

Reduction of swine dysentery through the use of plant extracts in feed

Leader:

Grupo Premier Pigs, SL

Other recipient members:

Industrial Ganadera de Artesa, SA

Other non-recipient members:

Grupo de Saneamiento Porcí_Lleida, del Camp d'Ivars d'Urgell i Secció de Crèdit, SCCL and the University of Girona

Coordinator:

Grupo Premier Pigs, SL

Web:

<https://premierpigs.com/>

<https://premierpigs.com/colaboracion-para-la-innovacion/>

01. Rationale

The aim of this project is to carry out a study to reduce the use of antibiotics in fattening pig feed by means of therapeutic alternatives such as plant extracts and thus eradicate infections of swine dysentery, one of the gastrointestinal tract diseases with the greatest economic impact on the pig sector and the most difficult to eradicate.

The main objectives are:

- Investigate commercial products based on natural extracts for use in the production of feed for fattening.
- Determine the degree of swine dysentery infection in pig breeding

	CR 15-110	ADG 18-110	ADFI 18-110	% Loss	Initial W. (kg)	Final W. (kg)
2015 Without plant extract	2.52	659	1.66	5.47%	15.2	103
2016 with plant extract	2.43	701.88	1.70	4.70%	14.8	109.8
Difference	-0.09	42.88	0.04	-0.70%	-0.4	6.8

Monitoring of results. CR: conversion rate. ADG: average daily gain (g/day). ADFI: average daily feed intake (kg/day). Source: Operational Group.



Photo: Operational Group.

(source) and fattening farms.

- Study different natural extracts for application in the feeding of fattening pigs and the palatability and acceptance by animals of the feed with extracts.
- Evaluate the efficacy of these extracts in the control of swine dysentery.
- Optimise the dosage of the plant extract to determine if there is a cumulative effect on control.
- Analyse the results and assess the economic cost of introducing extracts into feed in relation to the results obtained.

02. Results and conclusions

The application of a product to the feed in *Brachyspira*-positive farms is proposed with the aim of reducing the use of animal health products while at the same time improving production results.

The results of this project indicate that plant extracts in the form of a mixture of essential oils, added to feed at relatively low doses, allow a better conversion rate and increased growth rates in pig fattening.

From a sanitary point of view, they have shown good performance, reducing the losses by 20%, the conversion ratio by 9 grams, the Average Daily Gain by 42 grams, as well as the medication costs (when analysed by type of loss, the losses due to dysentery decreased by almost half).

When looking at all the results obtained from this project, it can be concluded that:

- The extract containing carob seeds, thyme and chicory allows a significant improvement in production (conversion rate and growth ratios), as well as good sanitary behaviour.
- From an economic point of view, the use of this extract allows a reduction of the costs per kilo of production, due to productive improvements and fewer sanitary problems, which can be seen in the graph below.