

 **DTU Food**
National Food Institute

EQAS 2014

Campylobacter

EURL-AR workshop, April 23-24th, 2015

Main purpose of the Campylobacter PT

2014  9th Proficiency Test

To assess and improve the performance of surveillance and antimicrobial susceptibility of each NRL in the fields of methodology, interpretation of results and data reported to

EFSA



Materials and Methods

- A pre-notification letter was sent by e-mail on the 30th June 2014
- On 14th October 2014, 8 *Campylobacter* strains embedded in charcoal swabs in Stuarts transport media were sent to each NRL and for some labs the reference strain, *Campylobacter jejuni* CCM 6214 (ATCC 33560).
- On the 29th January 2015, the website was opened – deadline 12th February 2015
- **Methods used for AST:** Broth microdilution and Agar dilution
- **Antimicrobials:** Nalidixic acid (NAL), Ciprofloxacin (CIP), Streptomycin (STR), Gentamicine (GEN), Erythromycine (ERY) and Tetracycline (TE).

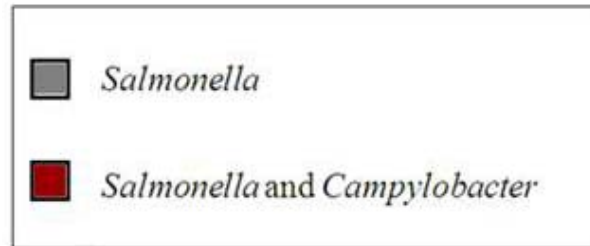


- **Interpretation of MIC values: EUCAST ECOFFs**
- **Evaluation of results**
 - a) Campylobacter speciation through mPCR
 - b) Susceptibility category: Resistant (R) – Susceptible (S)
- **Evaluation reports obtained in the database on 17th February 2015**



Materials and Methods

Participation



31 countries
32 sets of *Campylobacter* results



Results

Campylobacter speciation (correct results)

Strain	Species
EURL C9.1	<i>C. jejuni</i>
EURL C9.2	<i>C. coli</i>
EURL C9.3	<i>C. coli</i>
EURL C9.4	<i>C. jejuni</i>
EURL C9.5	<i>C. jejuni</i>
EURL C9.6	<i>C. coli</i>
EURL C9.7	<i>C. jejuni</i>
EURL C9.8	<i>C. coli</i>



Results

Campylobacter speciation (% of deviation/*per strain*)

Strains	Total number of results	Number correct	% of corrected results
EURL C-9.1	32	31	96,9
EURL C-9.2	32	31	96,9
EURL C-9.3	32	32	100,0
EURL C-9.4	32	32	100,0
EURL C-9.5	32	32	100,0
EURL C-9.6	32	32	100,0
EURL C-9.7	32	28	87,5
EURL C-9.8	32	31	96,9
Total	256	249	97,3



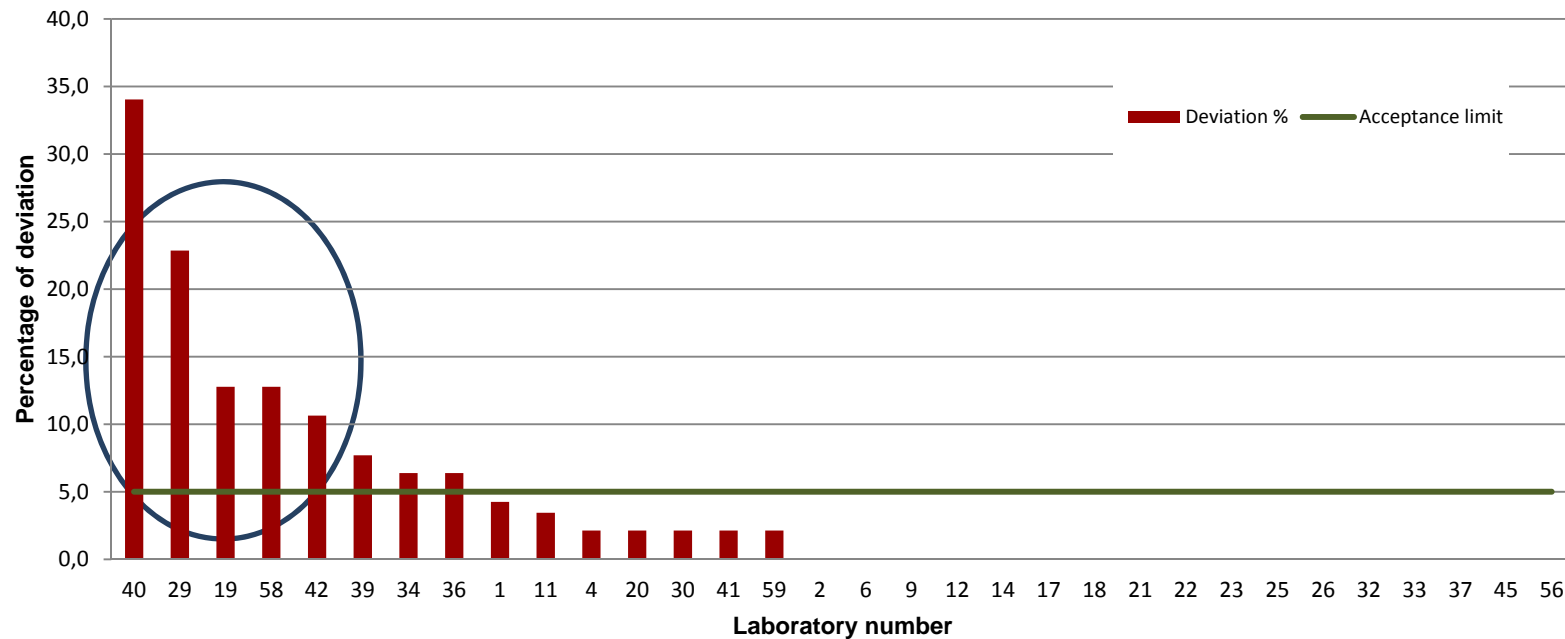
Results

Campylobacter susceptibility - % correct results *per* antimicrobial

Antimicrobials	% of corrected results
Ciprofloxacin - CIP	96
Erythromycin – ERY	96
Gentamycin – GEN	98
Streptomycine – STR	96
Nalidixic acid – NAL	96
Tetracycline - TE	87



Campylobacter results – pr. lab



Although eight labs had deviations higher than 5%, not all were considered outliers, but were contacted to allow them to inform of troubleshooting activities they had performed to identify the cause of the high level of deviation.

One lab was excluded due to not using the whole range of antimicrobial dilutions



Two labs were considered outliers

Results

Campylobacter susceptibility to tetracycline - % correct results *per* strain

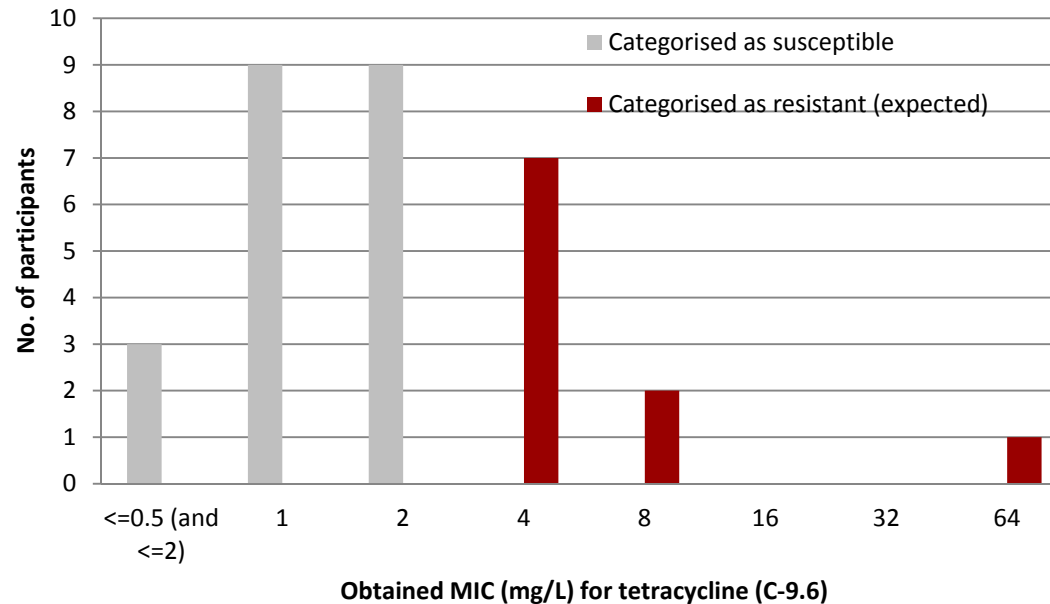
Antimicrobial	Strain	% Correct Results
Tetracycline - TET	EURL C-9.1	100
	EURL C-9.2	77
	EURL C-9.3	97
	EURL C-9.4	100
	EURL C-9.5	94
	EURL C-9.6	32
	EURL C-9.7	97
	EURL C-9.8	97



Results

EURL C9.6. *C. coli* – Tetracycline excluded

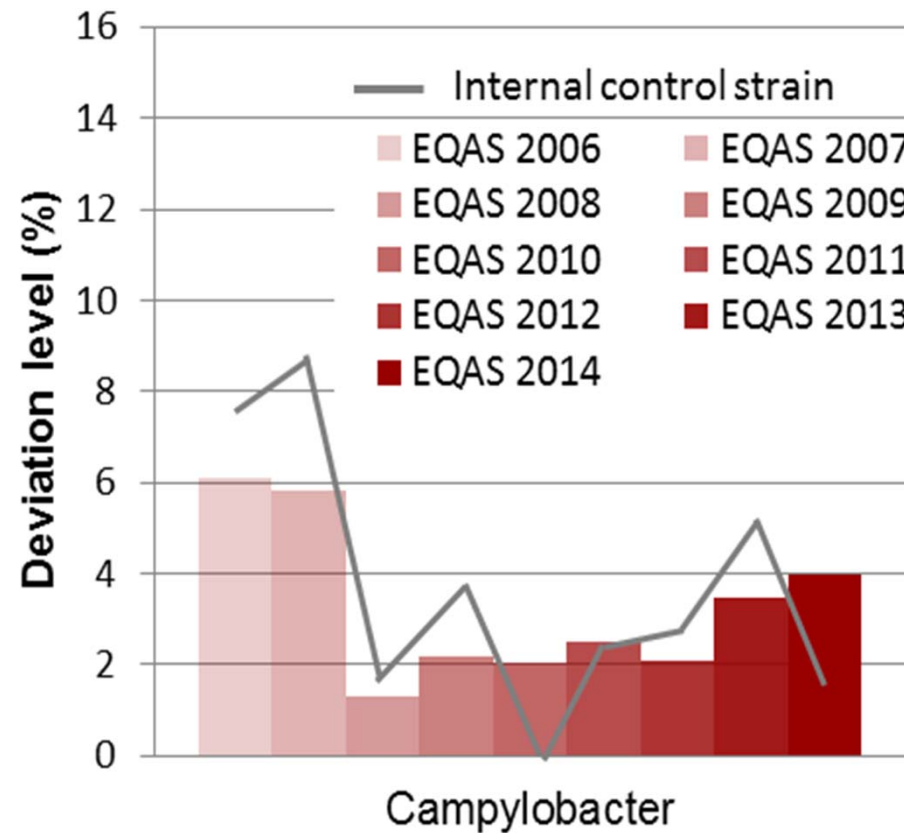
- 32% of NRLs – Results according with expected - **Resistant**
- 68% of NRLs – Results not according with expected - **Susceptible**



High level of deviation could not be explained → Results excluded from evaluation



Comparison to former EQASs



How did our NRL benefit from participating in this particular EQAS-component?

- Evaluation of the final performance of all technicians involved in the different tasks to deal with the routine work, including to trust results sent annually to EFSA under the CD652/2013.
- *External Quality Assurance* ➡ evaluation of the team by the National Accreditation System during the annual external auditing.
- Detection and correction of deviations, with a quick intervention/reply from the EURL team.
- Harmonization of methods, validation of reagents, etc



INIAV - National Institute for Agrarian and Veterinary Research



Lisbon (1913-2013)



Porto (2000)

Thanks for your attention and to all staff from
the EURL-AR for all your support