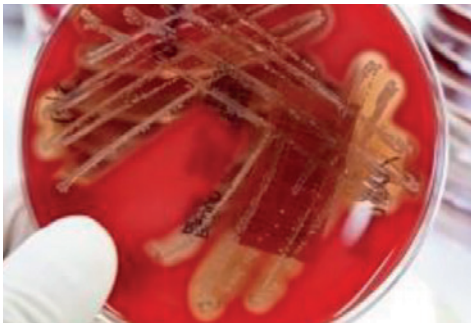
# DRAX S

## Protected lauric acid
## better gut health

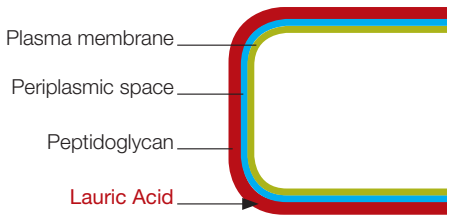

Intestinal health, essential for good performance without resorting to massive antibiotics use, is the result of interaction between diet, intestinal mucosa integrity and the balance of intestinal microflora. A stable intestinal flora supports digestion and effective absorption of nutrients, limits intestinal diseases and promotes an effective immune state. Gram$^{+}$ bacteria, such as streptococci, staphylococci and clostridium, cause considerable damage to animal health and significant financial losses for the farmers. ***Streptococcus suis*** is transmitted by direct contact or diffused by indirect contact via the droplets dissipated in the air with the respiration. Healthy pigs can carry the microorganism for several months in the tonsils and sows can act as healthy carriers. The sow transmits the antibodies to the piglets through the colostrum and, for this reason, the disease is uncommon in the nursing animals. Disease is common in the first period after weaning and often appears 2-3 weeks later and continues up to about 16 weeks of age. After the weaning almost 100% of pigs becomes bearer within three weeks.

## Streptococcus infection: economic damages

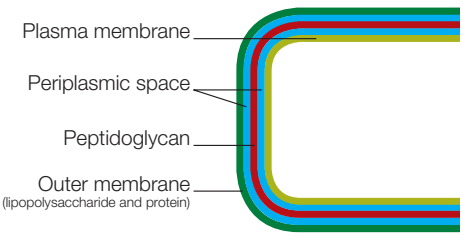
| | |
|---|---|
| ■ High mortality | **10-50%** |
| ■ High morbidity | **5-20%** |
| ■ Less average daily growth | **20/40 g/die** |
| ■ Feed consumption reduction | **+8/15 day** |
| ■ Feed conversion reduced | **-20/50%** |
| ■ Production loss days | **+20/30%** |
| ■ Drugs cost increased | **+1-5 €/pig** |
| ■ Increase general costs of work/possible workers contagion | |

Gram$^{+}$ bacteria cell wall is (50-90%) constituted by peptidoglycans, while Gram$^{-}$ have an additional polysaccharidic membrane (not present in Gram$^{+}$) and a thin peptidoglycan membrane.

### GRAM POSITIVE




### GRAM NEGATIVE

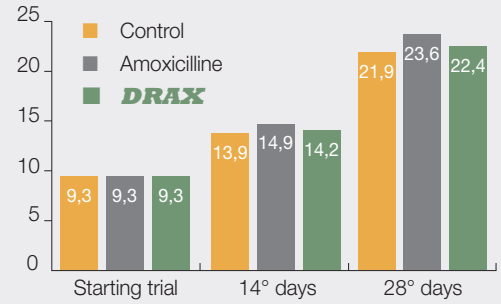



Among medium chain saturated fatty acids, Lauric acid is the one having strongest antimicrobial activity against gram positive bacteria and against some viruses and fungi. Lauric acid is able to interpose with the peptidoglycan cell wall causing its own breaks: once inside the cell, Lauric acid interfere with the bacterial gene transduction and transcription processes.

# DRAX S 2018 Trials

(Veterinary University of Milan, Zootechnical Experimental Center, CZDS, Lodi)

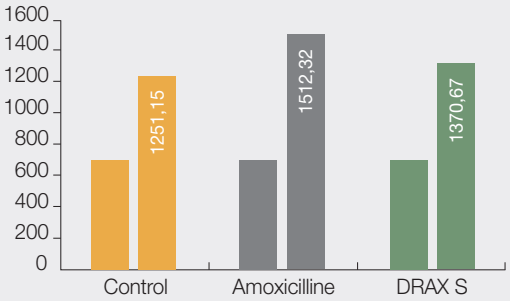
## Fig. 1 - Piglets weight during trial




## Tab. 1 - DRAX experimental design

| Treatment | Prestarter (0-14 days) | Starter (15-28 days) |
|---|---|---|
| Control | No additives | No additives |
| Medicated | Amoxicilline (400 mg/kg) | Amoxicilline (400mg/kg) |
| Laurate | DRAX S (1kg/ton) | DRAX S (1 kg/ton) |

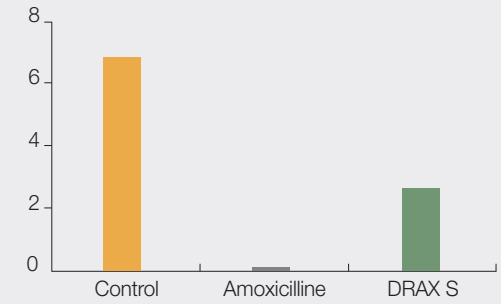
## Fig. 2 - Final weight of piglets groups (kg)




## Tab. 2 - DRAX Experimental design

| | |
|---|---|
| Treatment: 3 | Piglets for replicate: 4 |
| Replicates: 16 | Piglets for treatment: 64 |
| Total replicates: 48 | Total Piglets: 192 |
| Piglets: Topics (Stambo HBI Dalland 40) | 50% males, 50% females |
| Weaning age: 24 d | Weaning average weight: 9 kg |

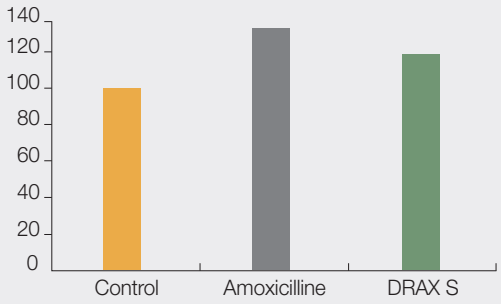
## Fig. 3 - Dead Piglets




## Tab. 3 - Dead animals and AB treated

| | Control | Amoxi | DRAX S |
|---|---|---|---|
| Dead* (*Streptococcus) | 7 | 0 | 3 |
| Antibiotic treated Streptococcus (Amoxicilline) | 5 | 0 | 3 |
| Diarrhea (Baytril) | 1 | 9 | 0 |

## Economic value of piglets groups (%)




## ECONOMIC CONSIDERATIONS

In the post-weaning DRAX has demon strated that it can easily decrease the dosage (and/or the time) of use of the antibiotics commonly used to prevent Streptococcosis. Compared to the control group (no antibiotic, no additives) DRAX has guaranteed an economic return of 20% more than the market value of piglets.

# When utilize **DRAX S**

- ✓ To reduce Streptococcus infection
- ✓ To prevent post weaning diarrhea
- ✓ During stress or heat situation
- ✓ To improve immunity status
- ✓ After feed changement quality

| **DRAX S**: Strengths points | | | |
|---|---|---|---|
| **Dosage** | **Drax Indications** | **kg/ton** | **Timing** |
| Post-weaning piglets | Coli Diarrhea prevention<br>Streptococcosis | 1,0 - 1,5 kg | All the period |
| 12 - 20 kg | Coli Diarrhea prevention<br>Streptococcosis | 1,0 - 1,5 kg | All the period |
| 20 - 40 kg | Coli Diarrhea prevention<br>Streptococcosis | 0,5 - 1,0 kg | All the period |
| Gestation sows/gilts<br>Lactation sows/gilts | Streptococcosis prevention | 0,5 - 1,0 kg<br>1,0 kg | 5-10 days<br>All the lactation period |

## **DRAX S**

## Premix for pigs

**Additives per kg:**

**Oligo elements:**
3b603 Zinc (Zinc oxide) mg 30.000.

**Support:**
Medium chain fatty acids ($C_{12}$);
Calcium salts of medium chain fatty acids (Lauric Acid $C_{12}$).

**Instructions for use and doses:** mix carefully to the other components of the feed, according to good processing practices, at a rate of 1 - 1.5kg / ton. of feed.

Do not exceed the limits set for trace elements with the use of other supplements.

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