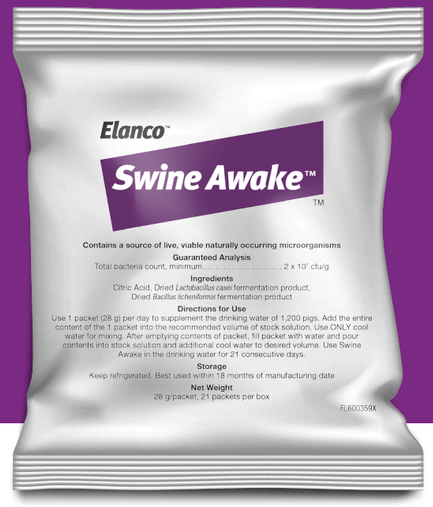
Swine Awake™

AWAKEN IMMUNITY WITH SWINE AWAKE™

1 Swine Awake™ contributes to the awakening of a non-specific response of the immune system in pigs vulnerable to viral challenges such as porcine reproductive and respiratory syndrome virus (PRRSv), a highly contagious disease that can cause reproductive impairment in breeding swine and respiratory illness in pigs of any age.[1]

2 A non-antibiotic solution applied through water, Swine Awake awakens a cell-mediated immune response, preparing a pig's immune system to face viral challenges.[2,3]

3 Applied ahead of viral challenges, Swine Awake's immune support increases the likelihood of improved pig livability, resulting in better productivity and an increase in marketable pigs.[4]



EASE OF IMPLEMENTATION

- Enables decision-making at the barn level
- Simple to introduce or remove from use

WATER-SOLUBLE

- Rapid implementation on targeted animals
- Simple to introduce into new systems

NON-ANTIBIOTIC SOLUTION

- Effective on livability[2,3]

Swine Awake is not intended to treat SRD or PRRS.

[1]Iowa State University. Porcine Reproductive and Respiratory Syndrome (PRRS). Available at: https://vetmed.iastate.edu/vdpam/FSVD/swine/index-diseases/porcine-reproductive. [2]Elanco Animal Health. Data on File. [3]Elanco Animal Health. Data on File. [4]Bretley K., Song R., Chang P. Impact of NutriQuest Swine Awake adminitration to weaned pigs on livability. Proceedings of 50th Annual Meeting of American Association of Swine Veterinarians. 214-215.

Elanco

Tylan™ Injection

(tylosin injection)

A TRUSTED BROAD-SPECTRUM SOLUTION

1 Tylan® Injection is a cost-effective treatment solution trusted for more than 30 years.

2 Tylan Injection is effective in the treatment of swine arthritis caused by *Mycoplasma hyosynoviae*; swine pneumonia caused by *Pasteurella* spp.; and swine erysipelas caused by *Erysipelothrix rhusiopathiae*.

3 Tylan Injection, along with good sanitation, can help limit overall herd disease transmission. Tylan Injection is an effective treatment of swine arthritis and swine dysentery when followed by appropriate water or feed medication.

Elanco

Tylan®

PROVEN ILEITIS* CONTROL TO THE FINISH

1 Tylan®'s consistent, dependable results in-feed to control ileitis delivers a healthy gut to grow a healthy pig.

2 Tylan controls ileitis by accumulating in the cells of the intestinal lining where infection occurs.[1]

3 Controlling the number-one enteric challenge, ileitis, alleviates costly variation and mortality, delivering a full value finish.

CONTROLLING SUBCLINICAL ILEITIS

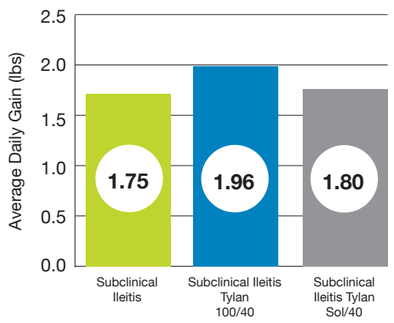
Tylan's impact on ADG and F:G[2]

Tylan medicated pigs had significantly lower fecal shedding levels of *Lawsonia intracellularis* compared to the challenged non-medicated pigs.

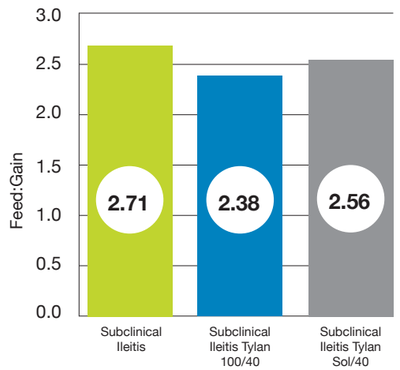
Reduced fecal shedding levels

Reduced oral fluid levels

Tylan-fed pigs also had lower oral fluid levels of *L. intracellularis* than the challenged control pigs. The subclinical infection in the challenged-only pigs resulted in a difference in ADG and FE compared to the challenged control pigs. In evaluating Tylan against subclinical ileitis, Tylan 100 g/ton followed by 40 g/ton treated group had improved ADG and FE compared to challenged, non-medicated pigs. Tylan Soluble followed by Tylan 40 g/ton medicated animals tended to have improved feed efficiency compared to the challenged-only pigs.



Tylan 100/40 improved ADG over 6 weeks by 12% (*P*=0.009)
Tylan Sol/40 improved ADG over 6 weeks by 2.86% (*P*=0.053)



Tylan 100/40 improved feed efficiency over 6 weeks by 12.2% (*P*=0.002)
Tylan Sol/40 improved feed efficiency over 6 weeks by 5.5% (*P*=0.056)

[1]Associated with *Lawsonia intracellularis*. [1]Data on file. Elanco Animal Health. [2]Elanco Animal Health. Data on File.

Elanco

Tylan® Soluble
tylosin tartrate

EFFECTIVE ILEITIS* CONTROL

1 Tylan® Soluble effectively controls ileitis, a leading enteric disease in the U.S., by accumulating in the cells of the swine intestinal lining where the infection occurs.[1]

2 Often associated with stressors, outbreaks are difficult to eliminate. Treatment after periods of stress and during outbreaks is necessary to control porcine proliferative enteropathy (PPE).

3 Tylan Soluble, which is mixed into drinking water for swine, offers effective PPE-ileitis control when followed immediately by Tylan Type A Premix in complete feed.

*Associated with *Lawsonia intracellularis*.
[1]Iowa State. Proliferative Enteritis. Available at: https://vetmed.iastate.edu/vdpam/FSVD/swine/index-diseases/lleitis. Accessed May 1, 2020.

The labels contain complete use information, including cautions and warnings. Always read, understand and follow the label and use directions.

PULMOTIL® AC IMPORTANT SAFETY INFORMATION:

Before using this product, it is important to read the entire product insert, including the boxed human warning.

WARNING: Exposure to tilmicosin in humans has been associated with chest pain, increased heart rate, dizziness, headache, and nausea. Death has been reported following ingestion or injection of tilmicosin. Avoid direct skin and eye contact. In case of human exposure, call 1-800-722-0987 and consult a physician immediately.

- Wear overalls, impervious gloves and eye protection when mixing and handling the product. Wash hands after handling the product. Wash affected parts if skin contact occurs. If accidental eye contact occurs, immediately rinse thoroughly with water.

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

- For use only in swine. Not for injection. Injection of tilmicosin has been shown to be fatal in swine and non-human primates, and may be fatal in horses and goats.
- Swine intended for human consumption must not be slaughtered within 7 days of treatment.
- Always treat the fewest number of animals necessary to control a respiratory disease outbreak. Prescriptions shall not be refilled.
- Concurrent use of Pulmotil AC and another macrolide by any route, or use of another macrolide immediately following this use of Pulmotil AC is not advised.

Ensure that pigs have continuous access to medicated water during the treatment period. Monitor pigs for signs of water refusal and dehydration while being treated.

Scan for the complete label

BAYTRIL® IMPORTANT SAFETY INFORMATION:

CAUTION: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian. Federal (USA) law prohibits the extra-label use of this drug in food-producing animals. To assure responsible antimicrobial drug use, enrofloxacin should only be used as a second-line drug for colibacillosis in swine following consideration of other therapeutic options.

- Not for use in humans. Keep out of reach of children.
- Avoid contact with eyes. In case of contact, immediately flush eyes with copious amounts of water for 15 minutes.
- In case of dermal contact, wash skin with soap and water. Consult a physician if irritation persists following ocular or dermal exposures.

Individuals with a history of hypersensitivity to quinolones should avoid this product. In humans, there is a risk of user photosensitization within a few hours after excessive exposure to quinolones. If excessive accidental exposure occurs, avoid direct sunlight.

DENAGARD® 10 PREMIX IMPORTANT SAFETY INFORMATION:

CAUTION: Using Denagard alone does not require a Veterinary Feed Directive (VFD). Using Denagard + CTC does require a VFD.

- Feed 35 g/ton of Denagard + 400 g/ton (10 mg/lb body weight in daily divided doses) CTC for 14 days.

PRADALEX™ IMPORTANT SAFTEY INFORMATION:

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian. Not for use in humans. Keep out of reach of children. Avoid contact with eyes and skin. Individuals with a history of hypersensitivity to quinolones should avoid this product. Not for use in animals intended for breeding because the effects of Pradalex on swine reproductive performance, pregnancy and lactation have not been determined. Not for use in nursing piglets because safety and effectiveness have not been demonstrated. Quinolones should be used with caution in animals with known or suspected central nervous system (CNS) disorders. Mild to moderate inflammatory changes of the injection site may be seen in swine treated with Pradalex. See package insert for additional safety information.

DOSAGE AND ADMINISTRATION:

Swine: Administer once as an intramuscular injection in the neck at a dosage of 7.5 mg/kg (1.7 mL/100 lbs) body weight. Do not inject more than 5 mL per intramuscular injection site.

TYLAN® INJECTION IMPORTANT SAFETY INFORMATION:

CAUTION: Federal law restricts this drug to use by or on the order of a licensed veterinarian.

WARNING: NOT FOR HUMAN USE. KEEP OUT OF REACH OF CHILDREN.

- **Adverse reactions, including shock and death, may result from overdosage in baby pigs.** Do not attempt injection into pigs weighing less than 25 lbs (0.5 mL) with the common syringe. It is recommended that Tylan 50 Injection be used in pigs weighing less than 25 lbs.
- Do not administer to horses or other equines. Injection of tylosin in equines has been fatal.
- Swine intended for human consumption must not be slaughtered within 14 days of the last use of this drug product.

If tylosin medicated drinking water is used as a follow-up treatment for swine dysentery, the animal should thereafter receive feed containing 40 to 100 grams of tylosin per ton for 2 weeks to assure depletion of tissue residues.

TYLAN® SOLUBLE IMPORTANT SAFETY INFORMATION:

CAUTION: Federal (USA) law restricts this drug to use by or on the order of a licensed veterinarian.

- Not for human use. Keep out of reach of children. Avoid contact with skin.
- Exposure to tylosin may cause a rash.
- Swine must not be slaughtered for food within 48 hours after treatment.

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