

The Belgian experience:

3 steps to reduce antimicrobial use in pig production

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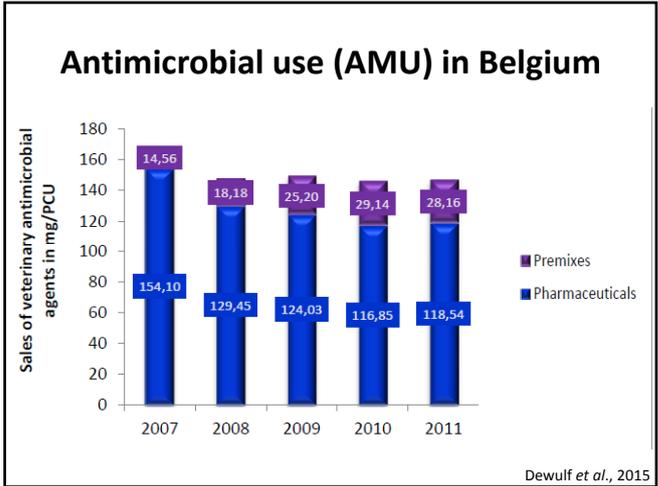
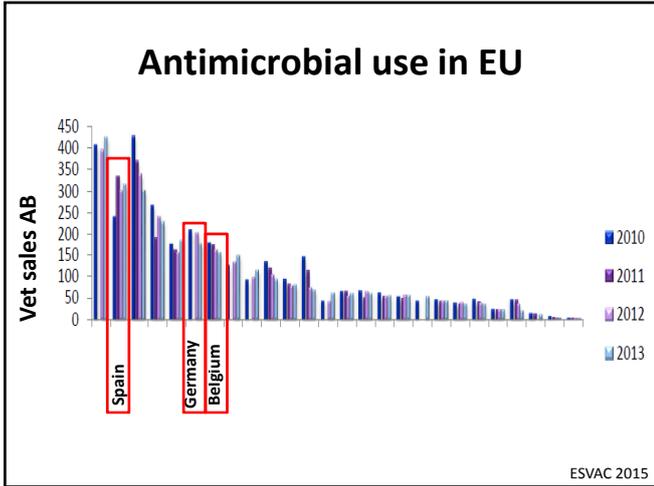
Huesca, 5 Abril 2017 - Jornada Técnica AVPA

Antimicrobial resistance (AMR)

Problem? → **SELECTIVE PRESSURE**



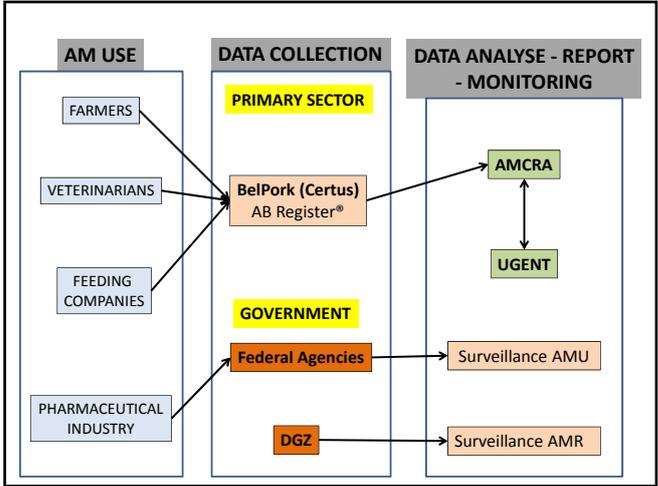

What can be done? → **PRUDENT USE**

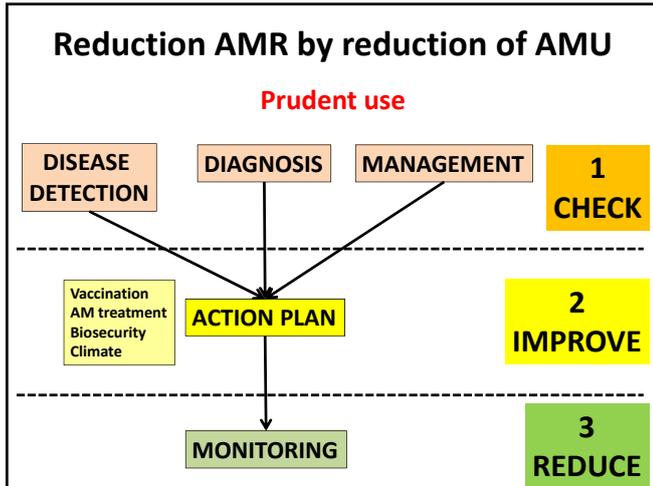


Pig Production in Belgium

6.25 mill pigs
12 mill pigs slaughtered/year

Vangroeneweghe et al., 2009





1. CHECK

- Quantify via AM usage formula:

$$TI = \frac{\text{Total amount of active substance (mg)}}{\text{DDDA}^1 \left(\frac{\text{mg}}{\text{kg}}\right) \times \text{number of days at risk} \times \text{kg animal at risk}} \times 1000 \text{ pigs at risk}$$

DDDA (Defined Daily Dose Animal)

- ABcheck®: Ghent University

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Callens 2016

1. CHECK

Preventive Veterinary Medicine 106 (2012) 53–62

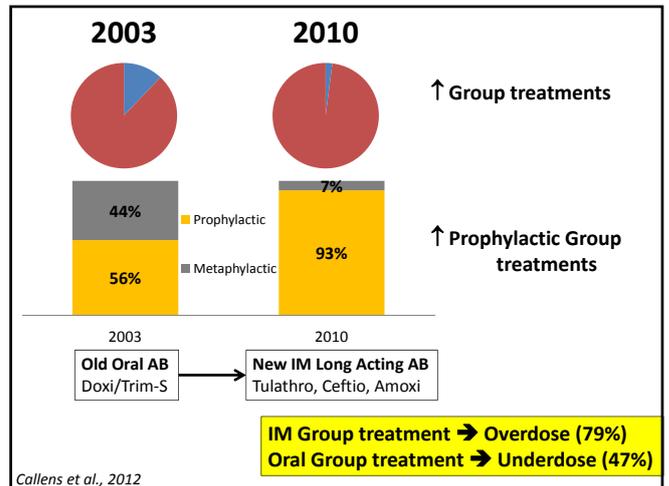
Contents lists available at SciVerse ScienceDirect

ELSEVIER Preventive Veterinary Medicine journal homepage: www.elsevier.com/locate/prevetmed

Prophylactic and metaphylactic antimicrobial use in Belgian fattening pig herds

Bénédicte Callens^{a,*}, Davy Persoons^a, Dominiek Maes^a, Maria Laanen^a, Merel Postma^a, Filip Boyen^b, Freddy Haesebrouck^b, Patrick Butaye^c, Boudewijn Catry^d, Jeroen Dewulf^a

50 pig herds
January – October 2010



Biosecurity

BioCheck®

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Biocheck, prevention is better than cure!
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2a. IMPROVE

ORIGINAL ARTICLE *Zoonoses and Public Health*, 2017, 64, 63–74

Reducing Antimicrobial Usage in Pig Production without Jeopardizing Production Parameters

M. Postma^a, W. Vanderhaeghen^{1,*}, S. Sarrazin¹, D. Maes² and J. Dewulf¹

61 pig herds

1st visit → 2nd visit → 3rd visit

CHECK → **IMPROVE** → **REDUCE**

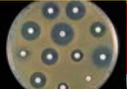
2a. IMPROVE

- ↑ **Biosecurity:**
 - External: +2.4 points
 - Internal: +7.0 points
- ↓ **AMU:**
 - 52% farrowing-slaughter
 - 32% breeders
- ↑ **Technical performance:**
 - +1.1 piglets weaned/sow/year
 - +5.9 g/pig/day
 - 0.6% mortality in finishing

Postma et al., 2017

2b. IMPROVE

AMCRA guidelines for prudent use:

Choice	Reason for use	Additional laboratory culture	Antibacterial susceptibility test	Stock in the farm for 2 months
Yellow 1 st	Curative	Preferebly	Preferebly	Yes
Orange 2 nd	Curative		Preferebly	Yes
Red 3 rd	Curative			Not allowed

AMCRA formularium 2016

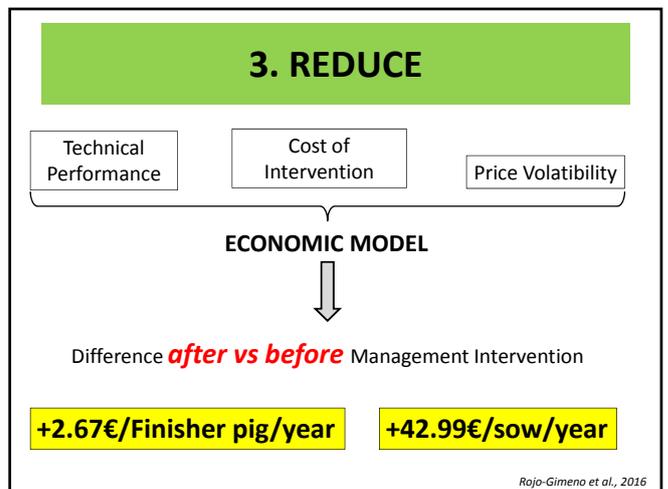
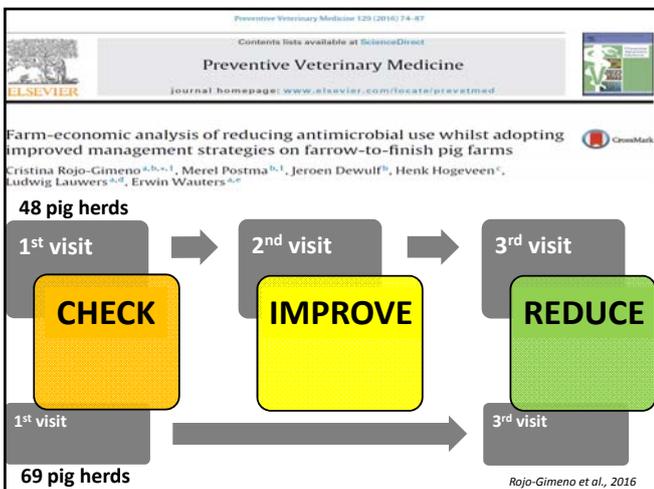
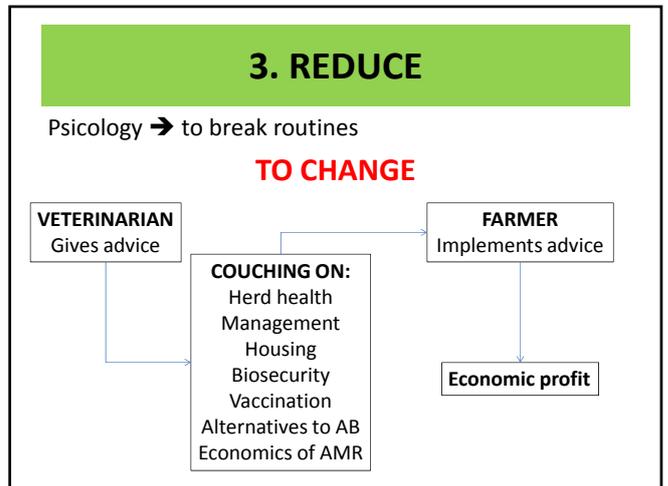
2b. IMPROVE

AMCRA Formularium:
eg. Actinobacillus pleuropneumoniae

1st – Limiting trigger factors: respiratory disease
 2nd – Management: climate, stock density
 3rd – Vaccination

Last – AB therapy

- 1st = Trim-S, Forfenicol
- 2nd = Amoxicillin, Tulathromycin
- 3rd = Ceftiofur, Marbofloxacin

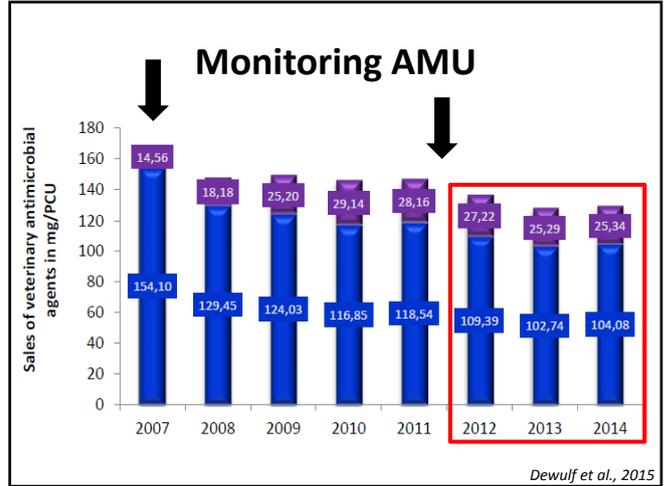


AMCRA Vision Plan 2020

An ambitious yet realistic plan for veterinary antibiotic policy until 2020

1. 50% lower antibiotic use by 2020
2. 75% lower use of the most critical antibiotics by 2020
3. 50% lower use of feed medicated with antibiotics by 2017
4. A global data collection system by 2016
5. A plan for each farm
6. Benchmarking of farmers and veterinarians
7. No antibiotics for prophylaxis, promotion of alternatives
8. Awareness-raising, repeatedly
9. Transparency and monitoring of suppliers and users
10. Surveillance of resistance to antibiotics

AMCRA 2015



CHECK – IMPROVE – REDUCE

IT IS POSSIBLE!!!!

Technical performance

Economic performance

→ Commitment between all partners

