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Antimicrobial resistance in organic and conventional dairy herds in Sweden

Objective

Investigate the prevalence and if the type of production have any influence on the antimicrobial resistance pattern

Conclusion Low prevalence from an international perspective. No significant differences in antimicrobial resistance patterns found between organic and conventional dairy herds in Sweden.

Background

Due to the Swedish animal health and welfare laws both organic and conventional farmed animals have to be treated in accordance with science and proven experience when needed.

Methods

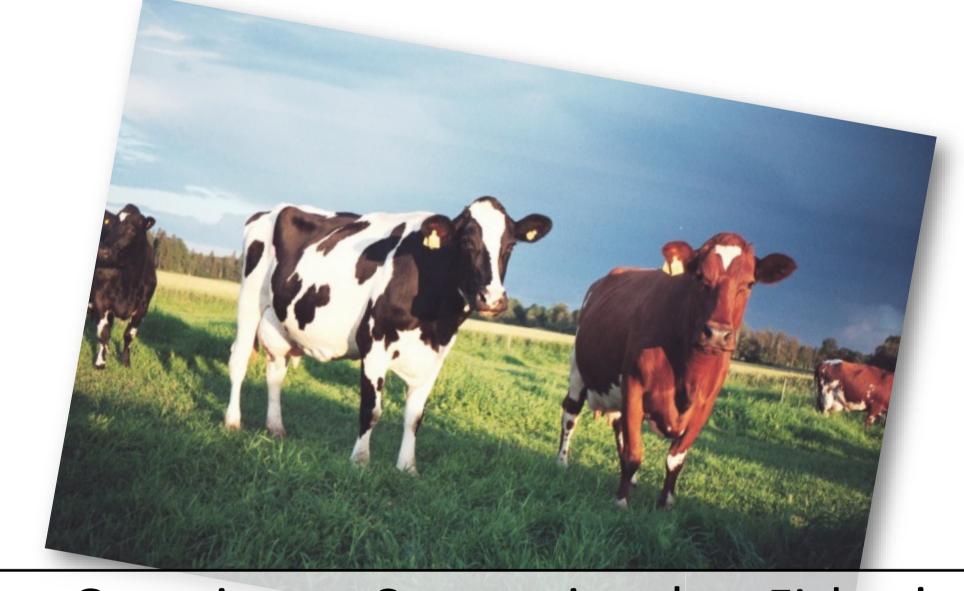


- 30 Organic and 30 Conventional Dairy Herds in Sweden
- Faecal samples from 5-6 calves per herd, 0-4 weeks old (tot.293)
- Identification of patterns of AMR (Antimicrobial resistance) in E. coli in gut flora of calves, as indicator for AMR in herds



Results

- AMR found against 10 out of 12 tested antibiotic agents
- AMR proportion ranged between 1-35 %
- No statistically significant difference organic and conventional between dairy herds



	Organic	Conventional	Fisher's
	(n=148)	(n=145)	exact test,
	Resistance	Resistance	two-tailed
Antimicrobial	%	%	P-value
Ampicillin	26.4	23.4	0.59
Cefotaxime	1.4	0	0.50
Ceftazidime	1.4	0.7	1
Chloramphenicol	8.8	3.4	0.09
Ciprofloxacin	6.1	6.2	1
Florfenicol	0	0	0
Gentamicin	0	0	0
Nalidixic acid	6.8	3.4	0.29
Streptomycin	27.7	30.3	0.70
Sulfamethoxazole	35.8	32.4	0.62
Tetracycline	28.4	24.8	0.51
Trimethoprim	8.1	9.7	0.69



