Farmer surveys on mastitis, dry cow therapy and antibiotic use

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Comet K-Projekt ADDA – Advancement of Dairying in Austria

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Advancement of Dairying

1. Principles of milk production and safety

- 1.1. Nutritional concepts for high-yielding dairy cows
- 1.2. Dairy cow reproduction
- 1.3. Udder health and innovation
- 1.4. Raw milk quality and food safety

2. Constituents of competitive milk production

- 2.1. Integrated data management
- 2.2. Strategies to reduce antibiotic use
- 2.3. Econometrics

Strategies to reduce antibiotic use

- First: we need to know the level of current antibiotic use in dairy cows
- Then: we can work out how to reduce antibiotic use.....
- While still treating sick animals (maintaining animal welfare)

Strategies to reduce antibiotic use

Current research project

- 18 veterinary practices
- 255 dairy farms
- 6700+ cows, 14,000+ cattle
- Commercial milk buyers and national milk recorders

Companies and organisations

National agencies

Laboratories

Cattle associations

Commercial milk buyers and national milk recorders

Veterinary health services

Feed companies

Geographic distribution

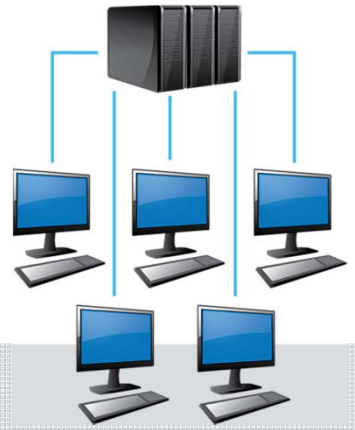






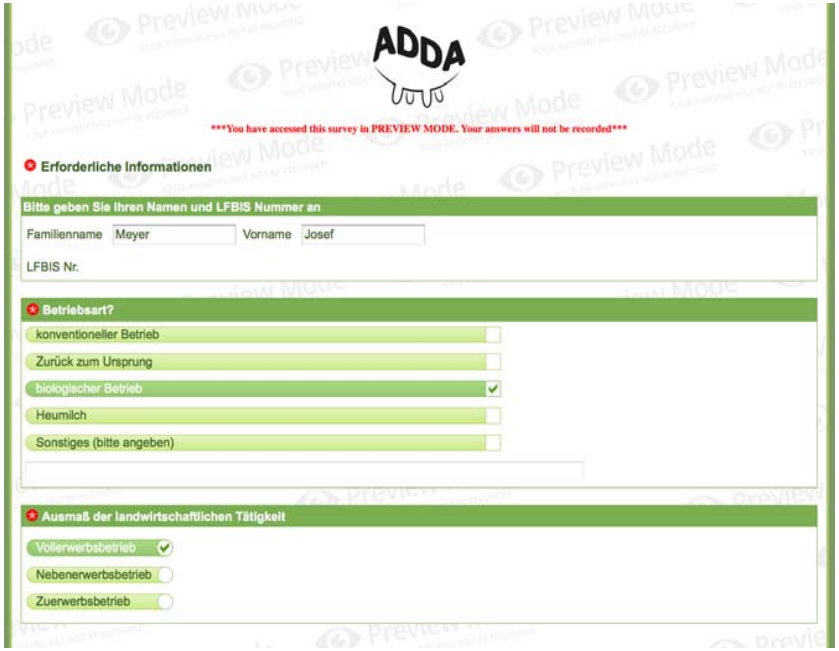

Data collection: 2015-2016

- Electronic data collection from vets on ALL medication records: diagnoses, dispensed and administered meds
- Individual animal performance data
- Milk samples taken from all mastitic cows – sensitivity testing
- 4 online surveys



Online surveys

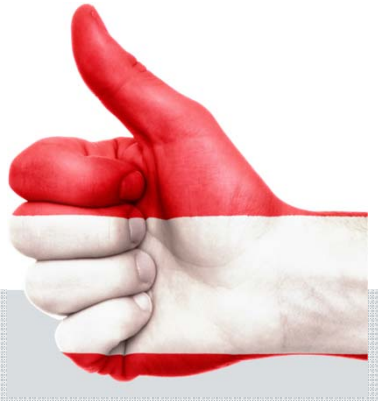
- Farmers
- Vets (2 surveys)
- Milk recorders and milk buyers



Surveys – response rates

- Dairy farmers: 204/263 (78% RR)
- Vets: 218/255 (85%)
- Demographics of vets: 30 responses
- National milk recorders and commercial milk buyer employees: 202/255 (79%)

Surveys still ongoing

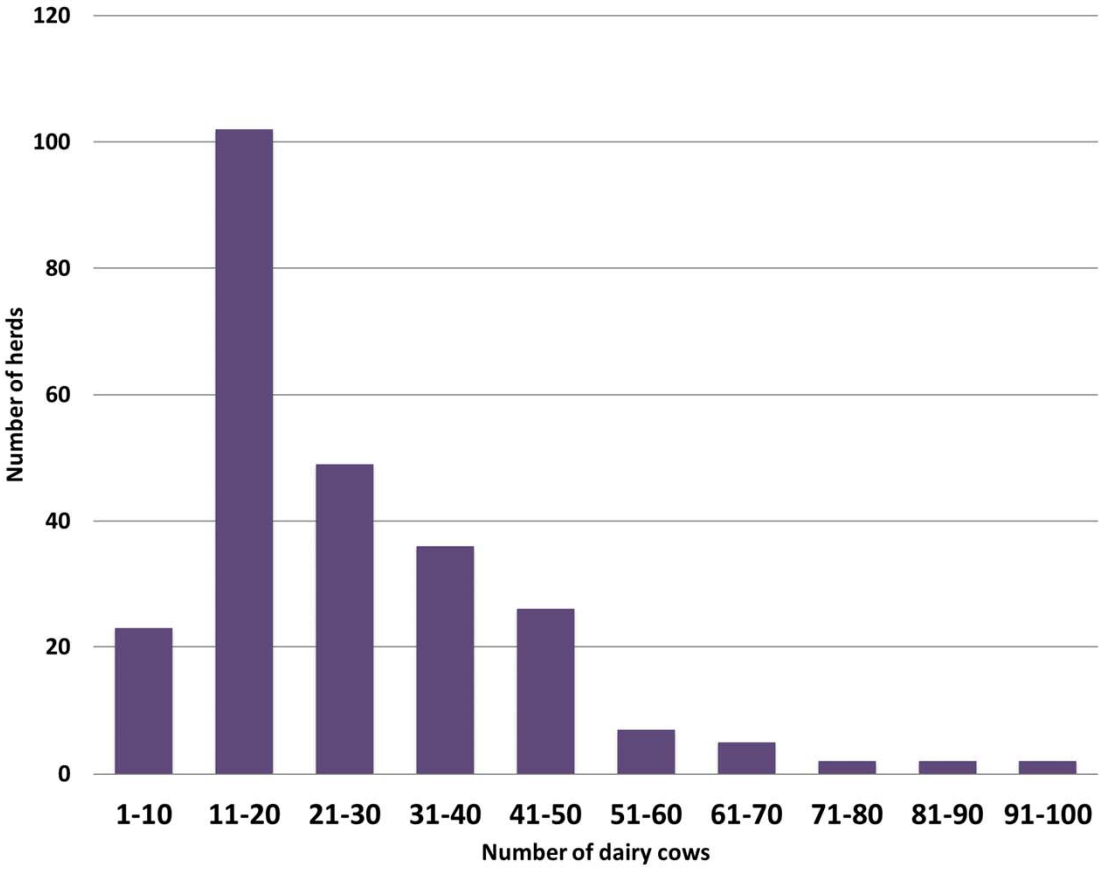


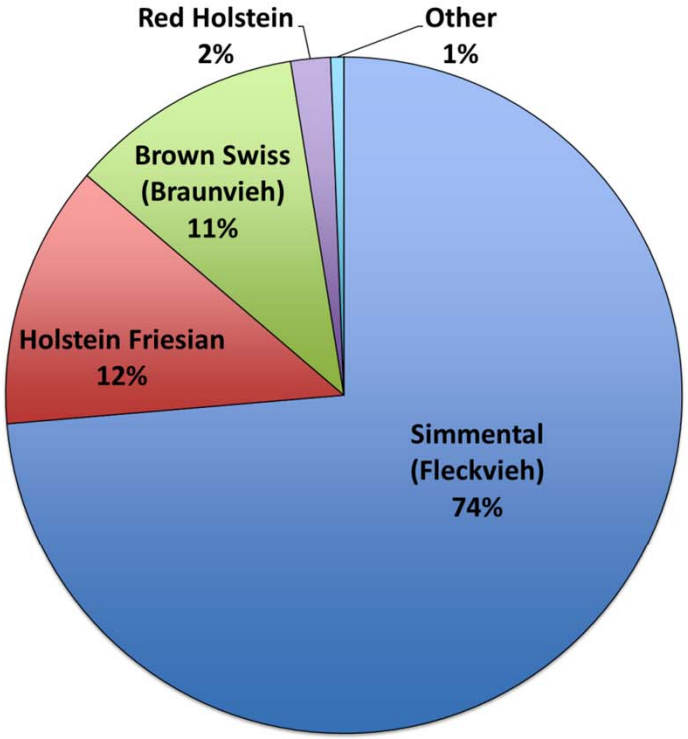
Results of farmer surveys

- 76% conventional farms
- 16% organic and 7% regional marketing

- 72% full-time farmers
- 23% part-time (<50% income from farm)
- 5% part-time (50-90% income from farm)

Results of farmer surveys





European comparison (2010)

Country	Total number of cattle farmers	Cattle per farm	Dairy cows per farm
Austria	71,940	28.1	11.3
Germany	144,850	86.5	46.4
France	199,620	97.7	45.0
Ireland	111,000	59.5	58.0
Spain	111,840	52.2	30.9
UK	85,760	117.3	78.3

Source: ZAR Jahresbericht 2014

Housing systems

Regular access to pasture

Farmers' opinion

The most important management areas for good udder health:

1) Milking practice/hygiene
2) Milking machine
3) Feed/nutrition
4) Stall hygiene
5) Dry cow management

Milk recorder surveys (initial results)

Milk recorder surveys (initial results)

- 61% of milkers wear gloves
- 44% of milkers dry-wipe teats prior to milking
- 30% do not teat dip
- 56% do not disinfect the cluster between cows

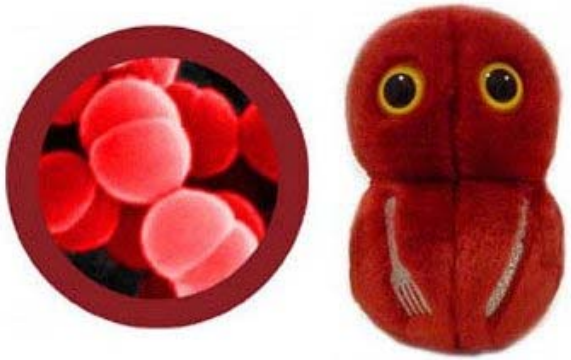
Mastitis

- Milk sampling and bacteriological culture when mastitis occurs?

- 53% of farmers: always
- 42% of farmers: sometimes
- 5% of farmers: never

Mastitis

- According to vets, most commonly isolated bacteria on these farms are:



Photos: giantmicrobes.com

Mastitis

- When is a California Mastitis Test (CMT) done?

- 15% of farmers: regularly on all cows
- 82% of farmers: cows with symptoms
- 3% of farmers: never

Veterinary Health Service

- Set up in each federal state
- Organised by both vets and farmers
- Farmers pay a „membership fee“
- Annual herd health check by vet
- Both vets and farmers must undergo regular training

Veterinary Health Service

- Udder Health Programme
- Bacteriological culture and antimicrobial susceptibility testing is either free or heavily subsidised
- High degree of acceptance among farmers

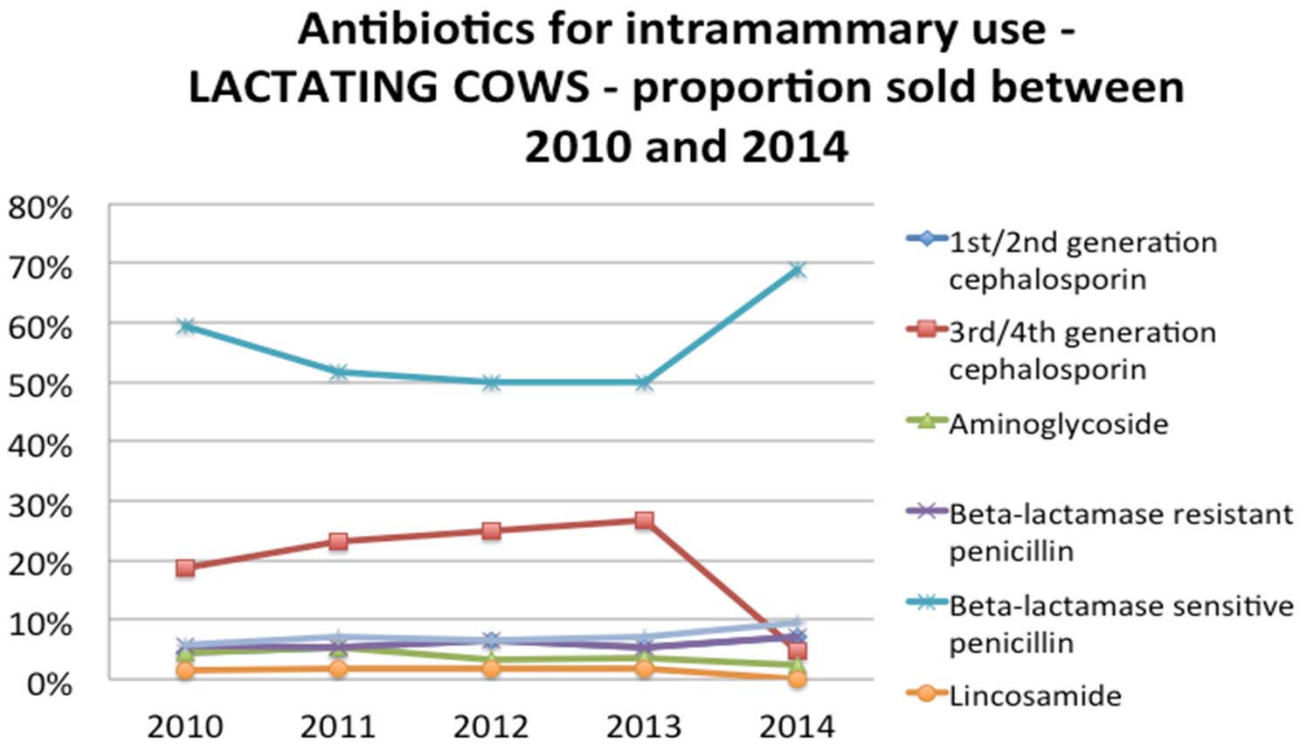
Antibiotic use on farm in Austria

- Veterinary antibiotics are ONLY available from veterinarians
- Intramammary treatments must be administered by a veterinarian
- UNLESS: farmer is a member of the Veterinary Health Service and has been sufficiently trained
- For acute cases and dry cow therapy

Antibiotic use on farm in Austria

- Farm vets MUST report all antibiotics dispensed for use in food-producing animals
- Vets do not have to report antibiotics administered directly to livestock
- Both farmer and vet must keep detailed records

Mastitis – Austrian data



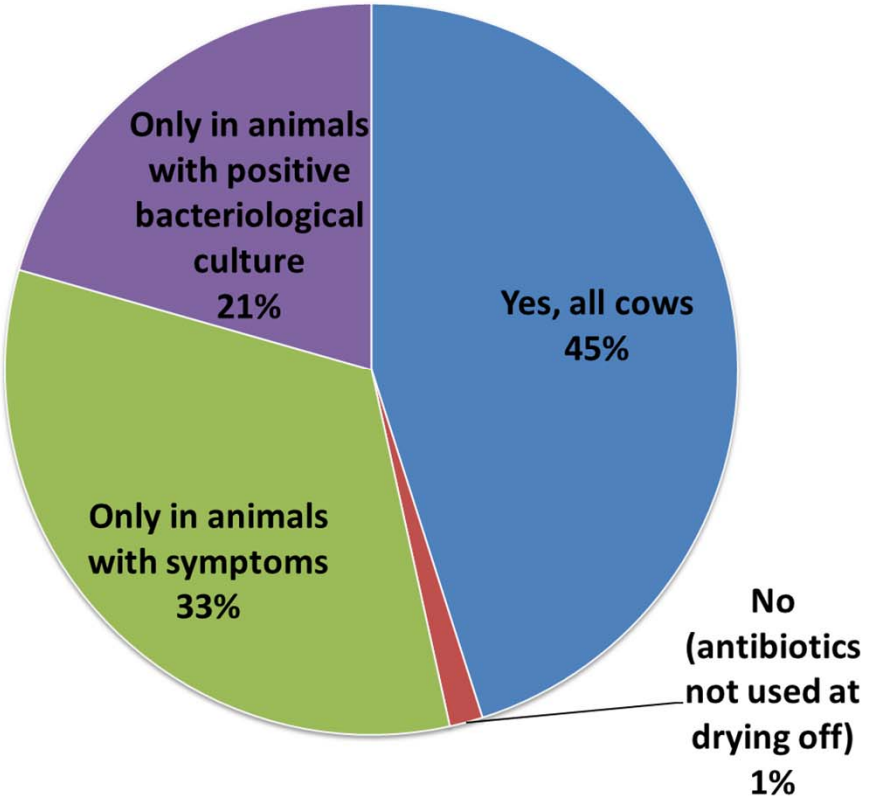
Source: Fuchs & Fuchs, AGES, 2015

Drying off

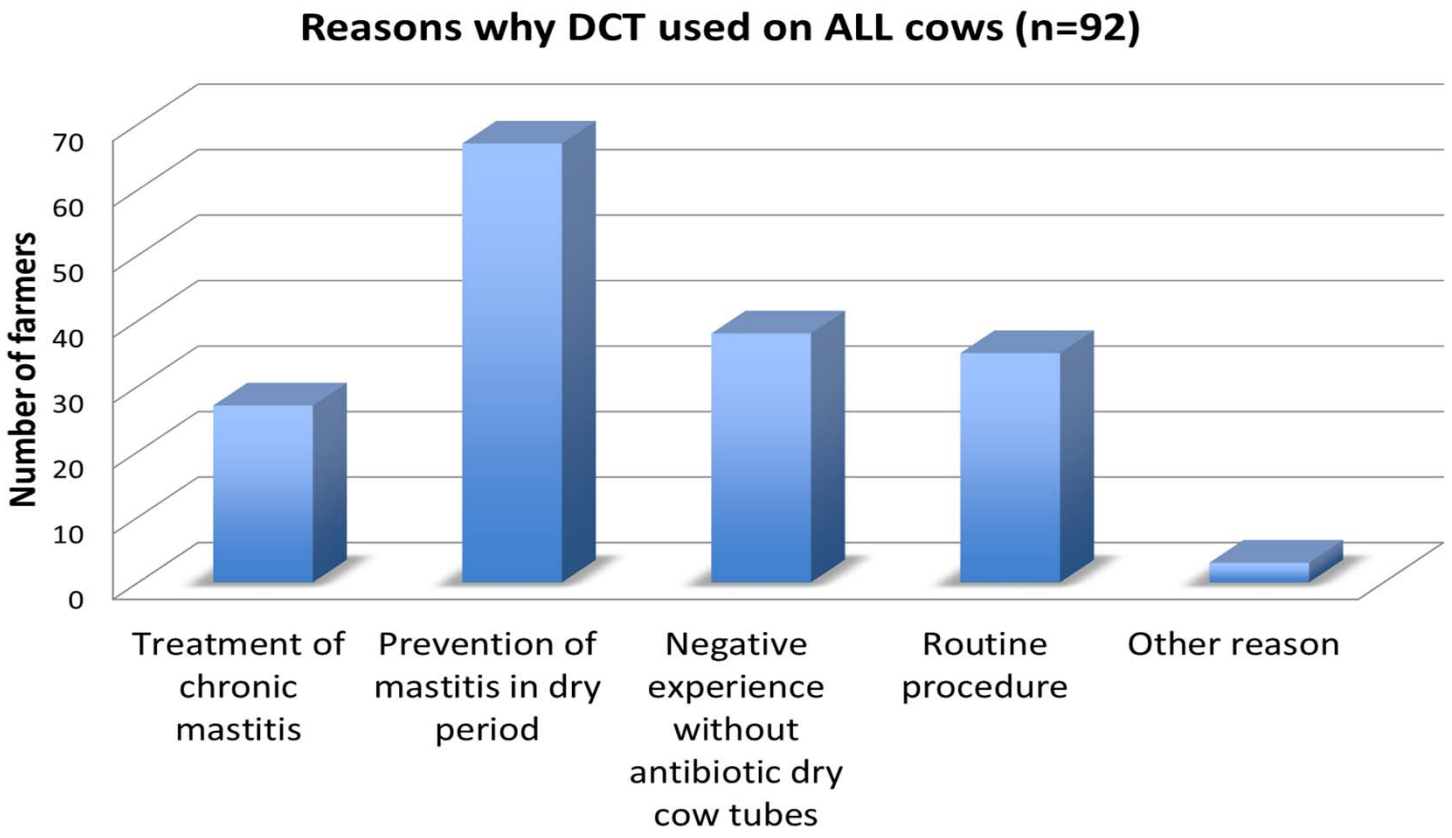
- 63% of farmers dry their cows off 56-60 days before calving
- 14% of farmers culture milk samples from ALL cows before drying off
- BUT 16% never culture prior to drying off

- BLANKET or SELECTIVE DCT?

Dry cow therapy – survey responses



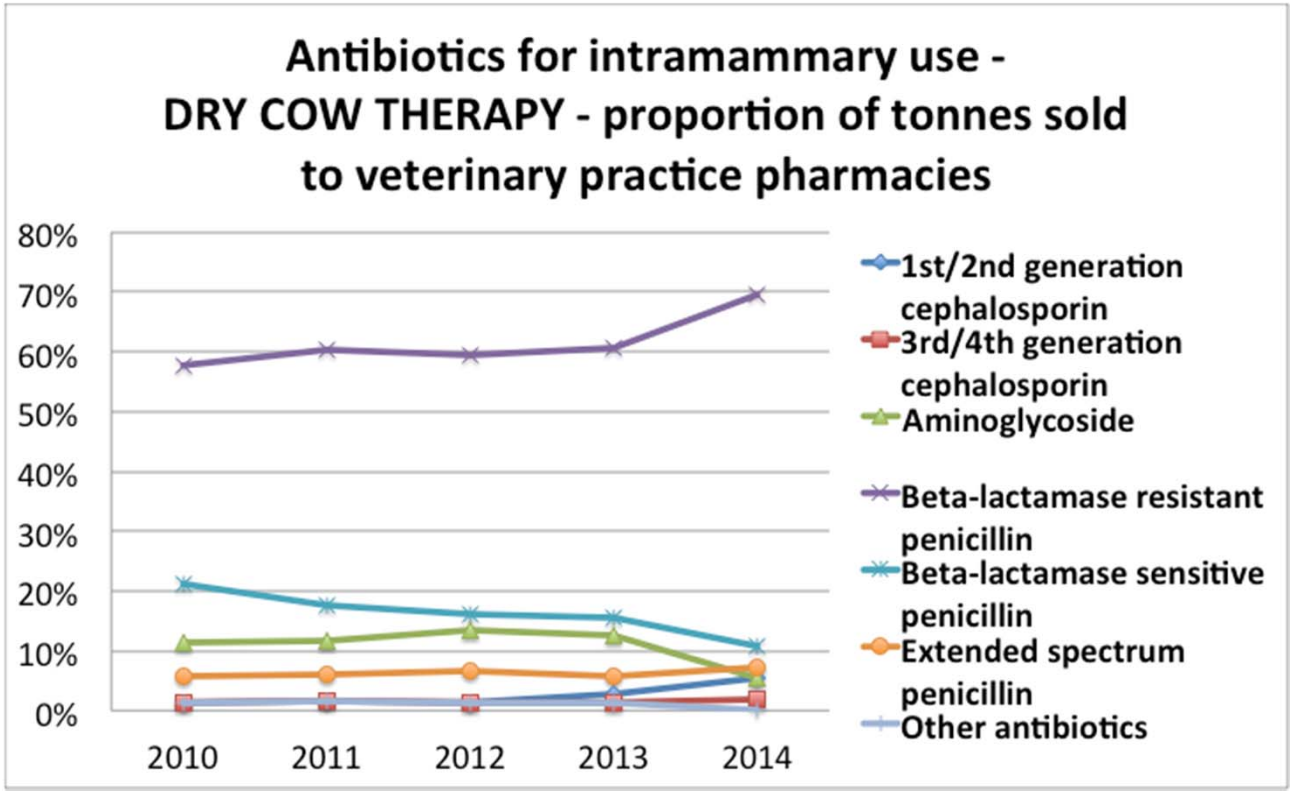
Dry cow therapy – survey responses



Dry cow therapy – survey responses

- Vets's first choice therapy is cloxacillin (71% of farms)
- But on 6% of farms cefquinome is first choice for drying off
- Results will be compared with actual antibiotic use data

Dry cow therapy – Austrian data



Source: Fuchs & Fuchs, AGES, 2015

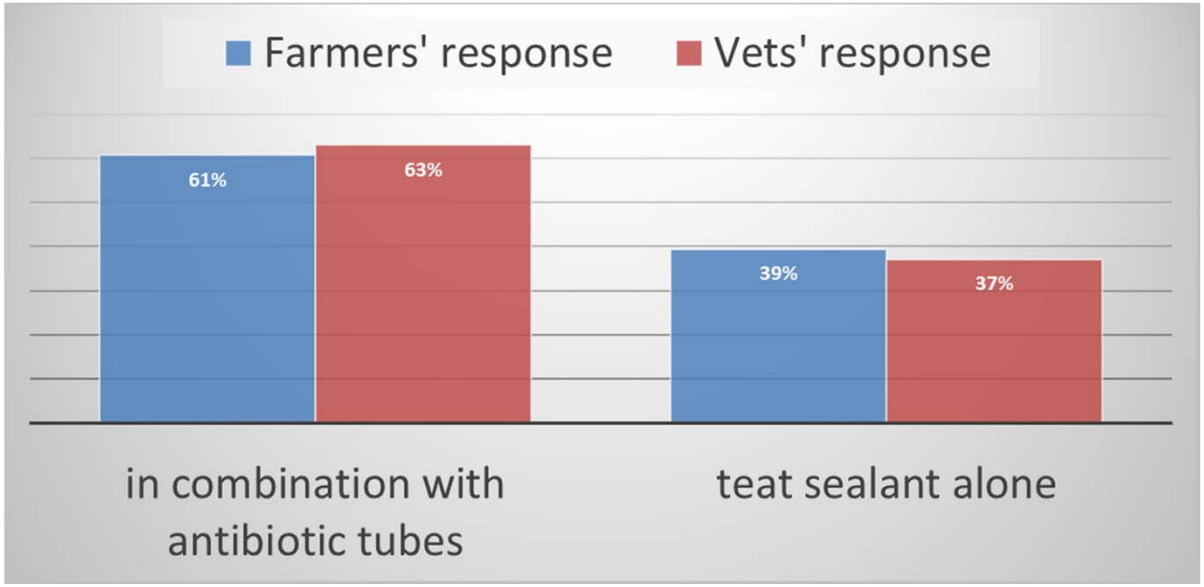







Alternatives to antibiotics

- If teat sealants are used, how?



Alternatives to antibiotics

- Mastitis vaccines are used on 13% of farms (all StartVac)

- Of these:
- 56% vaccinate prior to calving
- 68% only vaccinate infected animals

Conclusions

- Farmers are willing to be involved in antibiotic stewardship and improved cow health and welfare
- Selective dry cow therapy needs to be supported by vets, milk buyers and farmers
- Analysis of antibiotic use and antimicrobial resistance is ongoing

Thanks to my co-authors

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Scientific partners

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Any questions?