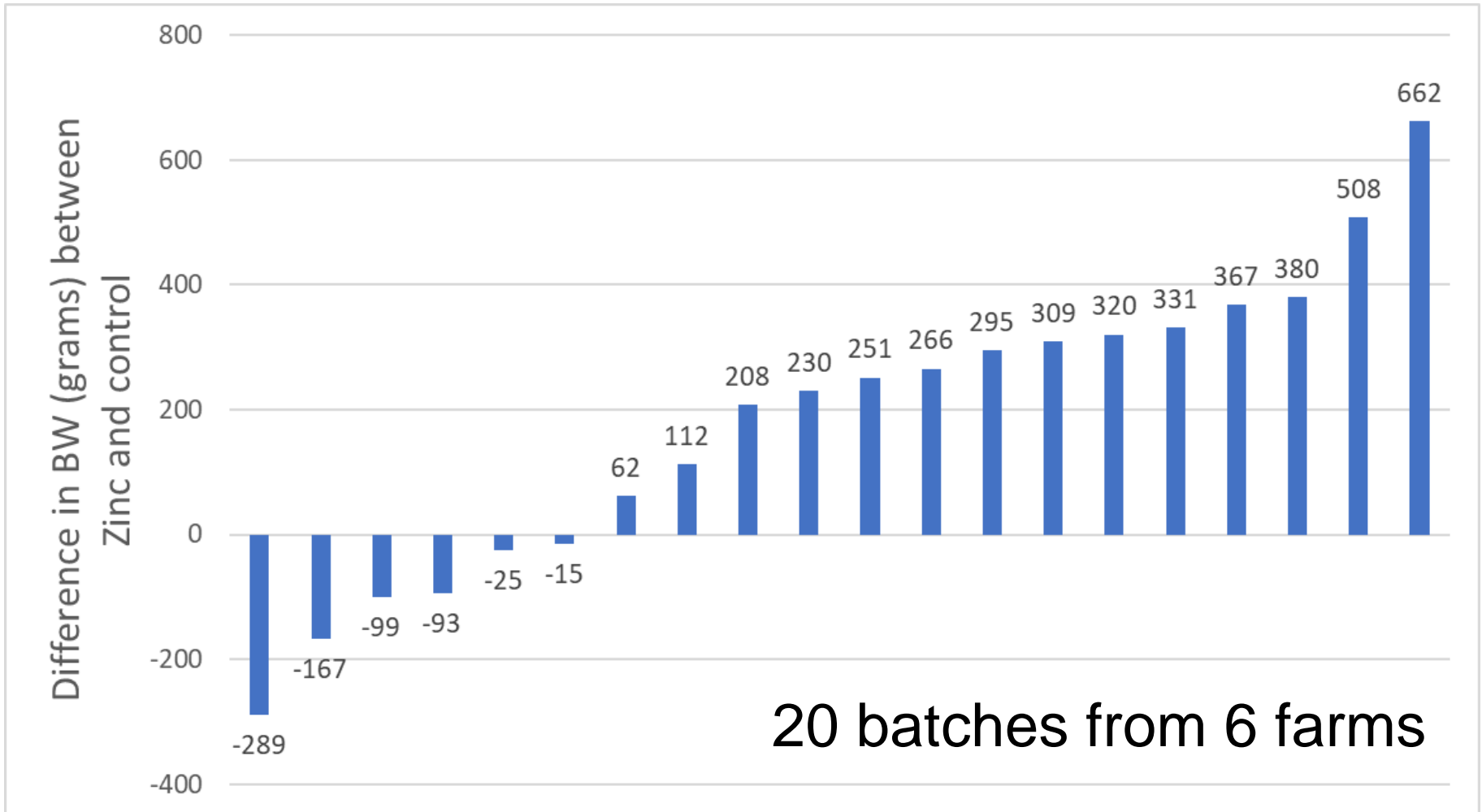# Removing ZnO (and antimicrobials) from pig diets step by step

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Teagasc Pig Development Department

Difference in body weight between pigs fed Zinc oxide and control 2 wks after weaning

20 batches from 6 farms

Performance of 20 pig batches fed diets with or without ZnO during the first 2 weeks post-weaning

	Avg Daily Gain, g/d	Mortality, %	Avg Daily Intake, g/d	FCR
With ZnO	259	1.0	334	1.3
Without ZnO	242	1.2	305	1.3
Difference	-17	+0.2	-29	0.0

This are averages…

First things first
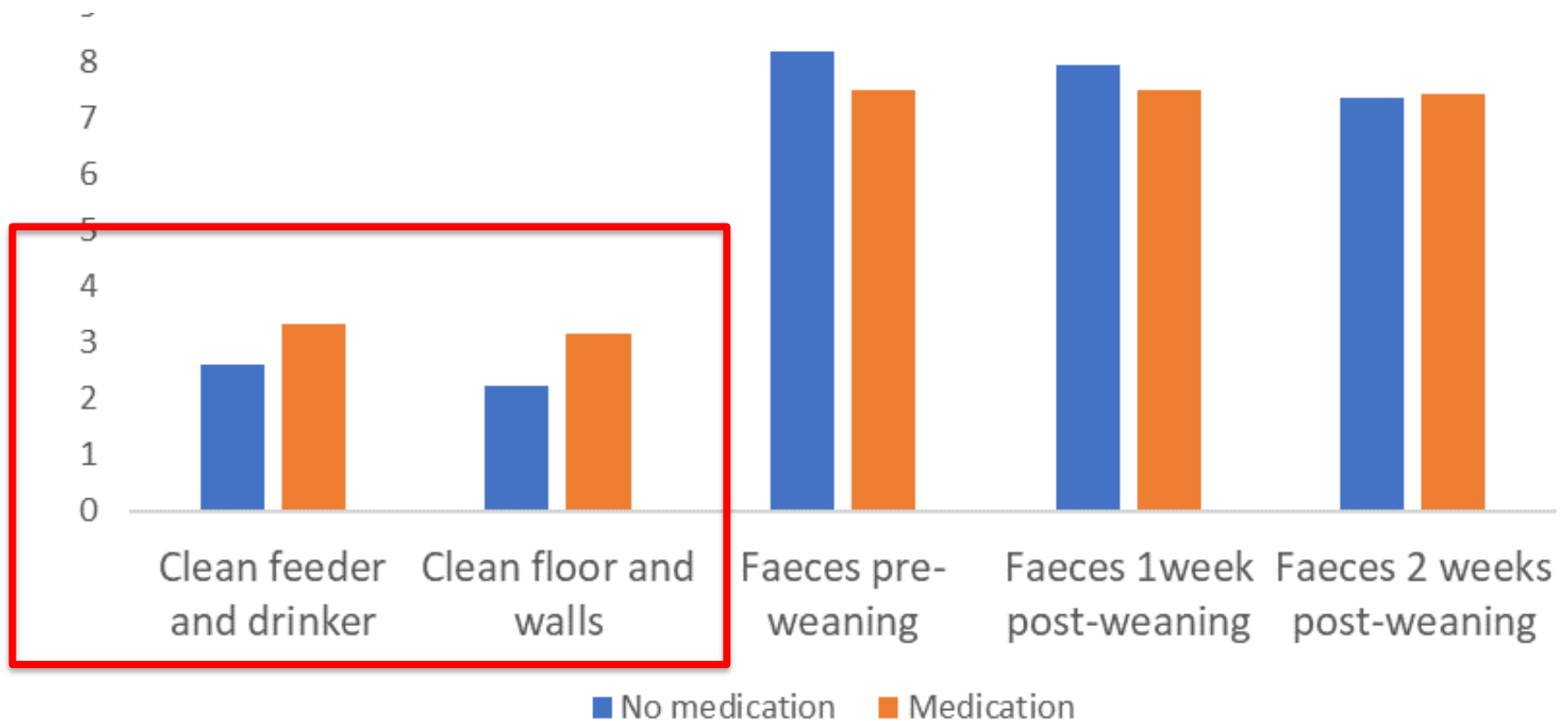
- Remove Zinc and antibiotics and see what happens (all diets?):

  - Nothing

  - Loose faeces and reduced performance

  - Disease outbreak:

    » Immediately… diarrhoea, sudden deaths…

    » Later in the cycle… pneumonia, mortality…

    » Meningitis

Assess the current situation

- Weaning weight and age: 28d, 7.5kg

- Environmental control: would you be ok sleeping in that room? NH3/Temp

- Fresh clean water and electrolytes

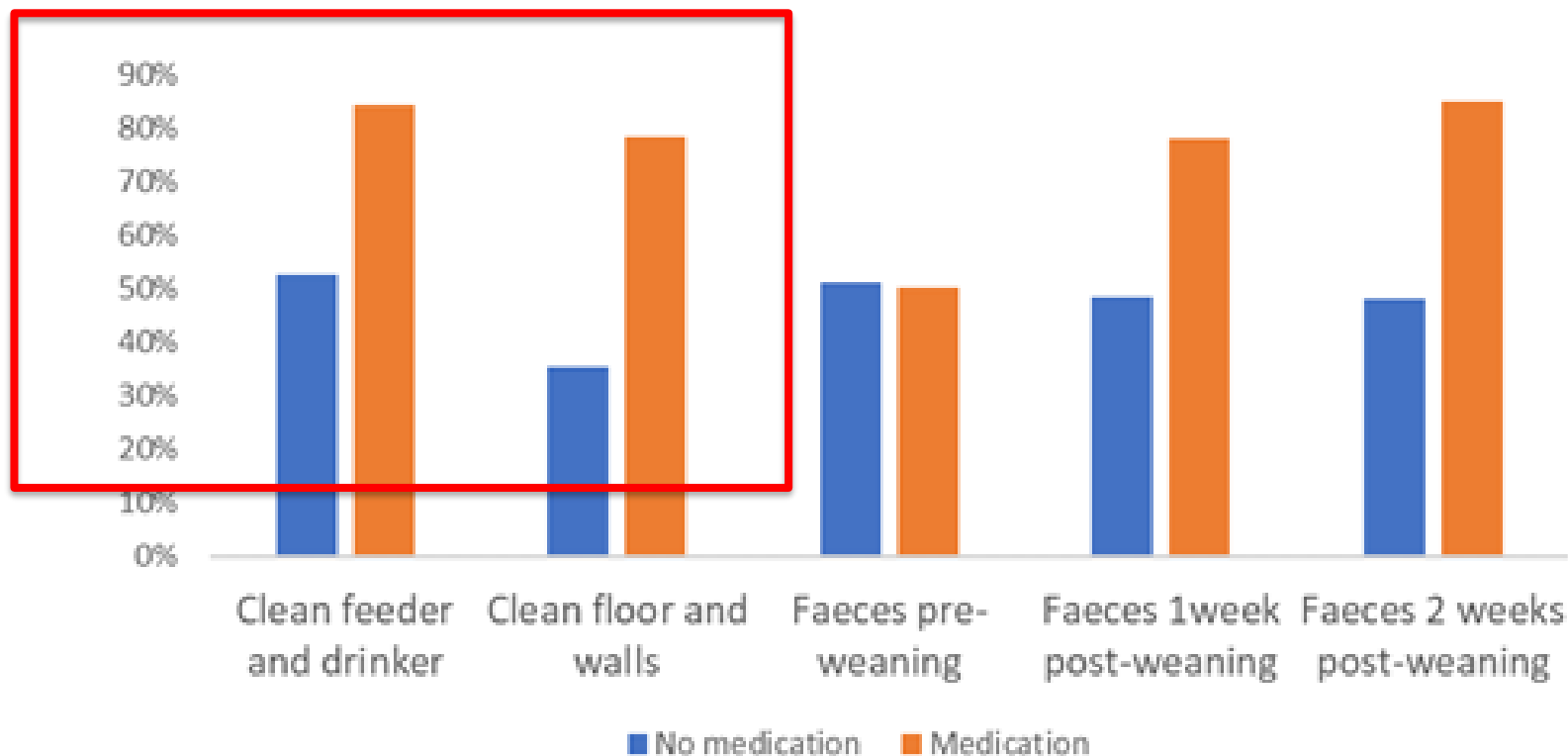- Hygiene?!?

- No current clinical issues

Hygiene: level of E coli

It is very difficult to achieve sterile environment

Hygiene: Level of resistant E coli

Whatever is in the room goes to the animal

Assess the current situation

Assess the current situation

Assess the current situation

Assess the current situation

Assess the current situation

Assess the current situation

Example of a bad situation

Big farm, hyperprolific genetics, PRRS+ with piglets weaned at 26d and transferred to a different site

A	B	C	D	E
7.5 – 8 kg	6.5 - 7.5 kg	6 - 7 kg	5.5 - 6.5 kg	5 – 6 kg

Example of a bad situation

A	B	C	D	E
7.5 – 8 kg	6.5 - 7.5 kg	6 - 7 kg	5.5 - 6.5 kg	5 – 6 kg

Should be able to remove Zinc

-Test your diet and a new one
-Test several batches
-Clarify which antibiotic works
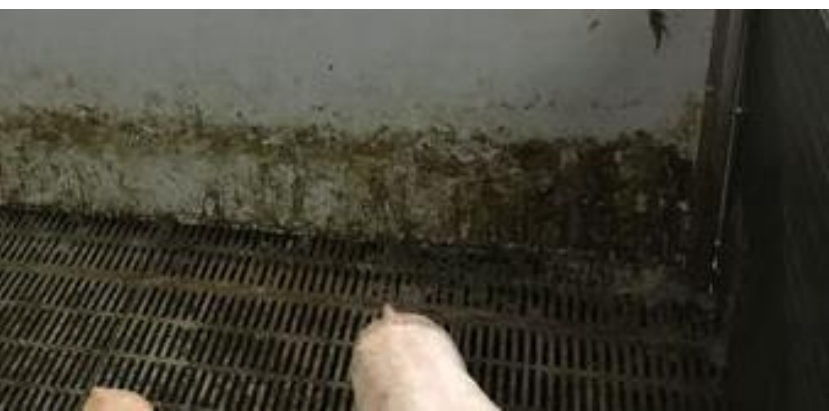
Extra measures to bring them forward

3

NO Zinc Oxide   Zinc Oxide

5

7

Example of a bad situation

A	B	C	D	E
7.5 – 8 kg	6.5 - 7.5 kg	6 - 7 kg	5.5 - 6.5 kg	5 – 6 kg

In the weaner

-FRESH Electrolytes &
Good starters/milk replacer
-Improve environment

Extra measures to bring them forward

Go back to the farrowing house and improve the piglet

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Thanks to the hard workers