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toute une vie en bonne santé

TENDANCE ET OCCURRENCE DES RÉSISTANCES AUX ANTIBIOTIQUES CHEZ *SALMONELLA*, *CAMPYLOBACTER* ET *E. COLI* ISOLÉES À PARTIR D'ALIMENTS

22/06/2020

NRL-AMR-Food & Food producing animals

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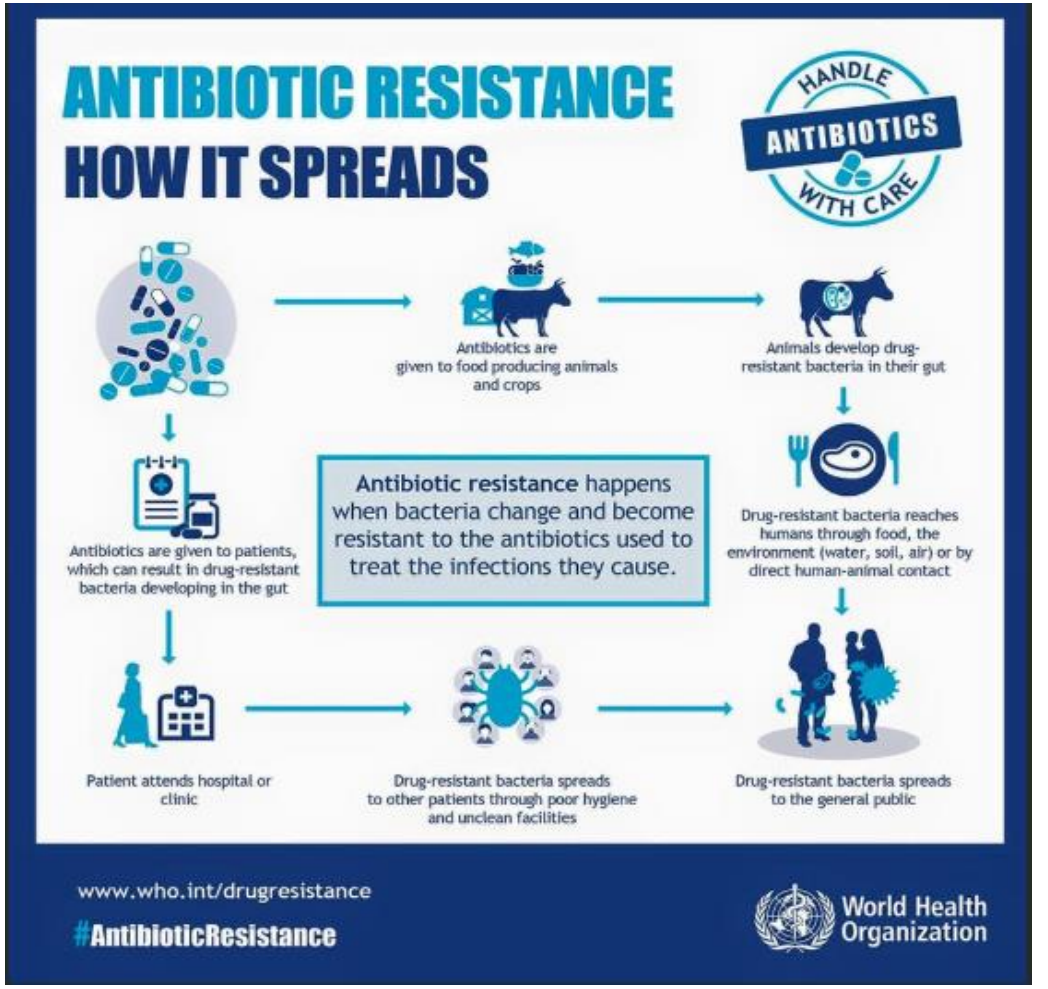
Comment la résistance aux antibiotiques se propage - approche OH



ECDC-EFSA forces réunies

Commission Implementing Decision 2013/652/EU
of 12 November 2013

Animal/Food

- Poultry
  - Laying hens
  - Broilers
  - Turkeys*
- Pigs
- Calves*< 1year of age

Food

- Meat
  - Beef, Pork, Broiler meat

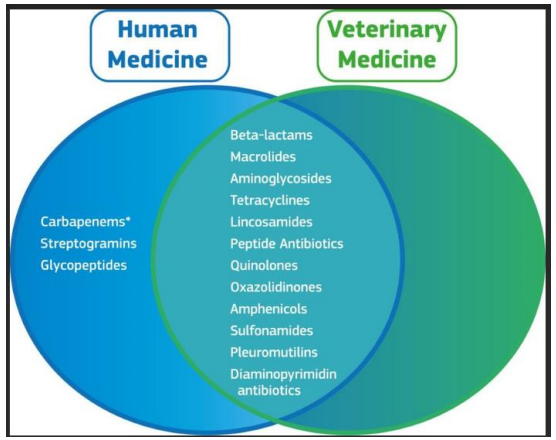
* +10,000 t/year

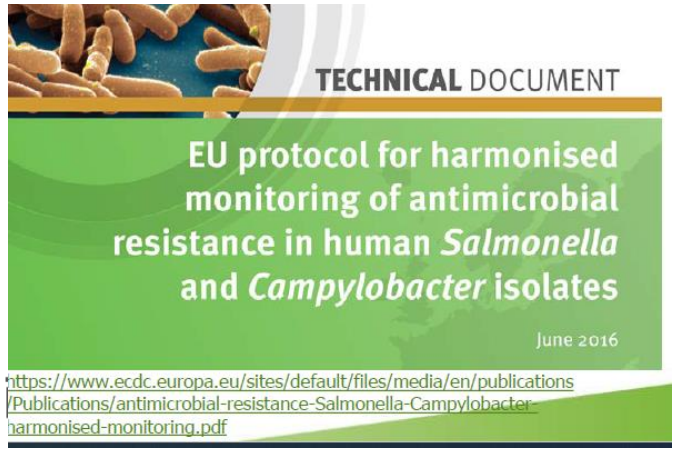
Zoonotic Bacteria

- *Salmonella* spp.
- *C. jejuni* / *C. coli*
- ESBL-/AmpC-/Carbapenemase-producing *Salmonella*

Indicator Bacteria

- *E. coli*
- *E. faecalis* / *E. faecium*
- ESBL-/AmpC-/Carbapenemase-producing *E. Coli*





https://www.ecdc.europa.eu/sites/default/files/media/en/publications/Publications/antimicrobial-resistance-Salmonella-Campylobacter-harmonised-monitoring.pdf

SCIENTIFIC REPORT

EFSA Journal

APPROVED: 31 January 2020

doi: 10.2903/j.efsa.2020.6007

The European Union Summary Report on Antimicrobial Resistance in zoonotic and indicator bacteria from humans, animals and food in 2017/2018

European Food Safety Authority and
European Centre for Disease Prevention and Control

Panel de substances antimicrobiennes inclus dans la surveillance

WHO Critically Important Antimicrobials for Human Medicine 6th revision

Advisory Group on Integrated Surveillance of Antimicrobial Resistance (AGISAR)
November 2018

Organisation mondiale de la Santé

Summary of categorization and prioritization of antimicrobials categorized as Critically Important, Highly Important and Important

	Antimicrobial class	Criterion / Prioritization factor (Yes=●)				
	CRITICALLY IMPORTANT ANTIMICROBIALS	C1	C2	P1	P2	P3
	HIGHEST PRIORITY					
Highest Priority	*Cephalosporins (3rd, 4th and 5th generation)*	●	●	●	●	●
Highest Priority	*Glycopeptides*	●	●	●	●	●
Highest Priority	*Macrolides and ketolides*	●	●	●	●	●
Highest Priority	*Polymyxins*	●	●	●	●	●
Highest Priority	*Quinolones*	●	●	●	●	●
	HIGH PRIORITY					
	Aminoglycosides	●	●		●	●
	Ansamycins	●	●	●	●	
	Carbapenems and other penems	●	●	●	●	
	Glycylcyclines	●	●	●		
	Lipopeptides	●	●	●		
	Monobactams	●	●	●		
	Oxazolidinones	●	●	●		
	Penicillins (antipseudomonal)	●	●		●	
	Penicillins (aminopenicillins)	●	●		●	●
	Penicillins (aminopenicillins with β-lactamase inhibitors)	●	●		●	●
	Phosphonic acid derivatives	●	●	●	●	
	Drugs used solely to treat tuberculosis / mycobacterial diseases	●	●	●	●	
	HIGHLY IMPORTANT ANTIMICROBIALS	C1	C2	P1	P2	P3

Critically Important Antimicrobials

C1 Criterion 1

The antimicrobial class is the sole, or one of limited available therapies, to treat serious bacterial infections in people.

C2 Criterion 2

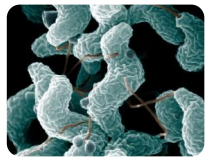
The antimicrobial class is used to treat infections in people caused by either: (1) bacteria that may be transmitted to humans from nonhuman sources, or (2) bacteria that may acquire resistance genes from nonhuman sources.

P1 Prioritization factor 1

Large number of people in the community or in certain high-risk populations (e.g. patients with serious infections in health care settings), who are affected by diseases for

European Commission
Directorate-General for Health and Food Safety (DG SANTE)

Antimicrobien
Tétracycline
Acide nalidixique
Ciprofloxacine
Erythromycine
Gentamicine
Streptomycine



Antimicrobien
Ampicilline
Céfotaxime
Ceftazidime
Méropénème
Acide Nalidixique
Ciprofloxacine
Tétracycline
Colistine
Gentamicine
Triméthoprime
Sulfaméthoxazole
Chloramphénicol
Azithromycine
Tigécycline

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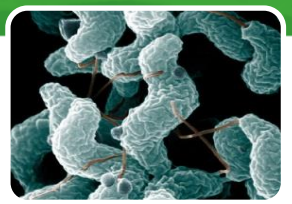
http://www.who.int/foodsafety/publications/CIAflyer_fr.pdf

La RAM dans les aliments : programmes de surveillance



Campylobacter spp.

- *C. coli* in pork (end in 2015)
- *C. jejuni* in poultry meat

- AMR Priority : Profile of resistance and emerging resistance to macrolides

Salmonella spp.

- *Salmonella* in Broilers and laying Hens National Control Plan (yearly).
- *Salmonella* from poultry neck skin (odd years)
- *Salmonella* in pork and bovine carcasses (even years)
- *Salmonella* in food and feed

- AMR Priority:
  - ß-lactams and carbapenems R
  - Colistin R
  - Tigecycline R
  - Co-resistance to CIA
  - MDR

E.coli (ß-lactamase/Carbapenemase producing)

- Detection of ESBL:
  - *ESBL* in poultry meat (since 2011)
  - *ESBL* in pork meat (since 2013)
  - *ESBL* in beef meat (since 2013)
  - *ESBL* in fish (since 2015)
  - *ESBL* in milk (since 2017)
  - *ESBL* in fruits and vegetables (since 2019)

- AMR Priority :
  - Carbapenems R
  - Colistin R
  - Tigecycline R
  - Co-resistance to CIA
  - MDR

SC •A•F•S•C•A• Agence Fédérale pour la Sécurité de la Chaîne Alimentaire

European Commission
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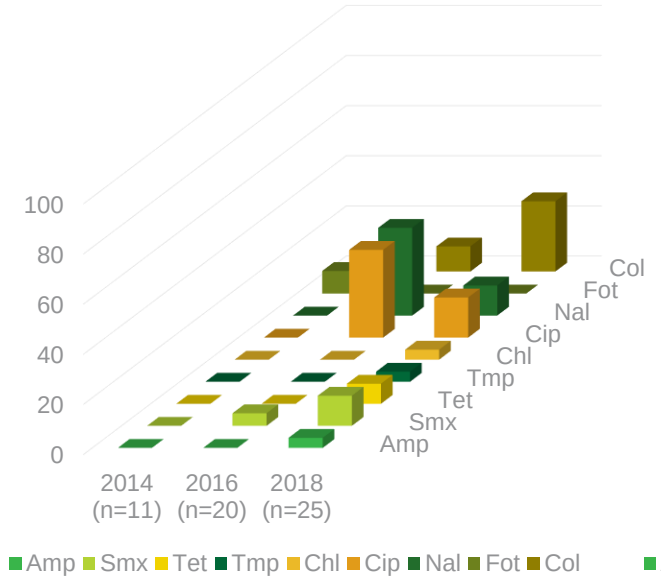
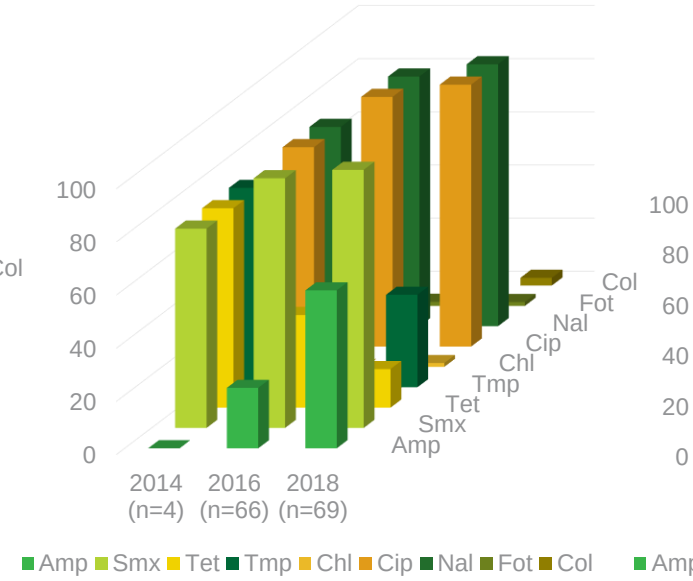
La RAM de *Salmonella* spp. isolée des carcasses de poulets de chair à l'abattoir

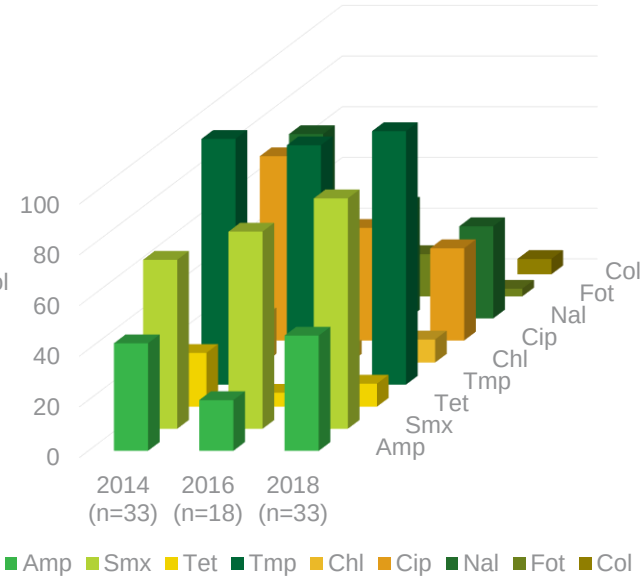
S. Enteritidis



S. Infantis



S. Paratyphi B

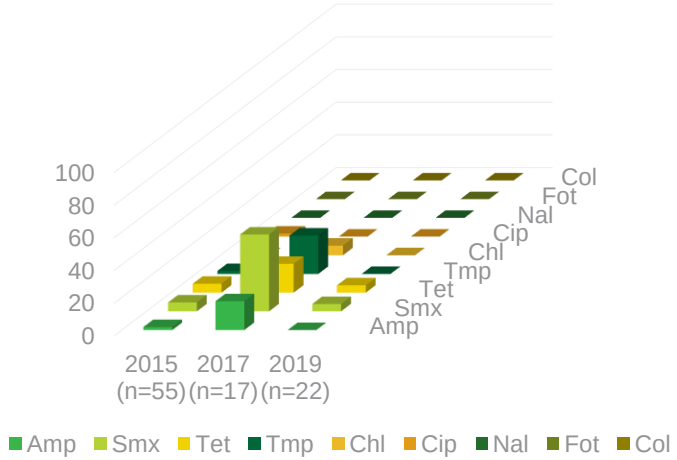


Trends 2014-2018		
↑ Col	↑ Amp, Tmp	↑ Smx, Col
↓ Cip	↓ Tet	↓ Cip Nal Fot
	= Cip, Nal, Smx	

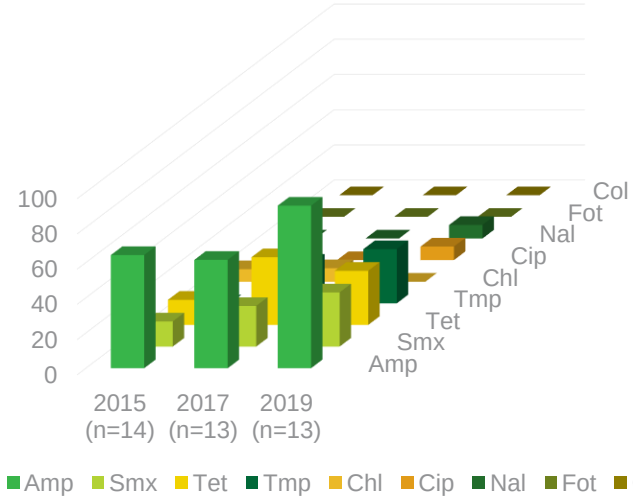
Susceptibilité complète et multirésistance

La RAM de *Salmonella* spp. isolée des carcasses de porcs à l'abattoir

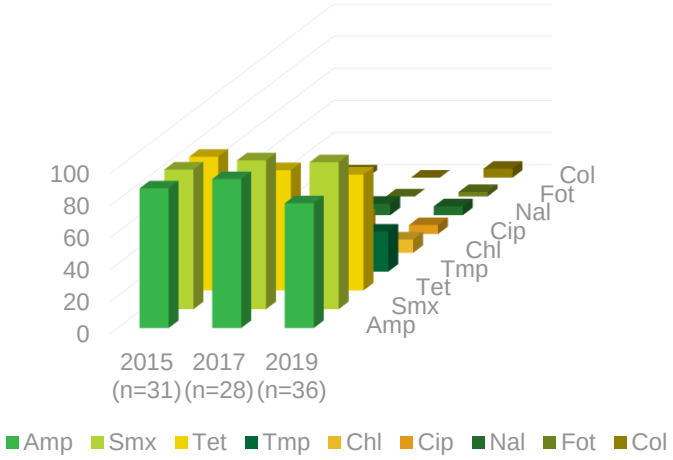
S. Derby



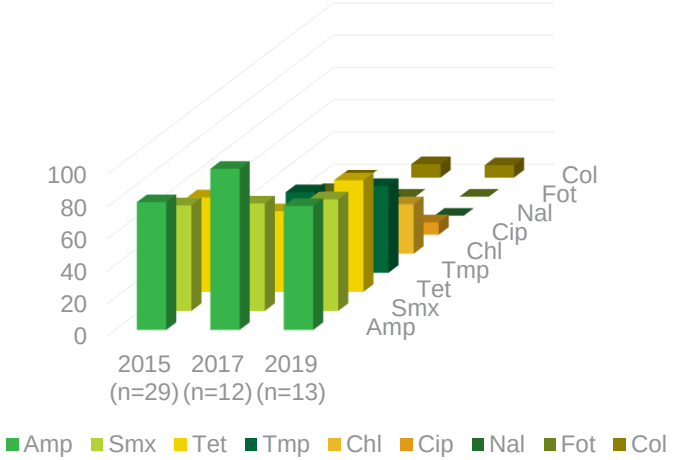
S. Typhimurium



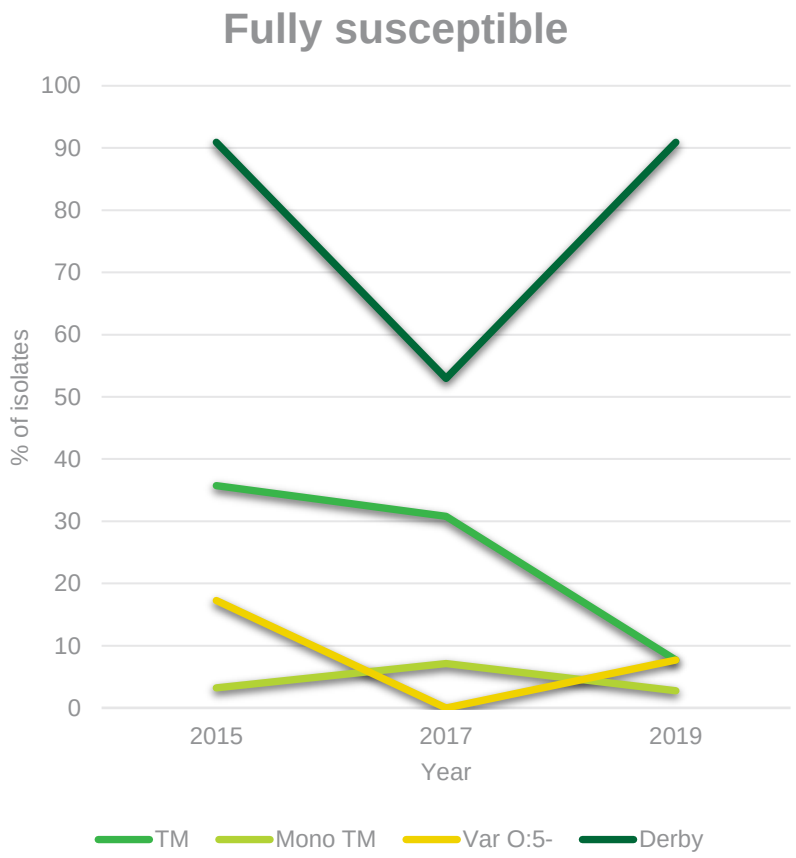
Monophasic *S.* Typhimurium

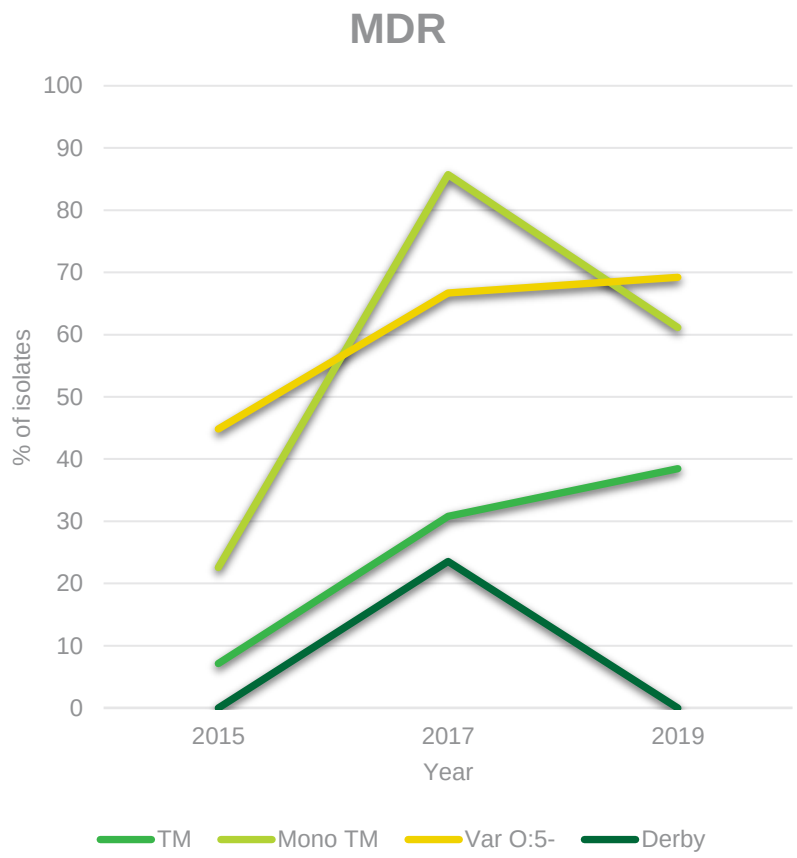


S. Typhimurium var O-



Susceptibilité complète et multirésistance





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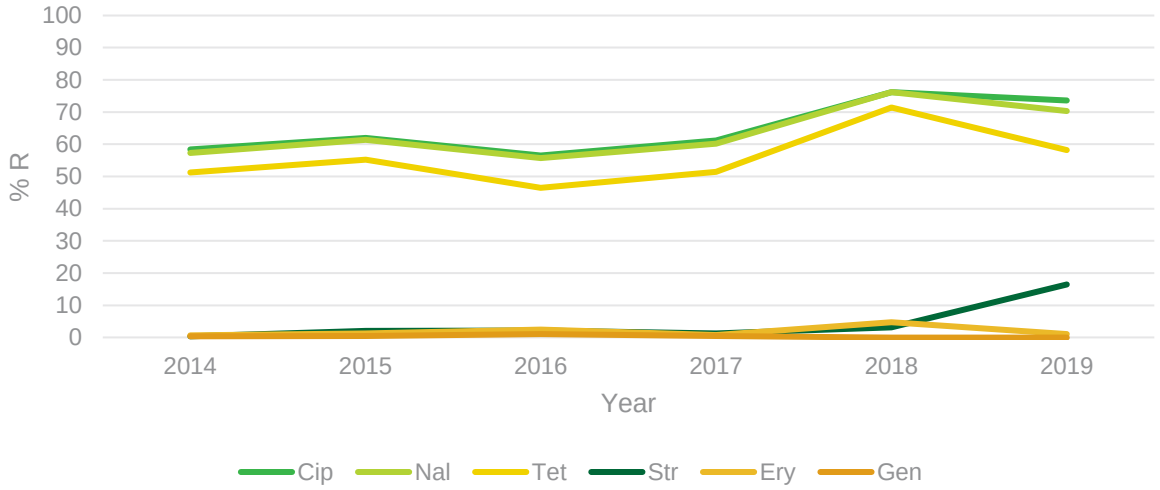
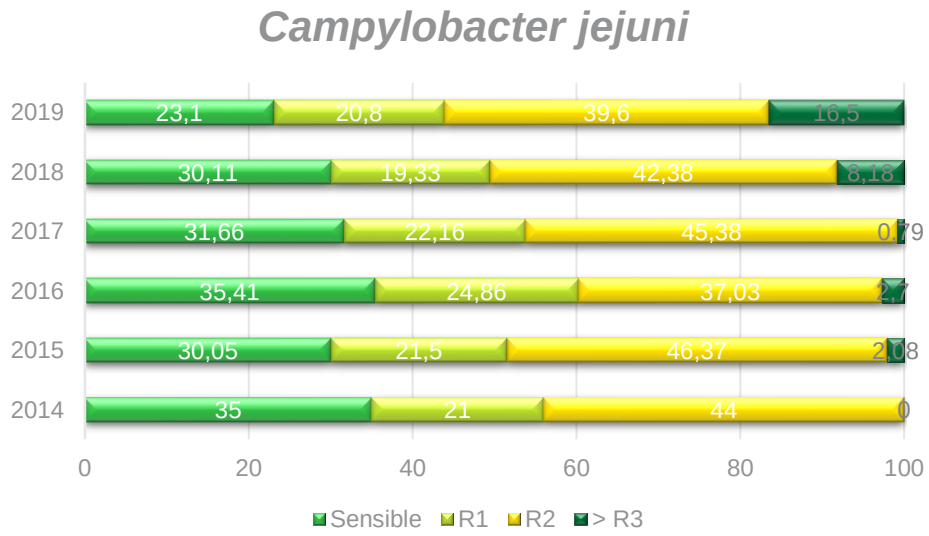
Campylobacter jejuni isolé de la (viande de) volaille

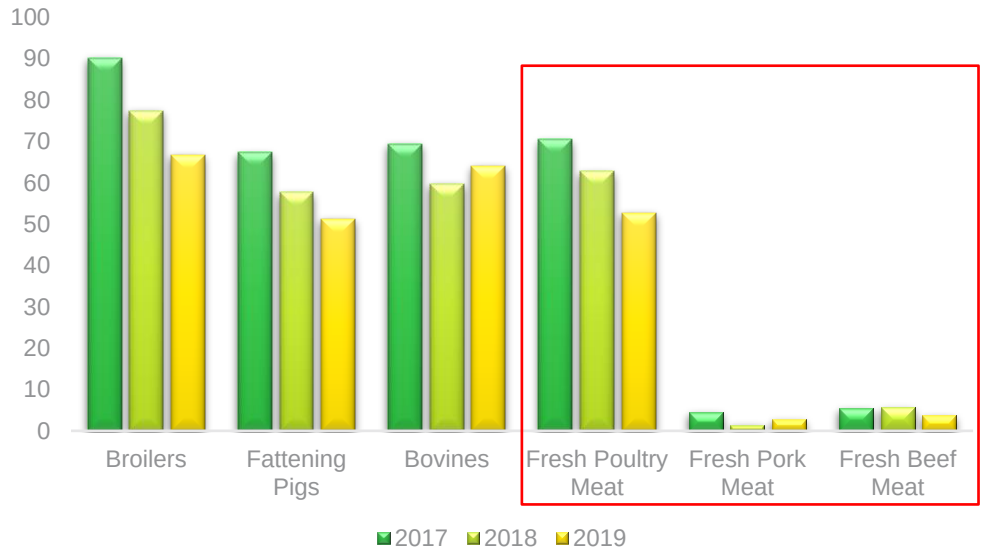


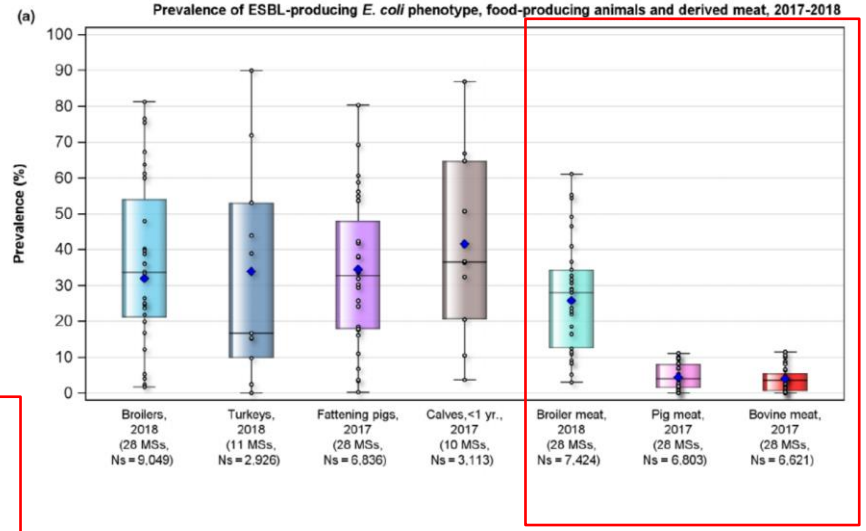
Profile de R	n	%
Sensibles	49	30,25
Cip	6	3,70
CipNal	24	14,81
CipNalStrTet	17	10,49
CipNalTet	61	37,65
CipTet	1	0,62
Ery	1	0,62
Tet	3	1,85
Total	162	



Prévalence d'*E. coli* ESBL dans la viande fraîche

Belgium situation, 2017-2019

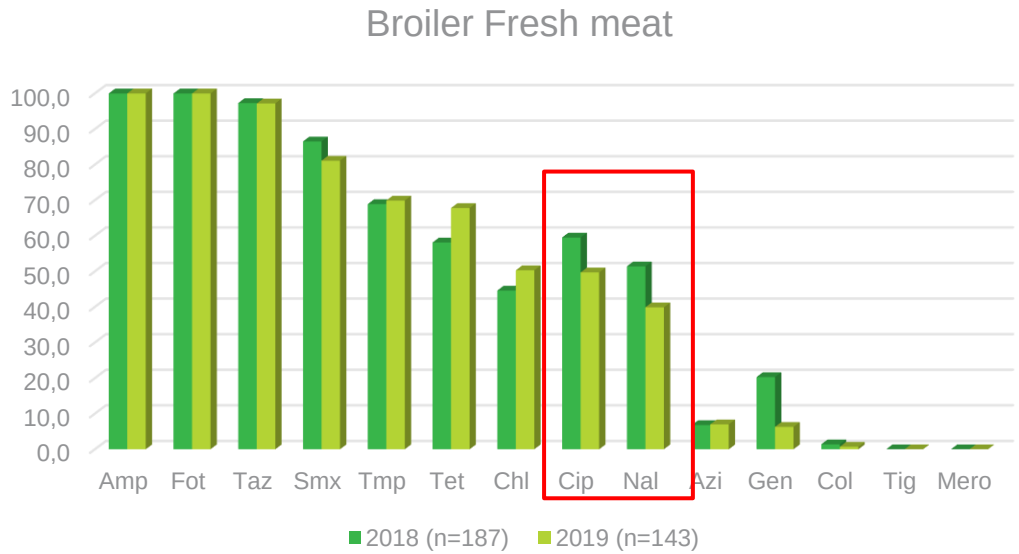


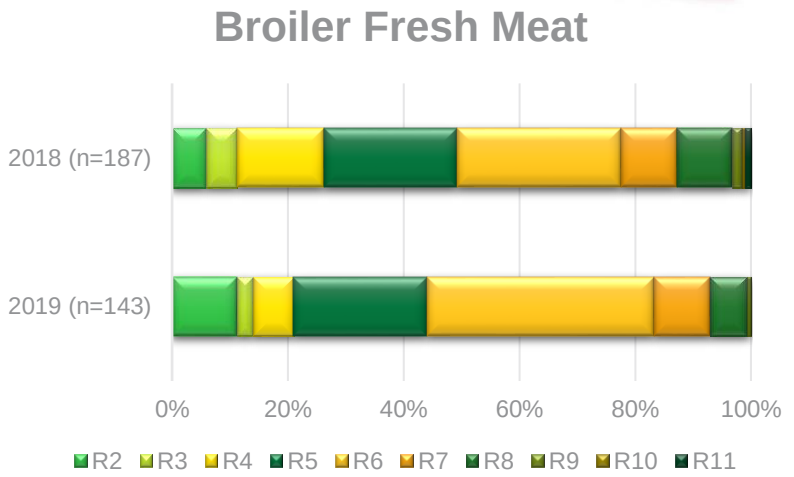


EFSA Journal 2020;18(3):6007

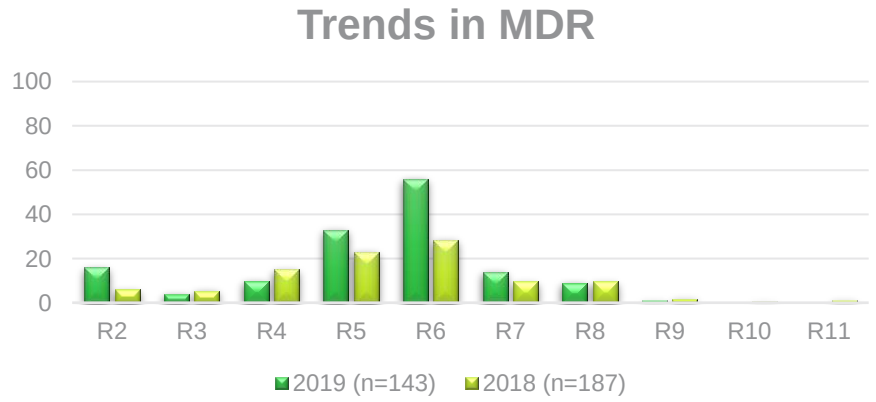
European situation, 2017-2018

Surveillance spécifique des bactéries *E. coli* productrices de ß-lactamases ou de carbapénémases dans la viande de volaille

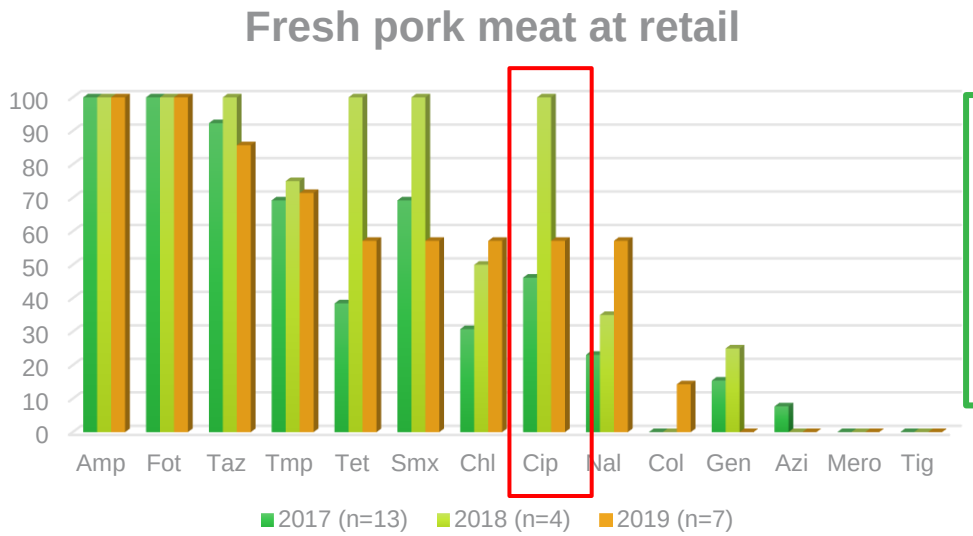




- Decrease observed for fluoroquinolones
- The level of MDR remains stable

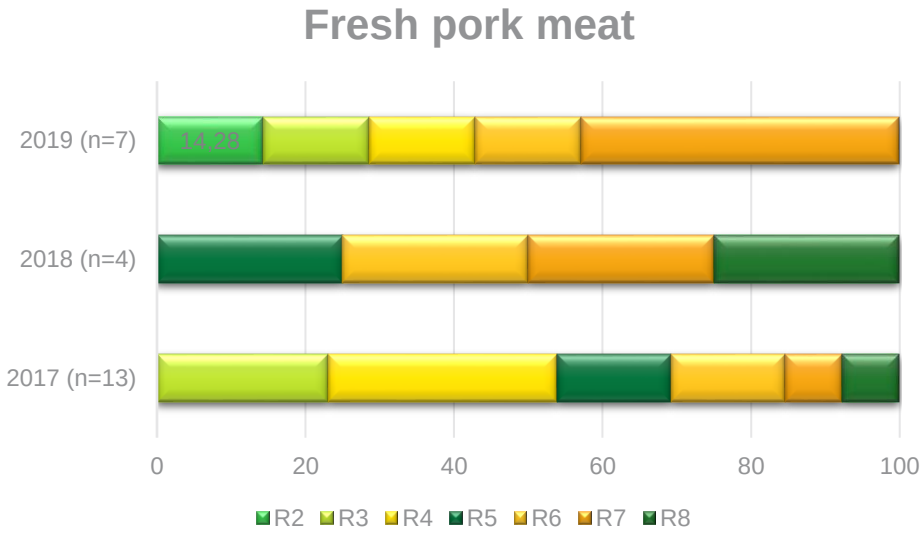


Surveillance spécifique des bactéries *E. coli* productrices de ß-lactamases ou de carbapénémases dans la viande de porc

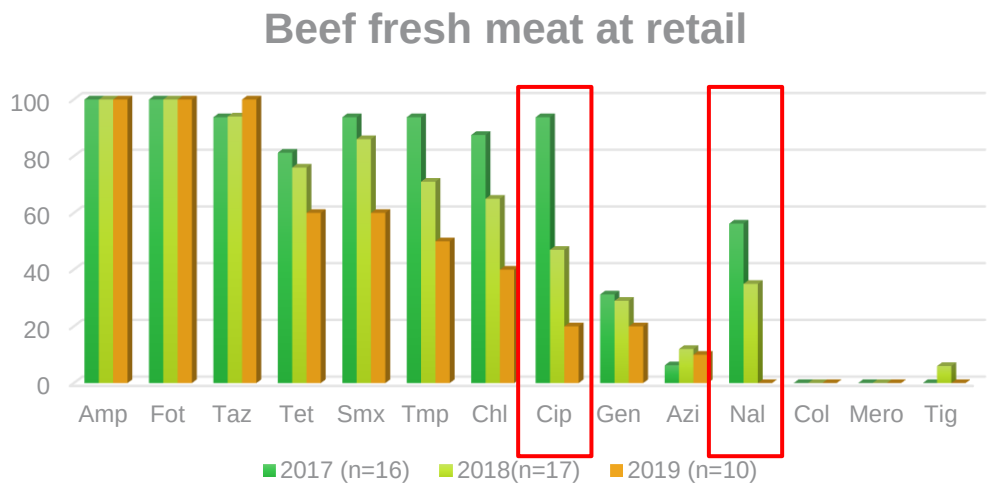


- Positive decrease trends are observed for many antimicrobials including the CIA, fluoroquinolones
- 1 isolate MDR profile combining ESBL+FQ+Col

MDR has decreased from 100% in 2017 and 2018 to 85,72% in 2019

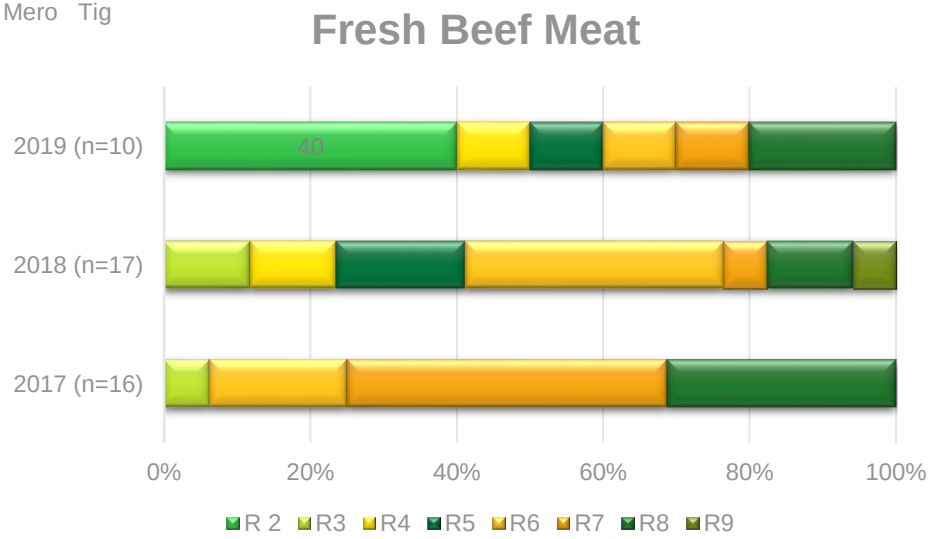


Surveillance spécifique des bactéries *E. coli* productrices de ß-lactamases ou de carbapénémases dans la viande fraîche de boeuf



- Positive trends are observed
- Decrease to many antimicrobials including the CIA, fluoroquinolones

- MDR has decreased from 100% in 2017 and 2018 to 60% in 2019



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