AMCRA
IMPROVE HEALTH, REDUCE RESISTANCE

The consumption of veterinary antibacterial products in Belgium in 2022 and its evolution since 2011

MARIES LISSENS

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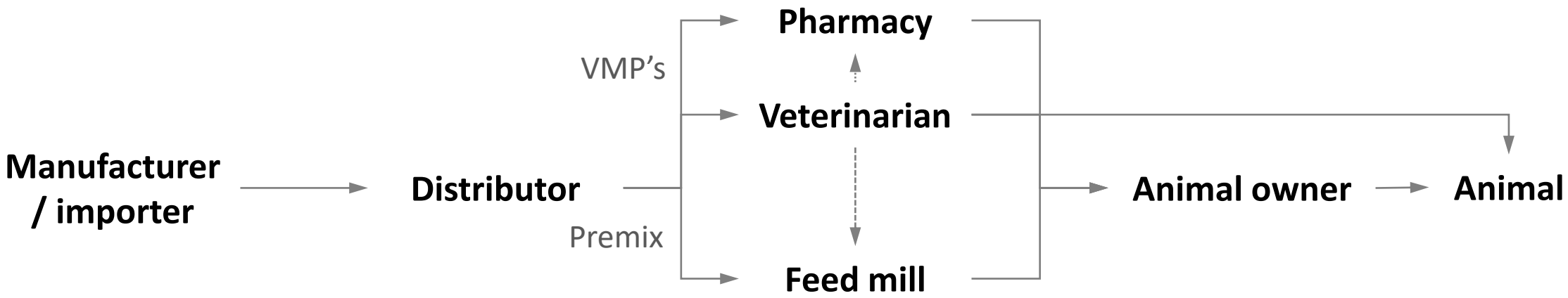
AACTING
Herd level antimicrobial consumption in animals
Collect | Analyze | Benchmark | Communicate

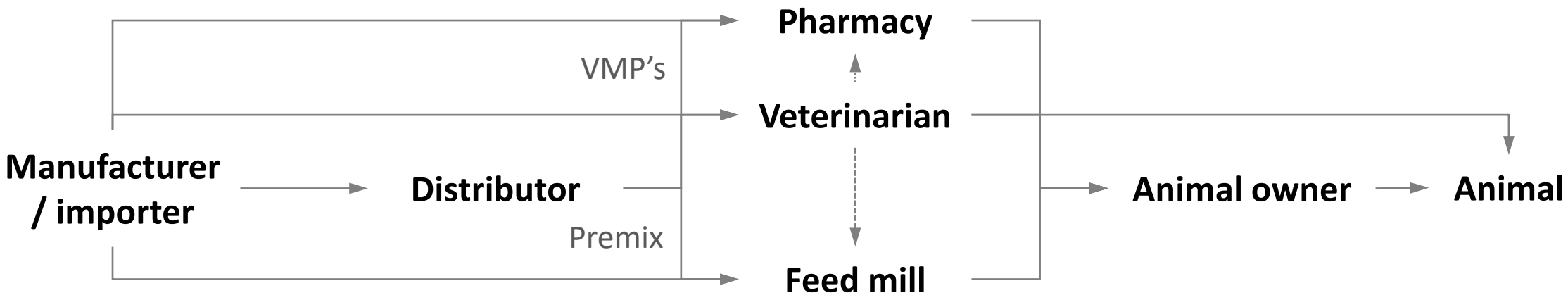
GHENT UNIVERSITY

famhp
federal agency for medicines and health products

COLLECTION AND REPORTING OF AMU IN ANIMALS IN BELGIUM



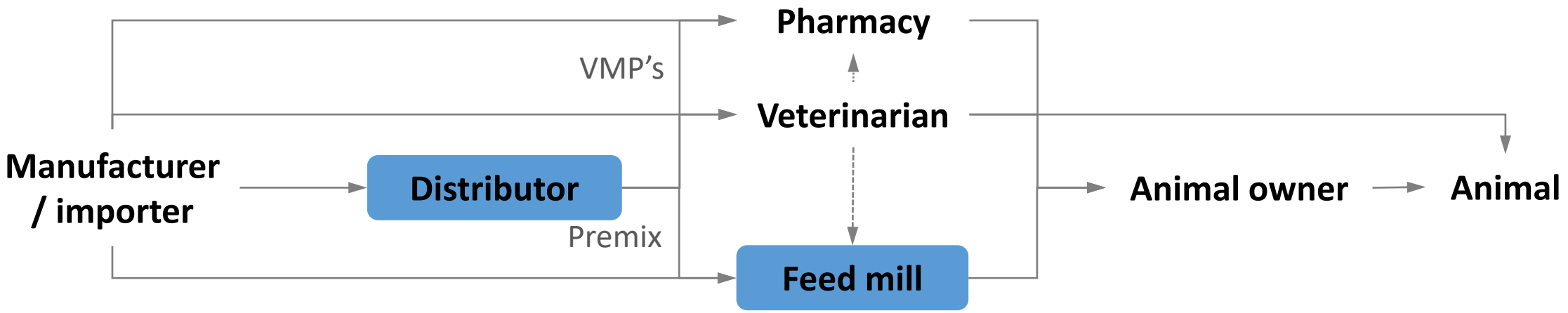
COLLECTION AND REPORTING OF AMU IN ANIMALS IN BELGIUM



Sales data (via request)

National BelVet-SAC report + ESVAC report

COLLECTION AND REPORTING OF AMU IN ANIMALS IN BELGIUM



Sales data (via request)

National BelVet-SAC report + ESVAC report

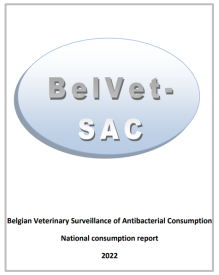
Use data (via national DC system Sanitel-Med)

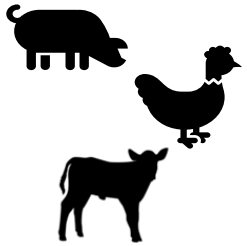
BM reports for farmers/vets + National reports

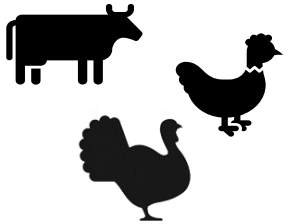
COLLECTION AND REPORTING OF AMU IN ANIMALS IN BELGIUM

GOVERNMENTAL DATA COLLECTION & REPORTING

2010	2017	2018	2019	2023
1st report national sales data	AMU DC via governmental system obliged for	1st BM reports use data farmers	1st BM reports use data vets	AMU DC via governmental system obliged for

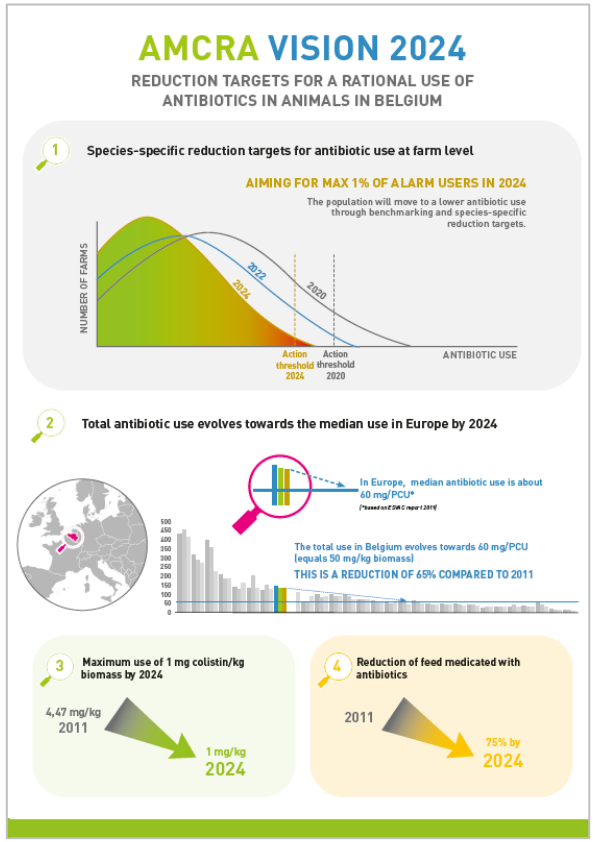






AMU POLICY IN BELGIUM: AMCRA VISION 2024

REDUCTION TARGETS FOR A RATIONAL USE OF ANTIBIOTICS IN ANIMALS IN BELGIUM

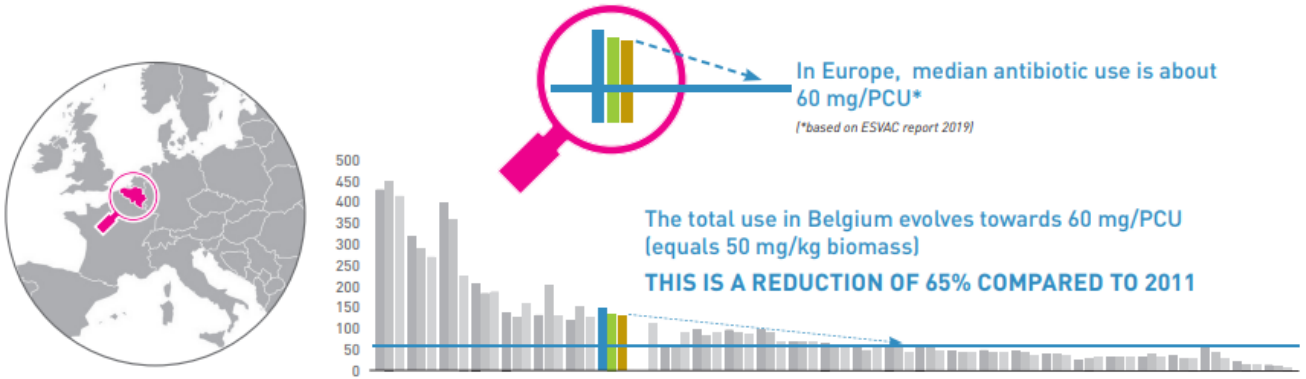


AMU POLICY IN BELGIUM: AMCRA VISION 2024

REDUCTION TARGETS FOR A RATIONAL USE OF ANTIBIOTICS IN ANIMALS IN BELGIUM

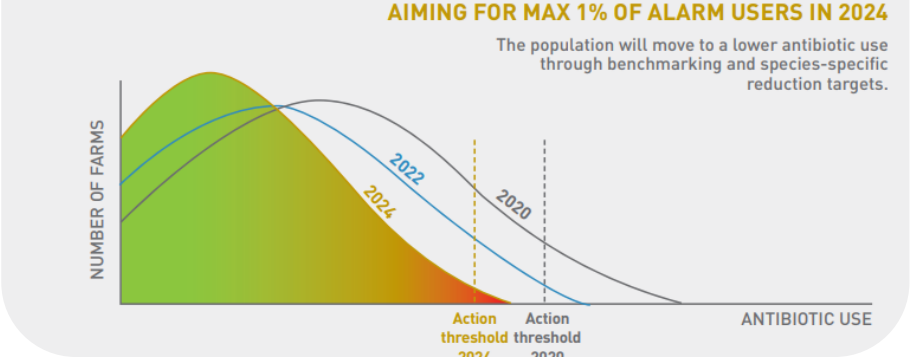
Sales

2 Total antibiotic use evolves towards the median use in Europe by 2024



Use

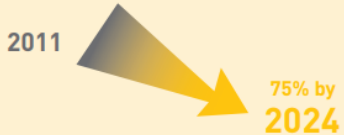
1 Species-specific reduction targets for antibiotic use at farm level



2 75% less use of the critically important antibiotics by 2020

3 Maximum use of 1 mg colistin/kg biomass by 2024

4 Reduction of feed medicated with antibiotics



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AMU Quantification: Annual BelVet-SAC report

Sales data

GHENT UNIVERSITY

famhp federal agency for medicines and health products

- Since 2011
- Collected from distributors & compound feed manufacturers
- All animal species covered
- Mass-based indicator: mg/kg biomass

AMU Quantification: Annual BelVet-SAC report

Sales data

- Since 2011
- Collected from distributors & compound feed manufacturers
- All animal species covered
- Mass-based indicator: mg/kg biomass

General trends
Limited species-specific info
per AB class

Use data

- Since 2018
- Collected at farm level

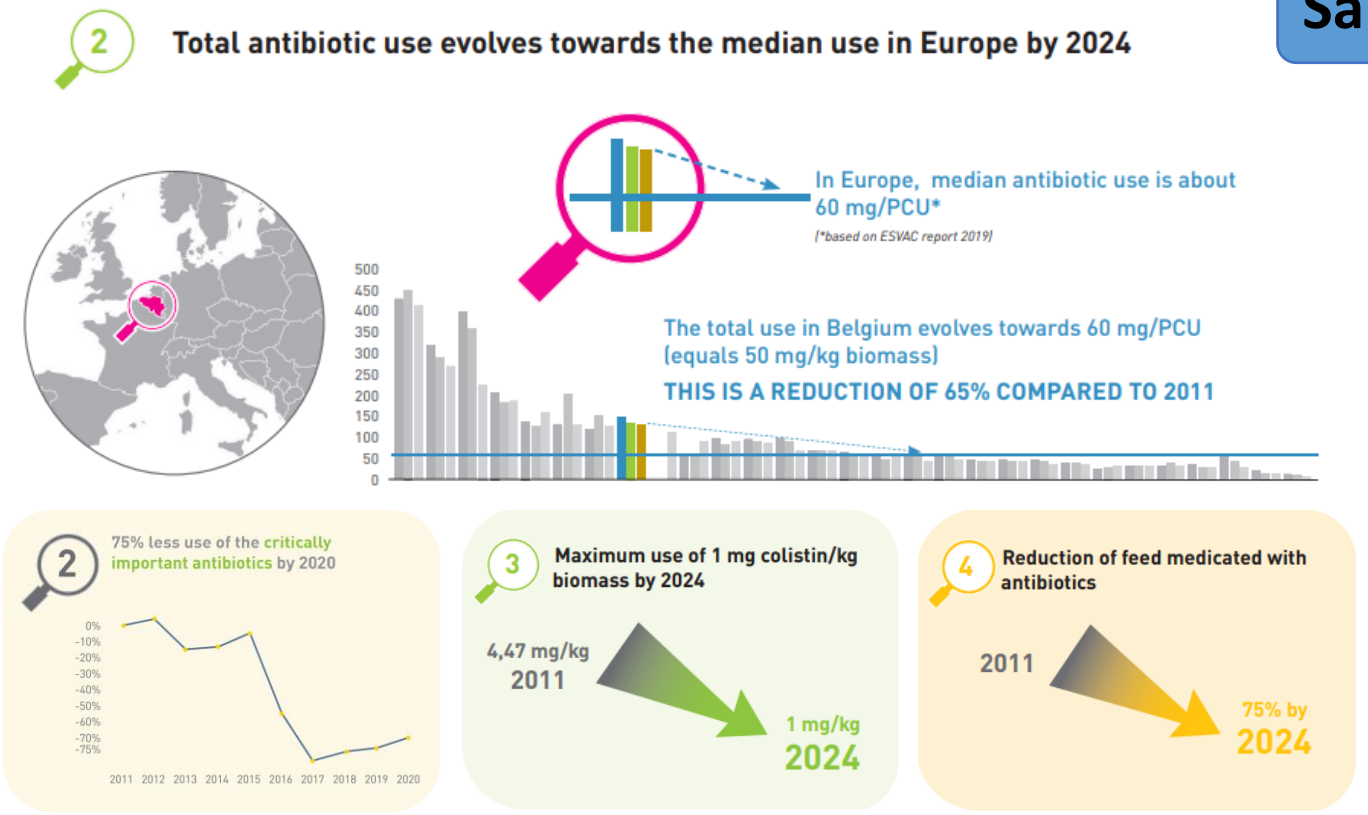
- Until 2022:
- Dose-based indicator: TD_{100}

Detailed trends
per species / animal category
per AB class

REDUCTION TARGETS FOR TOTAL AB USE

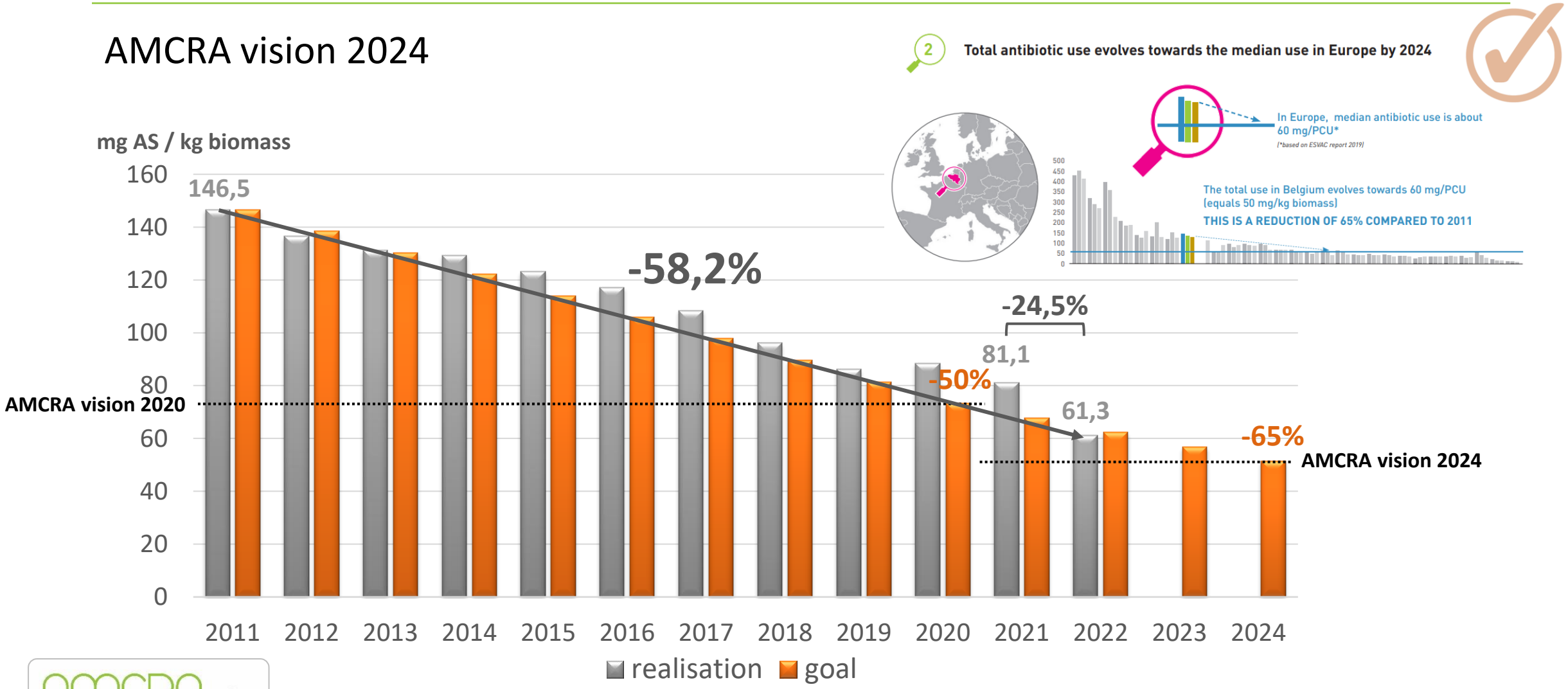
AMCRA vision 2024

Sales data



STANDARDIZED TOTAL SALES OF AS PER KG BIOMASS

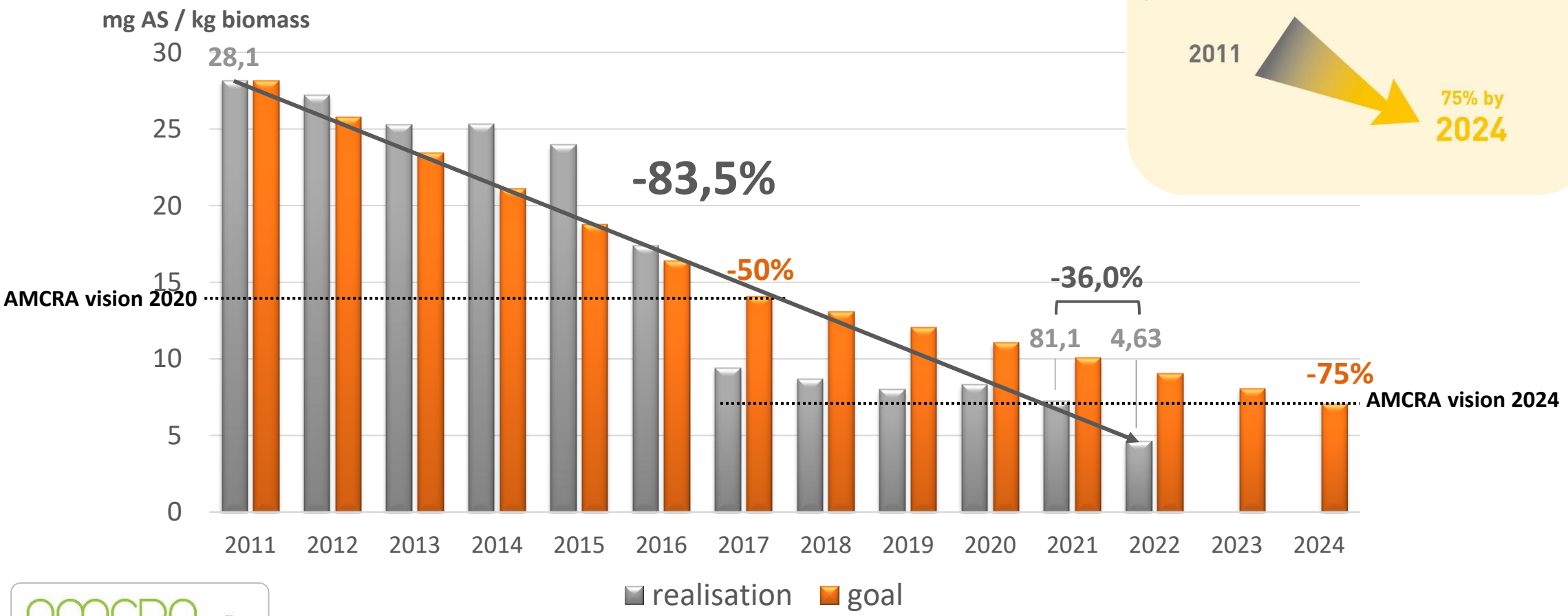
AMCRA vision 2024

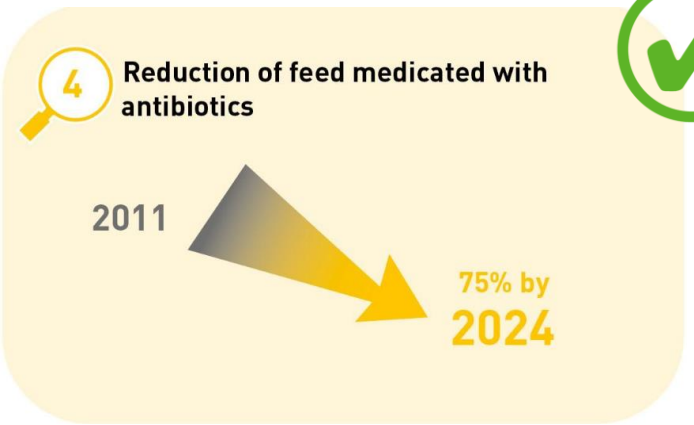


Sales

STANDARDIZED PREMIX SALES OF AS PER KG BIOMASS

AMCRA vision 2024





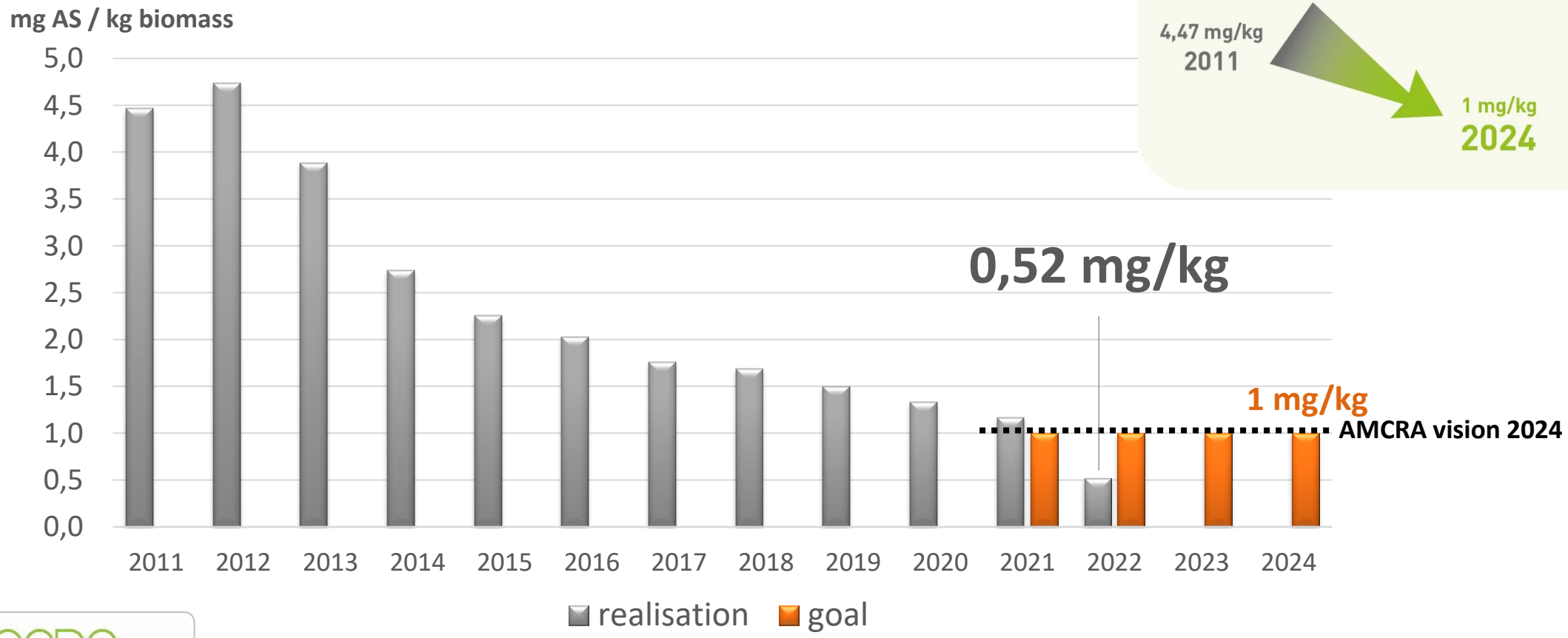
STANDARDIZED COLISTIN SALES OF AS PER KG BIOMASS

AMCRA vision 2024

3 Maximum use of 1 mg colistin/kg biomass by 2024

4,47 mg/kg 2011

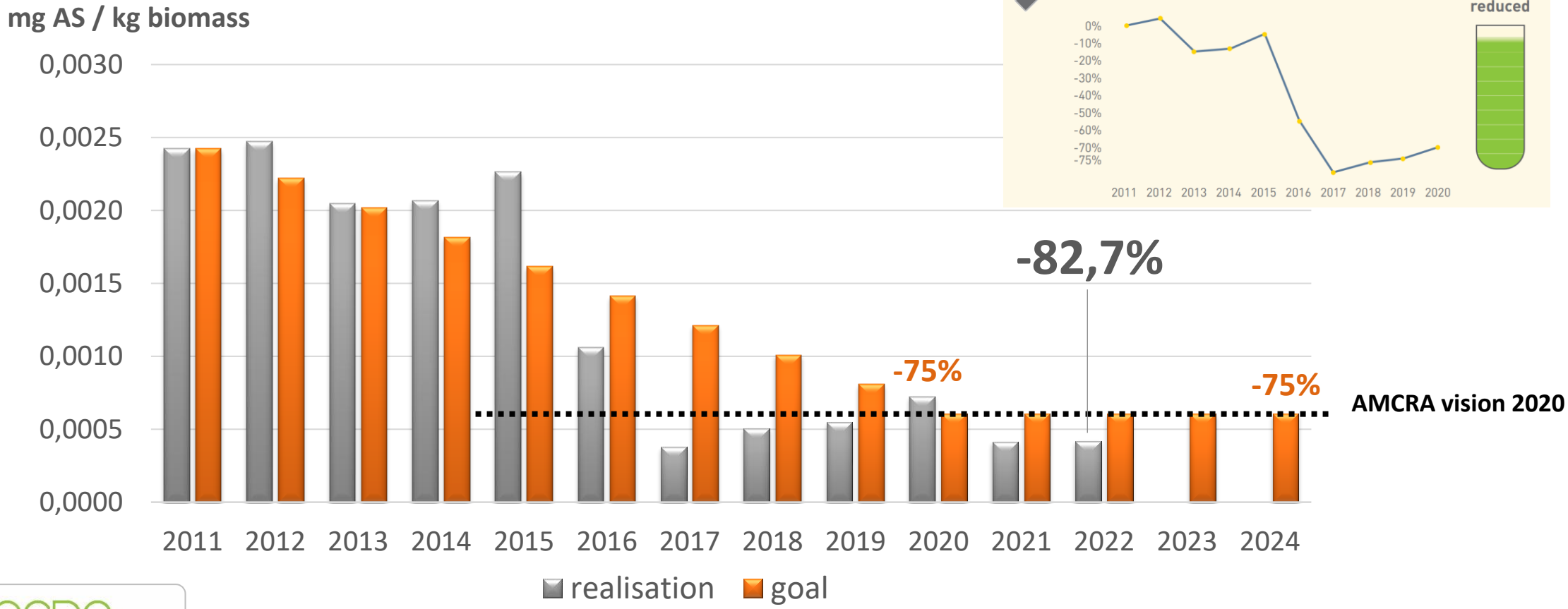
1 mg/kg 2024

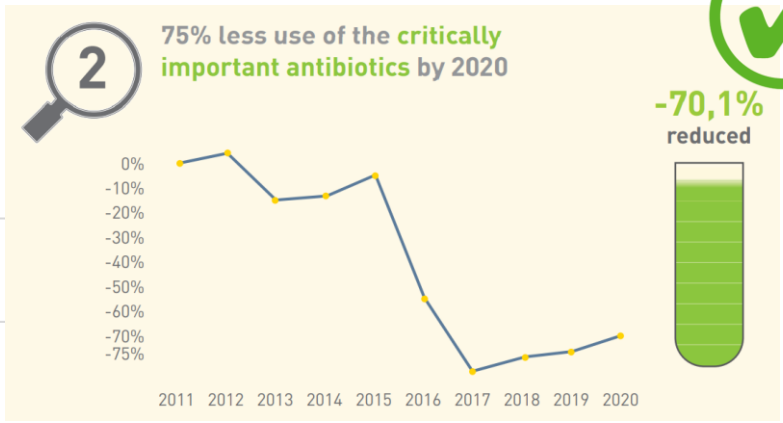


Sales

STANDARDIZED CRITICAL AB SALES PER KG BIOMASS

AMCRA vision 2020

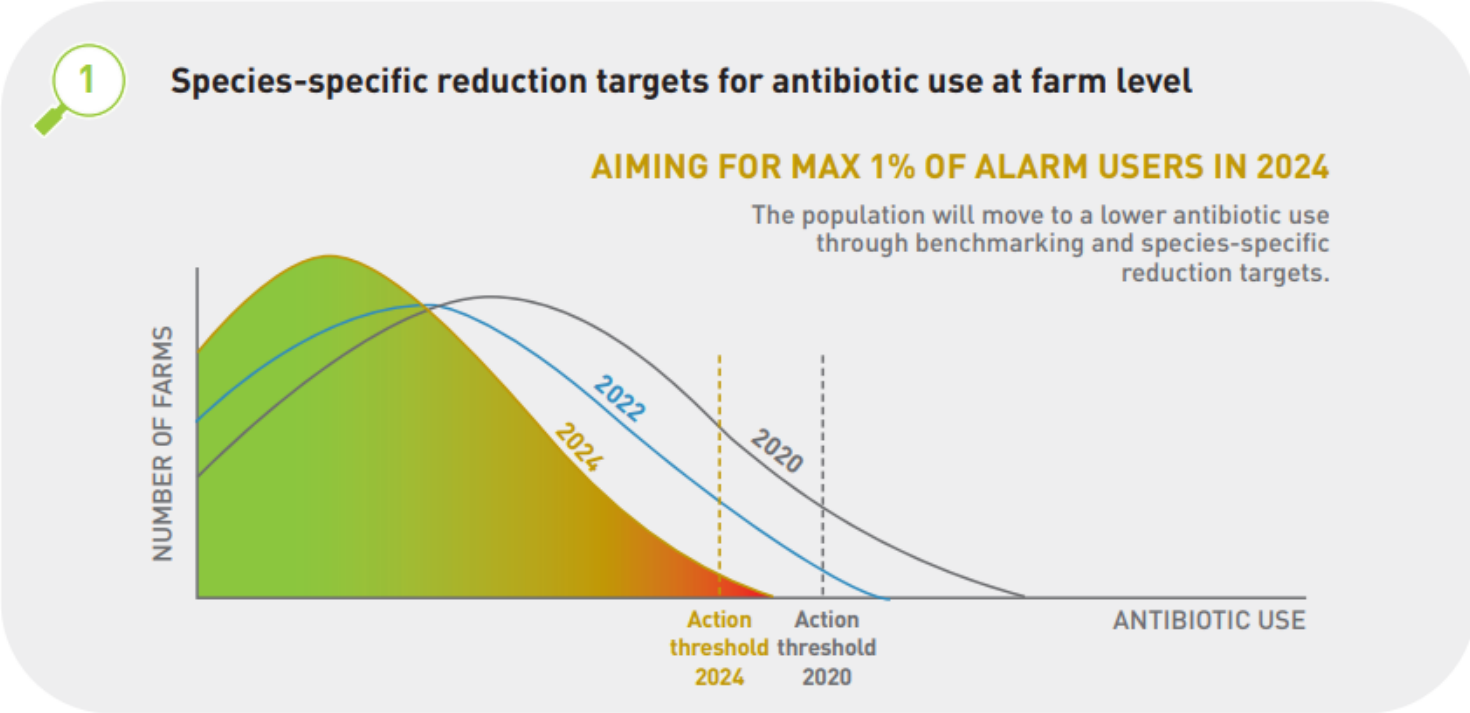




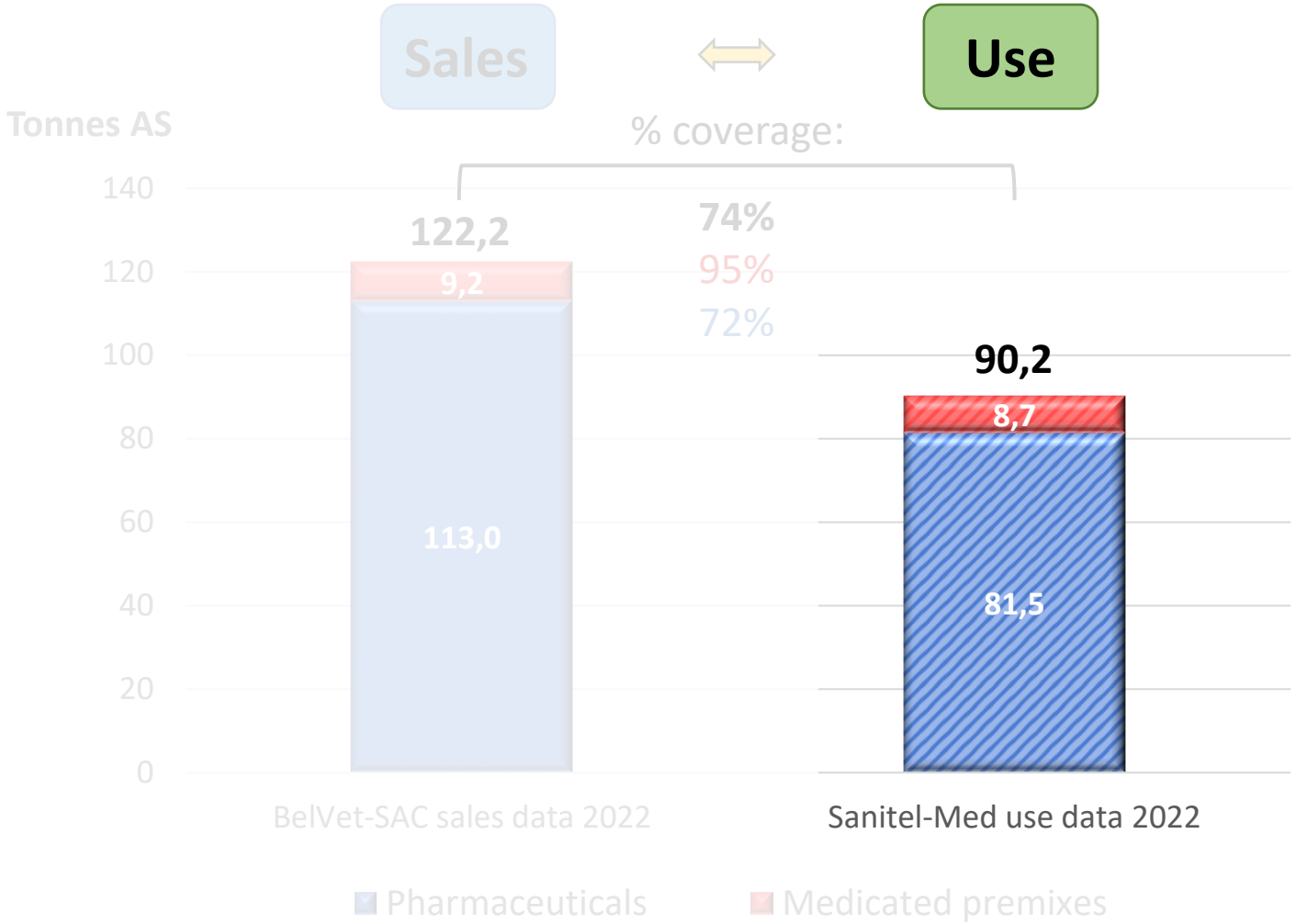
SPECIES-SPECIFIC REDUCTION TARGETS FOR AB USE

AMCRA vision 2024

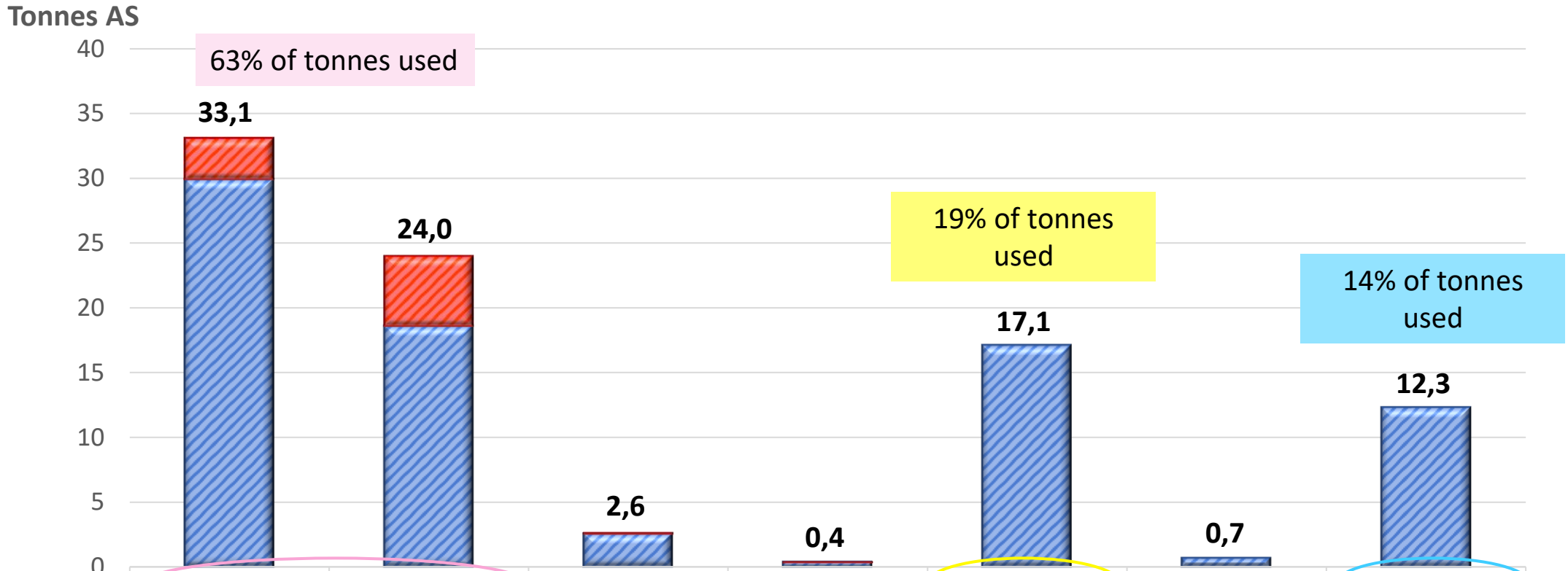
Use data



TOTAL SALES OF AS VS SANITEL-MED USE DATA



TOTAL USE OF AS PER ANIMAL CATEGORY IN SANITEL-MED



	Fatteners	Weaners	Sows/boars	Sucklers	Broilers	Laying hens	Veal calves
Medicated premixes	3,2	5,4	0,0	0,0	0	0	0
Pharmaceuticals	29,9	18,6	2,6	0,4	17,1	0,7	12,3

STANDARDIZED DOSE-BASED AB USE INDICATOR: BD_{100} PER SPECIES

$BD_{100} = TD_{100}$ (Treatment Days per 100 days)

$$TD_{100} = \frac{\text{mg antibiotic}}{DDDA_{bel} \times \text{kg animals 'at risk'} \times \text{days 'at risk'}} \times LA_{bel} \times 100$$

365 days

STATBEL
België in cijfers

Table 8. Number and kg animals at risk from 2018 till 2022 in pigs, poultry and veal calves.

	Animals at risk (x 10^3)					Kg at risk (x 10^3)				
	2018	2019	2020	2021	2022	2018	2019	2020	2021	2022
PIGS	6 209	6 085	6 218	6 039	5 751	318 869	311 901	316 048	305 965	289 561
POULTRY	43 624	44 902	49 016	48 919	48 754	54 921	55 860	60 838	60 892	60 474
VEAL CALVES	170	171	171	173	168	13 629	13 717	13 718	13 856	13 452

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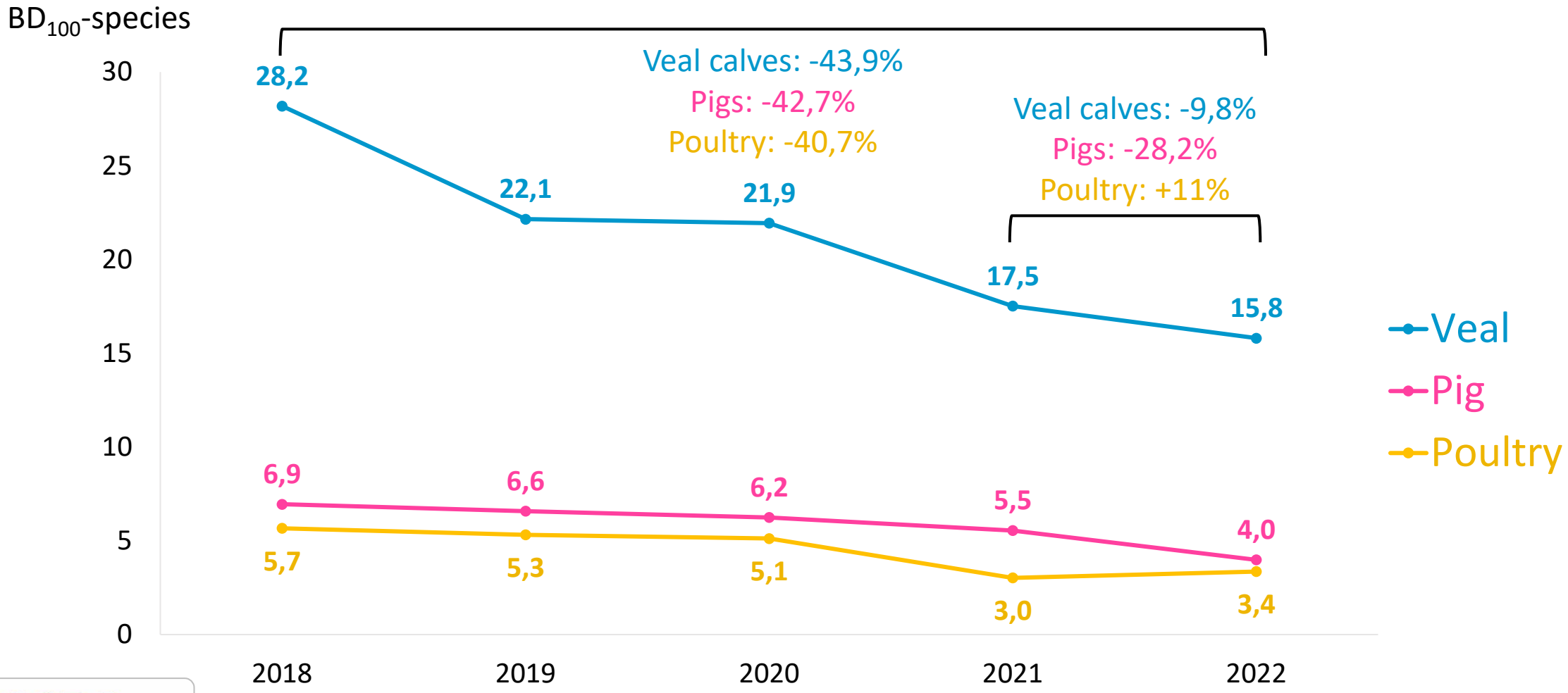
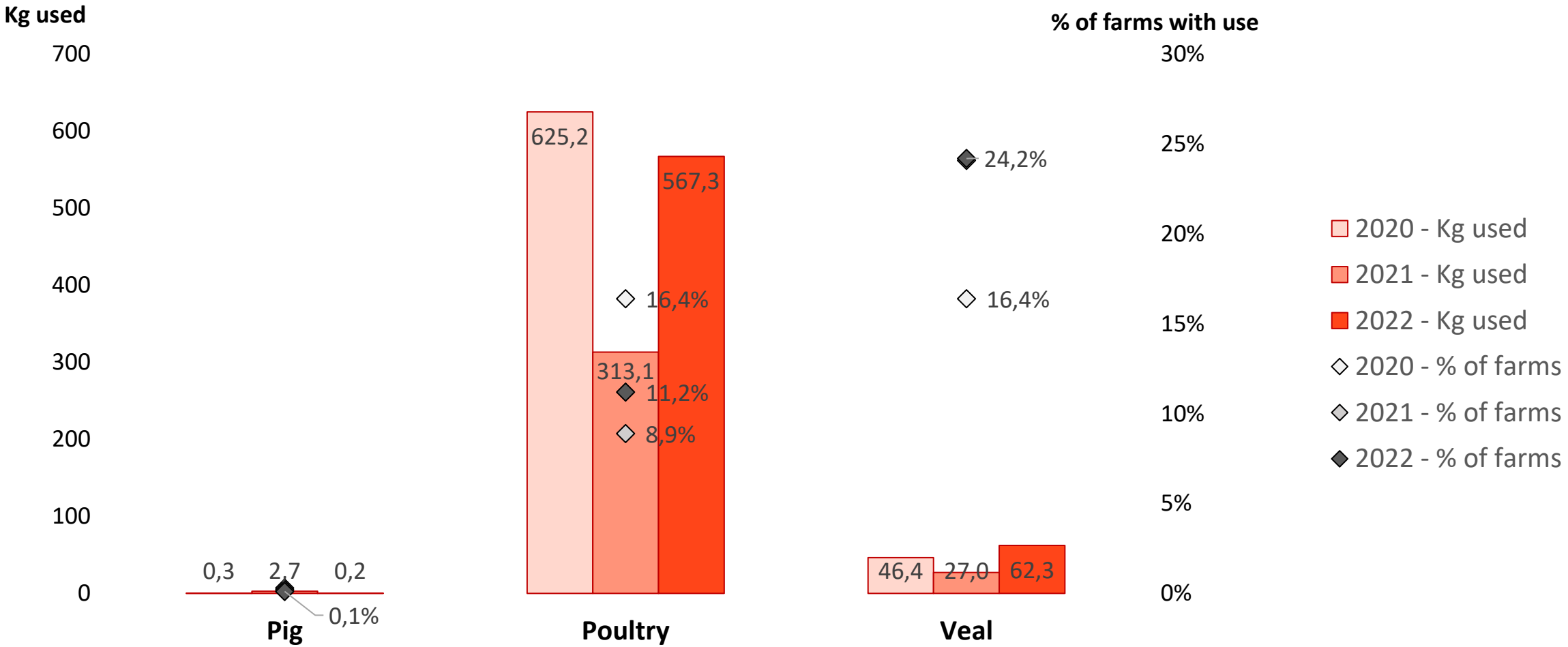
AB USE PER SPECIES: BD_{100}-SPECIES



CRITICAL AB USE PER SPECIES IN SANITEL-MED

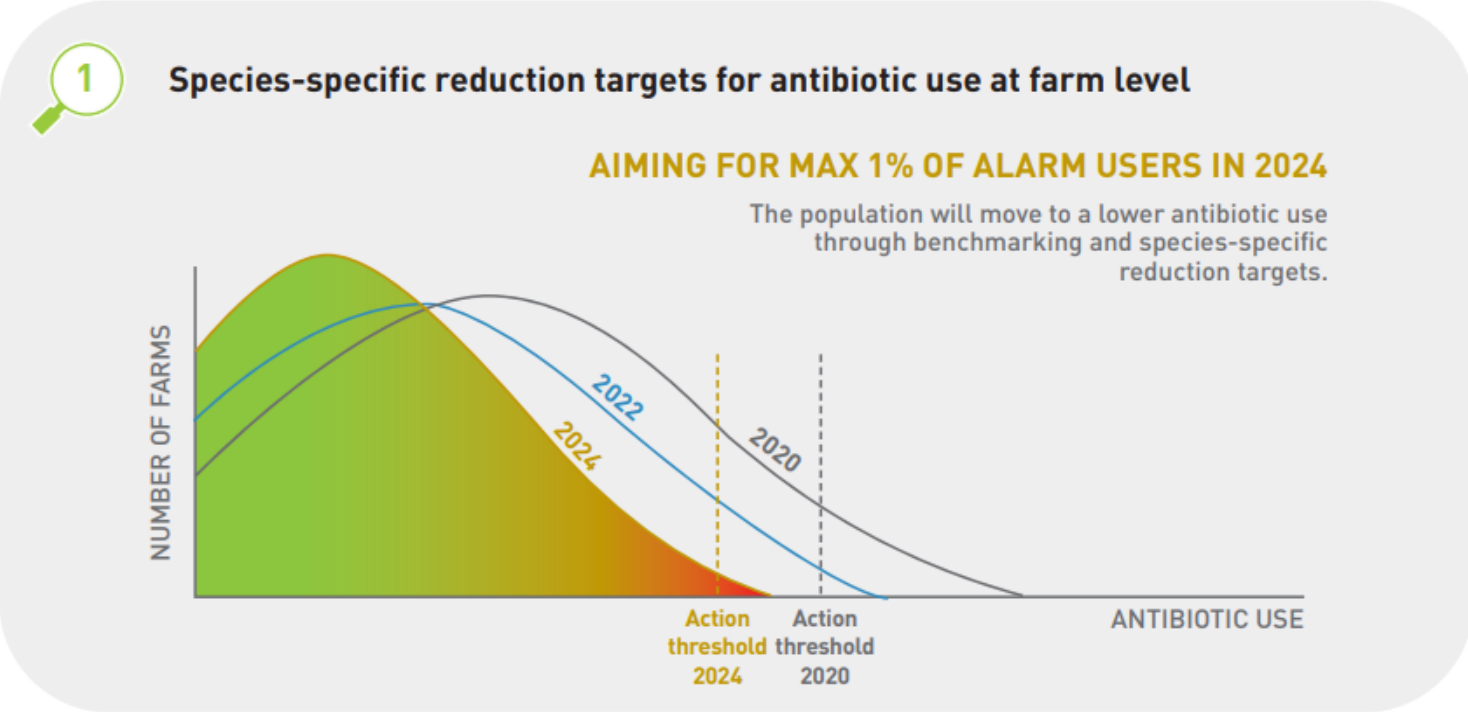


FLUOROQUINOLONES

SPECIES-SPECIFIC REDUCTION TARGETS FOR AB USE AT FARM LEVEL

AMCRA vision 2024

Use data



SPECIES-SPECIFIC REDUCTION TARGETS 2021-2024

Nursery piglets

	Alert value	Action value
01/01/2021	2	10
01/01/2023	2	6
01/01/2024	**2**	**5**

Weaning piglets

	Alert value	Action value
01/01/2021	14	50
01/01/2023	14	40
31/12/2024	**14**	**30**

Broiler chickens

	Alert value	Action value
01/01/2021	6	14
01/01/2023	5	12
31/12/2024	**5**	**10**

Fattening pigs

	Alert value	Action value
01/01/2021	2,7	9
01/01/2023	2,7	6
01/01/2024	**2,7**	**6**

Sows

	Alert value	Action value
01/01/2021	0,28	1,65
01/01/2023	0,28	1,65
01/01/2024	**0,28**	**1,65**

Veal calves

	Alert value	Action value
01/01/2021	10	15
01/01/2023	8	11
31/12/2024	**6**	**9**

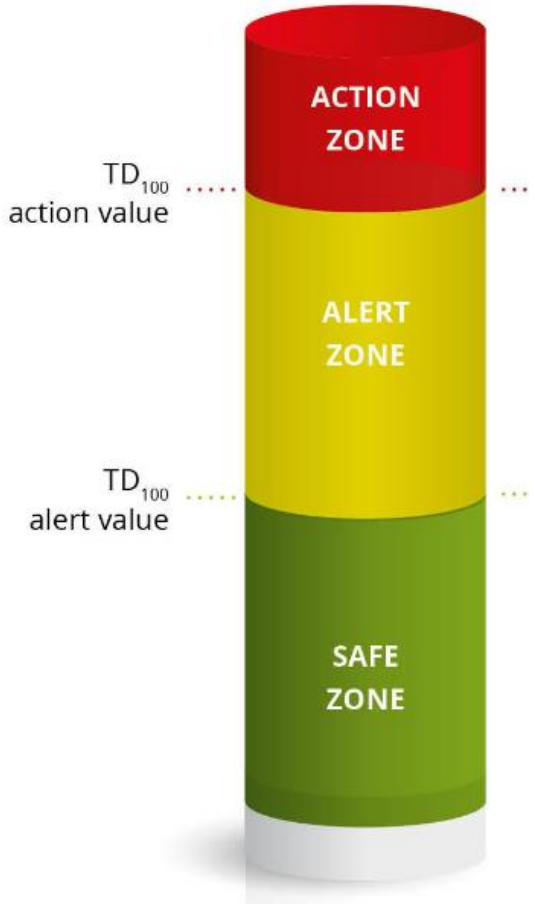
AB USE AT FARM LEVEL: BD_{100} PER FARM & ANIMAL CATEGORY

$BD_{100} = TD_{100}$ (Treatment Days per 100 days)

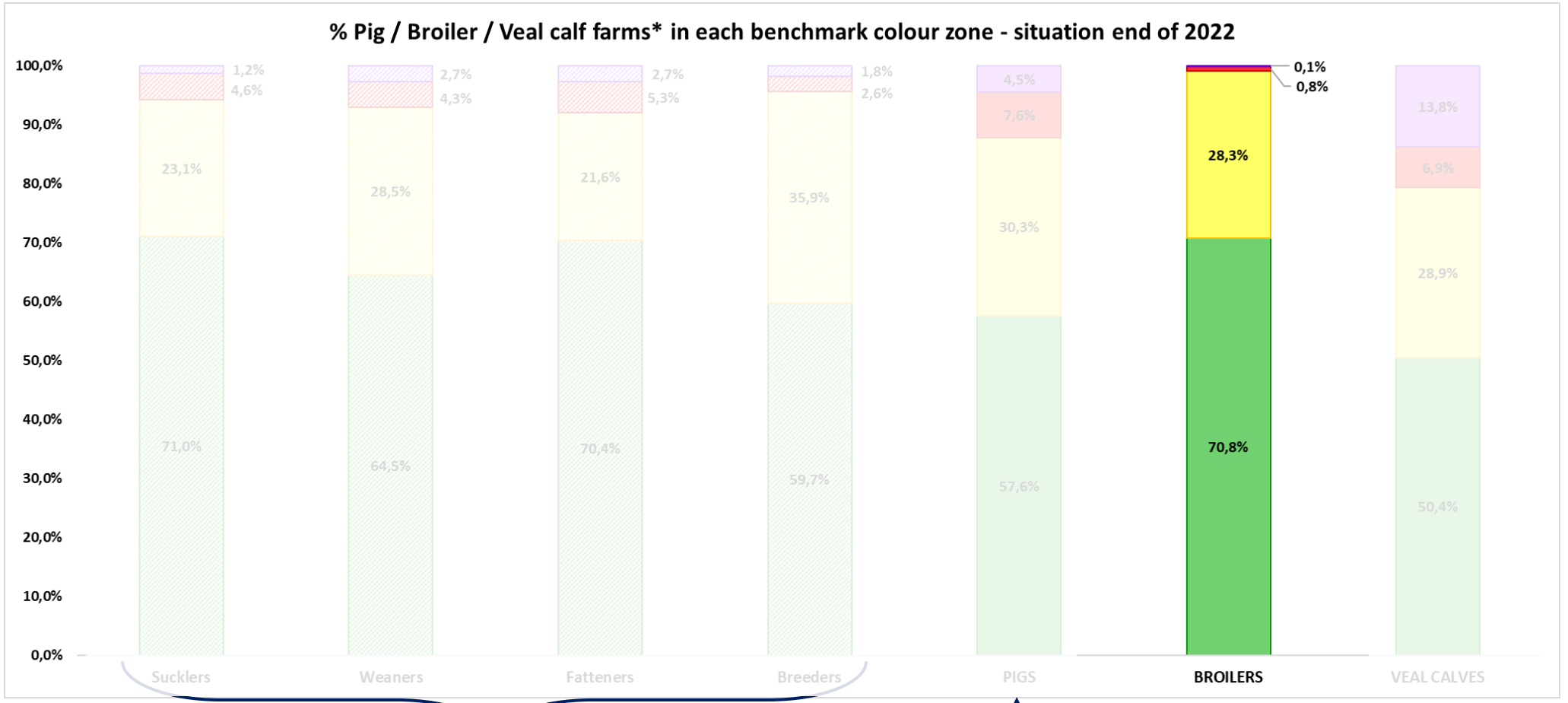
$$TD_{100} = \frac{\text{mg antibiotic}}{DDDA_{bel} \times \text{kg animals 'at risk'} \times \text{days 'at risk'}} \times LA_{bel} \times 100$$

Farm-specific
Animal category-specific

AB USE AT FARM LEVEL: BD_{100} PER FARM & ANIMAL CATEGORY

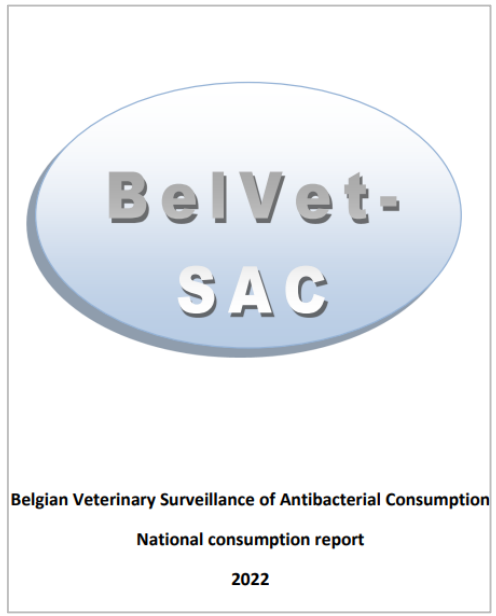


AB USE AT FARM LEVEL: BD_{100} PER FARM & ANIMAL CATEGORY



CONCLUSIONS AMU IN BELGIUM IN 2022

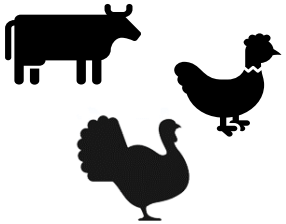
- Very good results obtained in 2022 due to combined efforts in all sectors
- The reduction targets for use of critically important antibiotics, colistin and medicated premixes were all maintained or achieved in 2022
- Challenges are still ahead to obtain targeted 50 mg / kg biomass use with a maximum of 1% alarm users in each sector by 2024

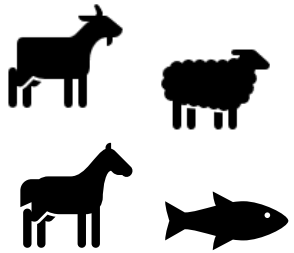


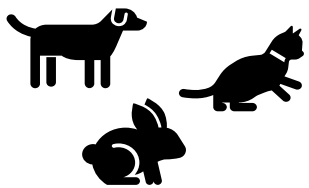
FUTURE CHALLENGES FOR AMU IN BELGIUM

GOVERNMENTAL DATA COLLECTION & REPORTING

2023	2026	2029
AMU DC via governmental system obliged for	AMU DC for all food-producing animals	AMU DC for all animals bred or kept





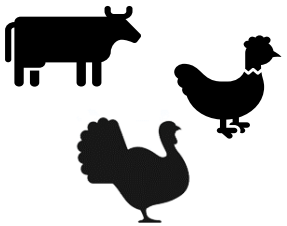


FUTURE CHALLENGES FOR AMU IN BELGIUM

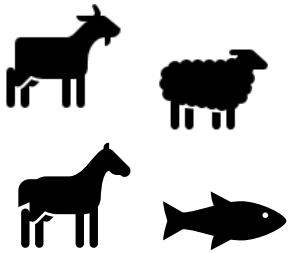
GOVERNMENTAL DATA COLLECTION & REPORTING

2023 → 2026 → 2029

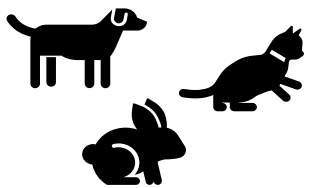
AMU DC via governmental system obliged for



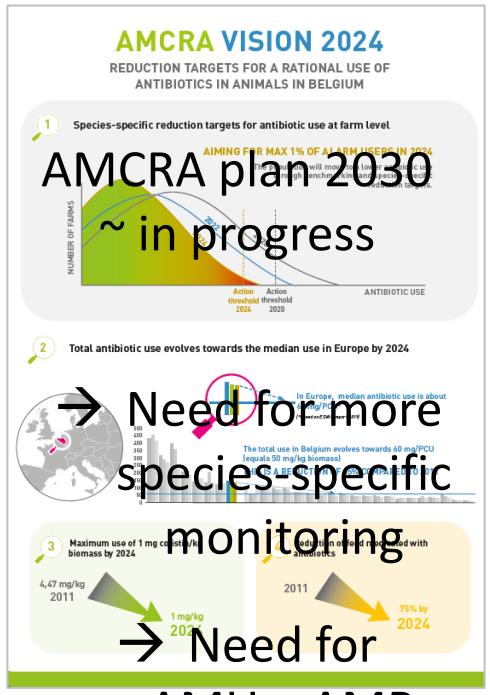
AMU DC for all food-producing animals



AMU DC for all animals bred or kept



AMU POLICY



AMCRA plan 2030 ~ in progress

→ Need for more species-specific monitoring

→ Need for AMU ~ AMR

BELGIAN OUTPUT/REPORTS ON AMU IN ANIMALS

Barometer:
follow-up AB-use
4x a year
per animal category

BELGIAN OUTPUT/REPORTS ON AMU IN ANIMALS

Barometer:
follow-up AB-use
<u>4x a year</u>
<u>per animal category</u>

BELMAP One health report:
Since 2021, 1x per year
<u>AMU + AMR</u>
<u>Human + animals + environment</u>

ACKNOWLEDGEMENTS

- AMCRA-colleagues
- Prof. Jeroen Dewulf,
  Drs. Reshat Jashari
- Dr. Antita Adriaens,
  Dr. Lies Van Nieuwenhove,
  Apr. Inge Vandenbulcke

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