

# Effect of dietary resin acids and hydrolysed yeast in piglets challenged with F4-enterotoxigenic *Escherichia coli*

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## Introduction

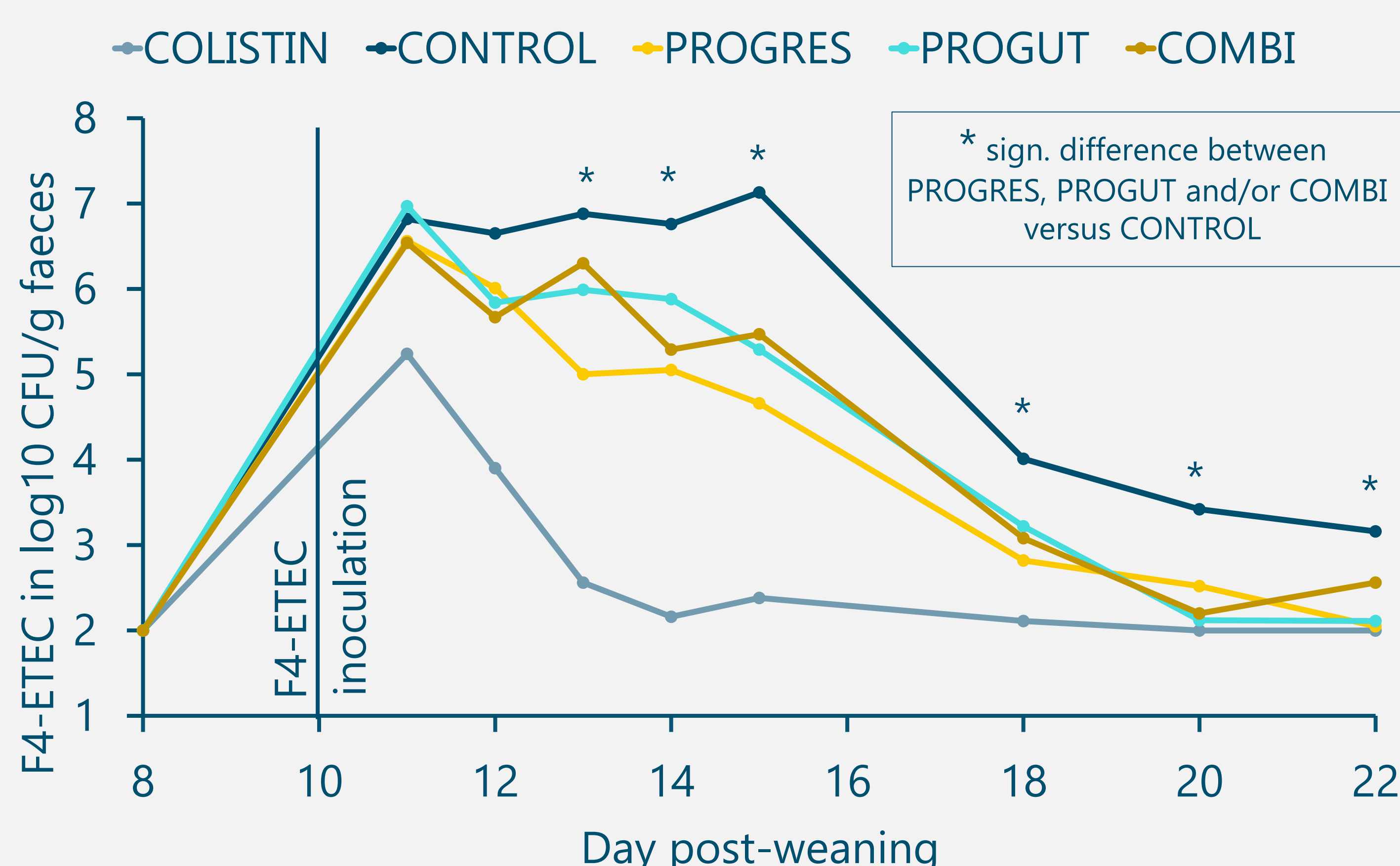
PROGRES® contains tall oil fatty acids that can lower inflammation. PROGUT® is a *Saccharomyces cerevisiae* yeast hydrolysate, of which its cell wall contains macromolecules that can bind to F4-ETEC fimbriae. We hypothesized that PROGRES® and PROGUT® may inhibit F4-ETEC proliferation and diarrhoea in weaned piglets

## Objectives

To test the ability of PROGRES® and PROGUT®, in combination and alone, to reduce proliferation of F4-ETEC and post-weaning diarrhoea in piglets challenged with F4-ETEC after weaning

## Results

### PROGRES, PROGUT and their COMBI reduce F4-ETEC shedding



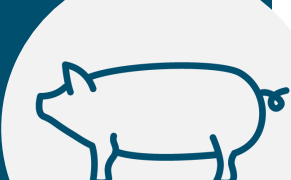
### PROGRES and COMBI shorten the diarrhoeic period after F4-ETEC inoculation

Treatment	Days with diarrhoea
COLISTIN	0.80±0.36 <sup>a</sup>
CONTROL	2.97±0.77 <sup>b</sup>
PROGRES	1.20±0.55 <sup>a</sup>
PROGUT	2.00±0.60 <sup>ab</sup>
COMBI	1.10±0.38 <sup>a</sup>
<i>P</i> -value	0.06

No effect on faecal MPO throughout the trial

## Conclusion

**PROGRES® and PROGUT®, in combination and alone, make weaned piglets more resilient to enterotoxigenic F4-positive *Escherichia coli* and represent alternatives for managing post-weaning diarrhoea**

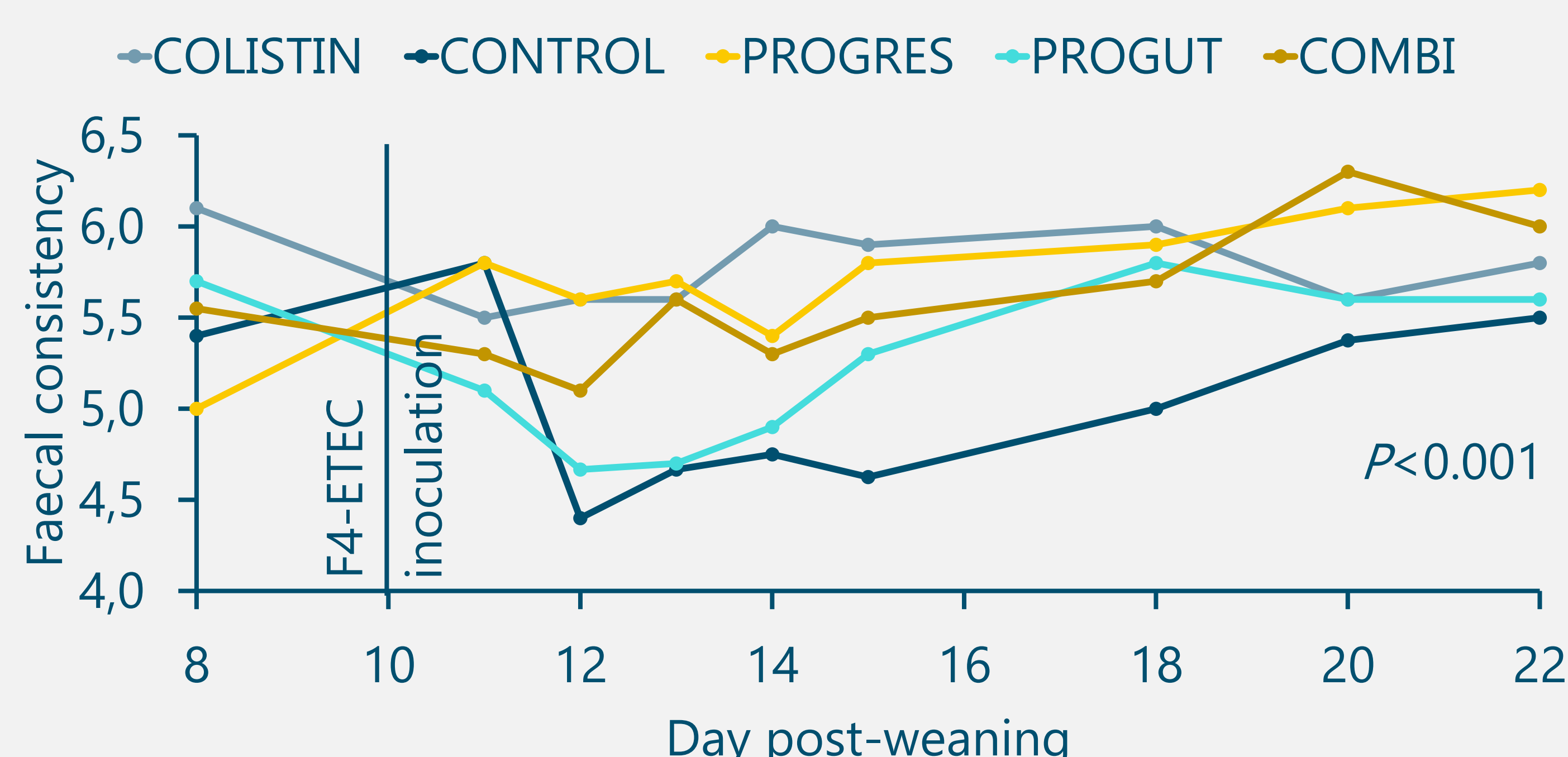


## Methods

- 50 piglets, 7.8 kg BW, weaned at 29.7 days of age, mixed sex
- $5.9 \times 10^9$  CFU F4-ETEC inoculation in all piglets at d10 post-weaning
- Zootechnical performance (d0, 8, 15, 22), faecal consistency (score  $\leq 4$ : diarrhoea, d0, 8, 11-15, 18, 20, 22), faecal F4-ETEC shedding (qPCR; d8, 11-15, 18, 20, 22) and faecal MPO (d0, 8, 15, 22)
- 5 treatments with 10 piglets/treatment, and 5 piglets/pen, d0-22:

COLISTIN	Control diet + colistin via drinking water
CONTROL	Control diet: barley, wheat, soybean meal, maize-based
PROGRES	Control diet + 1.0 g/kg PROGRES®
PROGUT	Control diet + 1.5 g/kg PROGUT®
COMBI	Control diet + 1.0 g/kg PROGRES® + 1.5 g/kg PROGUT®

### PROGRES and COMBI improve post-weaning faecal consistency



### PROGRES and PROGUT maintain zootechnical performance after F4-ETEC challenge

