

Healthier goats project: Eradicating CAE, Johne's and caseous lymphadenitis in norwegian goats

Dag Lindheim¹⁾ and Liv Søilverød ^{1) 2)}

¹⁾Department of Goat Health Services, TINE Norwegian Dairies SA, Ås, Norway,

²⁾Department of Mastitis Laboratory, TINE Norwegian Dairies SA, Molde, Norway.

Norway

- 2500 kilometers from North to South
- 30 hours drive
- Milk producing herds all over the country



Goats in Norway

- 350 milk producing herds,
using mountain pastures
during summer !

38000 milking goats

19 mill. liters /year

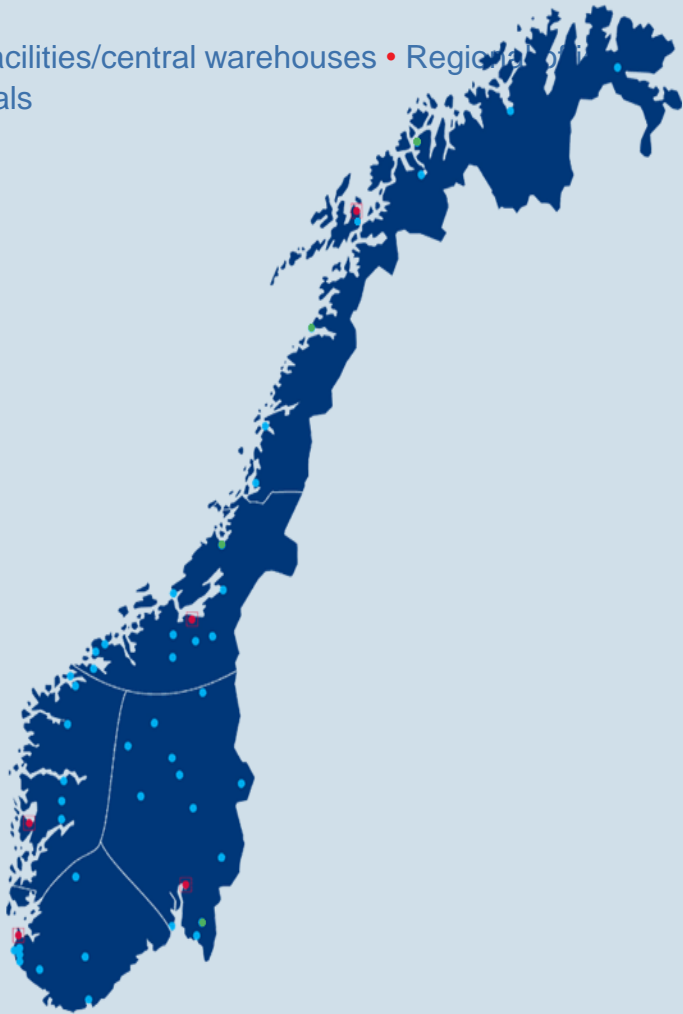
- 750 other goatherds

68000 goats in total





- Dairy facilities/central warehouses
- Regional offices
- Terminals



TINE – a dairy cooperative owned by 14 000 farmers (cows and goats)

36 dairy facilities processing 1475 million litres cows' and goats' milk

TINE has 95 % of the national raw milk market

- Healthy animals – an important aspect of our milk quality !

Goat identification - health system

Norwegian goats have unique identification numbers associated with their livestock herd.



TINE has created a unique health system for cows and goats. A health card for each animal to collect registrations in the herds.

Norwegian cows' and goats' production data, health recordings, use of medicine, and the quality parameters from milk production is registered together in one database

Information about administrated drugs is also reported to the *Norwegian Food Safety Authority*

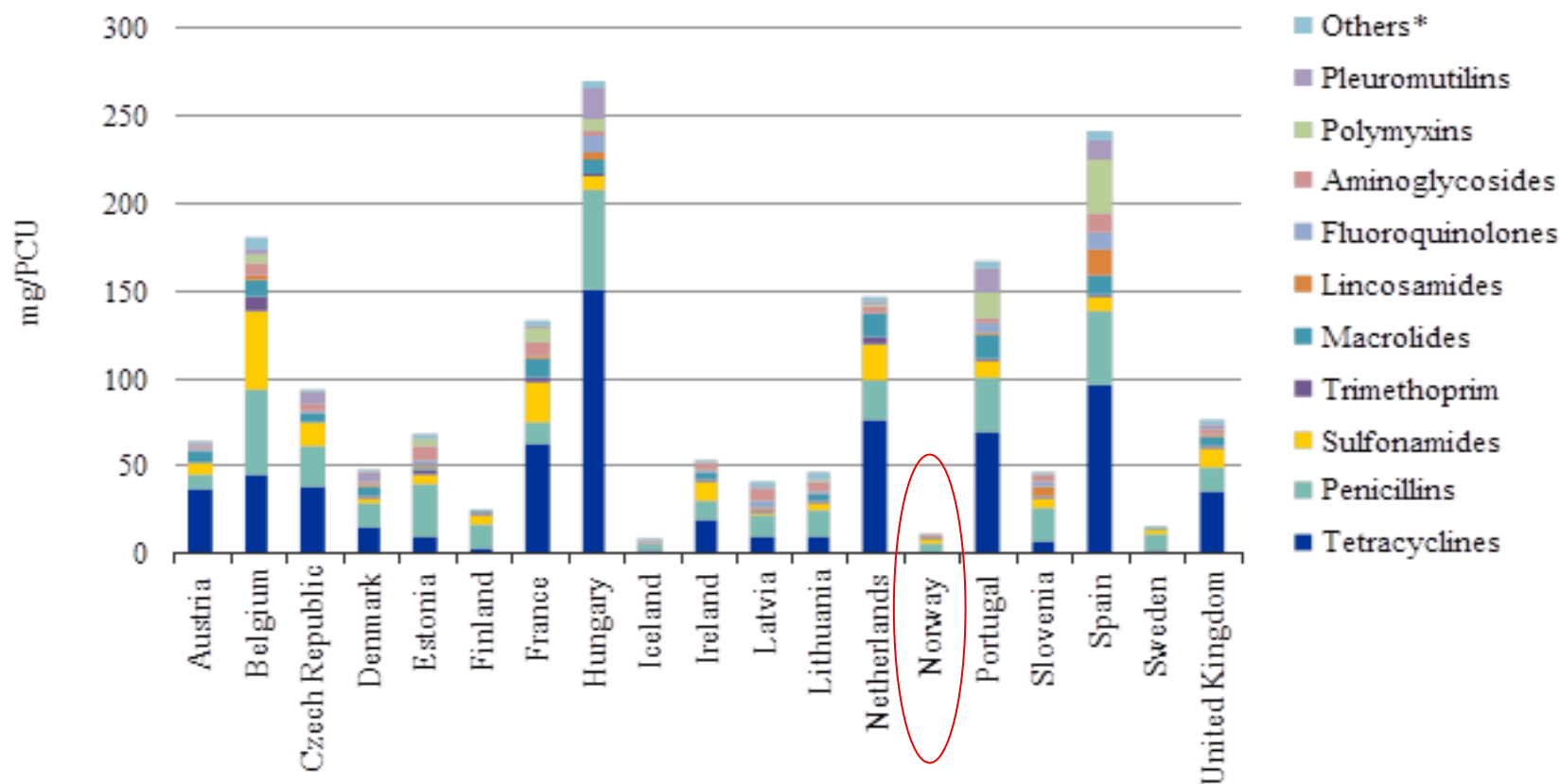


«*The Norwegian strategy*»

Farmers Associations working together with the authorities



- To handle infectious diseases by prevention, using minimal amounts of antibiotics
- Believing it is possible to eradicate and control infectious diseases, we try to eliminate the infections instead of introducing large scale vaccination programs in milk producing animals
- Building farmers knowledge in «every day» biosecurity and advice restricted trading with animals – «a key to success».



History – 2001



- 88 % of the milk producing herds had CAE antibodies in bulk tank milk
- CLA prevalence > 70%.
- Johne's disease was a notifiable disease, and enzootic in parts of southern Norway
- The last 25 years increased clinical disease problems and decreased milk yield, has been recorded



Project – Healthier Goats

- The board in TINE Norwegian Dairies and the Goat Health Services decided to start and are running the project
- >90 mill NOK raised by the Government over 10 years periode
- The project rely on strict organisation and detailed regulations (<http://geithelse.tine.no/English>)
- Farmers sign a committing contract for 5 years
- Local veterinarians and TINE husbandry advisors are contracted

Methods

1. Culling of seropositive animals in flocks with CAE prevalence $< 10\%$. No CLA and no Johne's



Methods

2. “Snatching” kids. Kids are taken from the mother immediately after birth. They are housed in a clean barn, given cow colostrum and raised on milk replacer

The infected herd is slaughtered at the end of the lactation.

The barn and the near surroundings are cleaned and disinfected.

Healthy goats are moved back to the cleaned barn to start lactation.



Methods

3. The last years it has been possible to buy healthy kids from farmers who sanitized earlier in the project, as an alternative to do the challenging snatching job.

The sanitized flocks are **monitored** by clinical observation and antibody detection in serum and bulk tank milk for 5 years.





Financial support to the farmer

- 2400/2600 NOK pr replaced goat
- Free advising, bloodsampling and laboratory analysis for 5 years

Building knowledge



A variety of educational efforts for farmers, advisors and veterinarians are carried out to supply information about the diseases, the project and it's methods.

+ every day biosecurity !

- ***Receiving this knowledge is for free***

This is an important success factor!



Applied tests

Johne's disease: IFN- γ , Idexx ® Elisa Paratuberkulose Antibody Verification

CAEV antibodies : "Elitest MVV/CAEV" HYPHEN BioMed

CLA antibodies: "Elitest CLA #CK105A" HYPHEN BioMed

TINE Mastitis Laboratory in Molde, Norway, has done developing work, to interpret ELISA-tests on bulk tank milk for monitoring

Results

- 602 farmers have applied
 - 372 milk producing herds and 230 other, mainly Kashmir, Boer and Mohair

CAEV serum antibodies detected in

0,8% kids < 5 weeks of age

0,9% goats > 6 months of age

Test results verify that farmers manage to follow the projects procedures very accurate.



Results

Reinfection in 602 sanitized flocks shows

- 3 CAE reinfections
- 1 Johne's disease reinfection
- 8 CLA reinfections

**No reinfections in sanitized flocks
during 2012 and 2013 !**

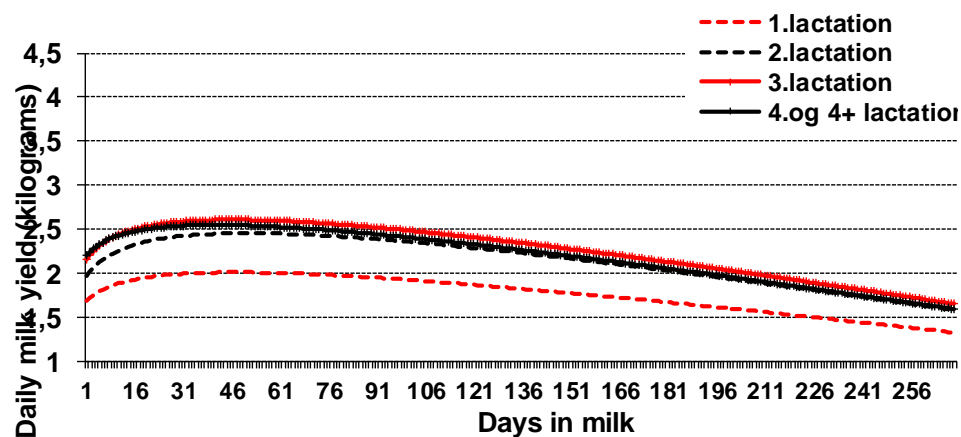


- Until 2011 the program has been voluntary
- From 2012 TINE lowered milkprice for non-sanitized herds
- CAE is a notifiable disease from 2012

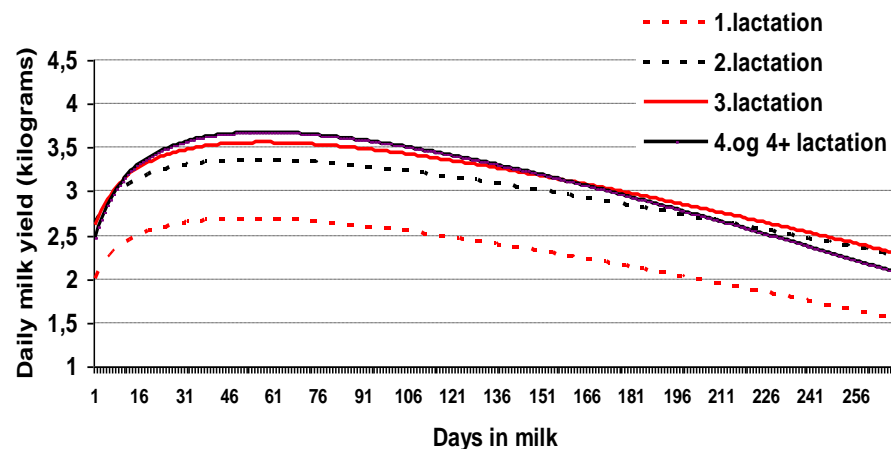


40 % improved milk yield!

Before snatching

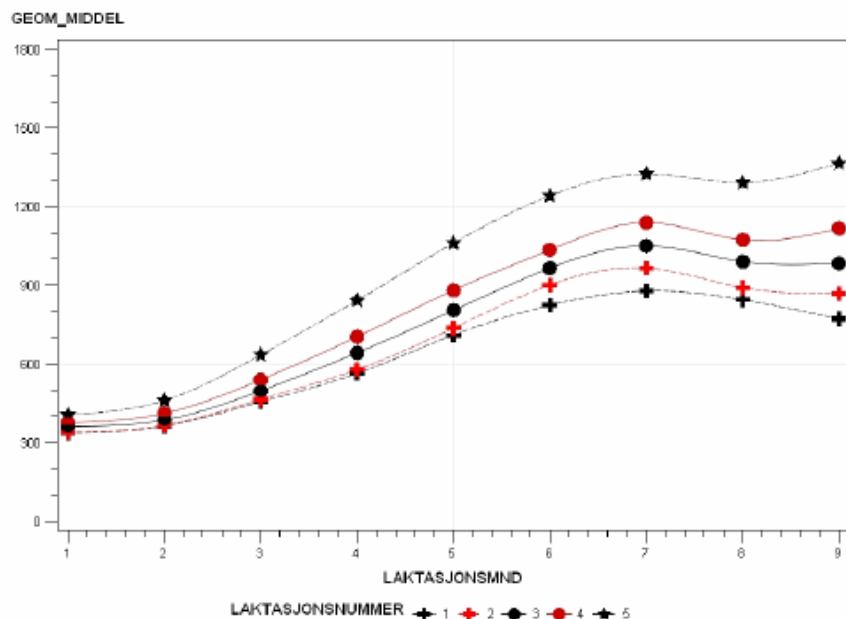


After snatching

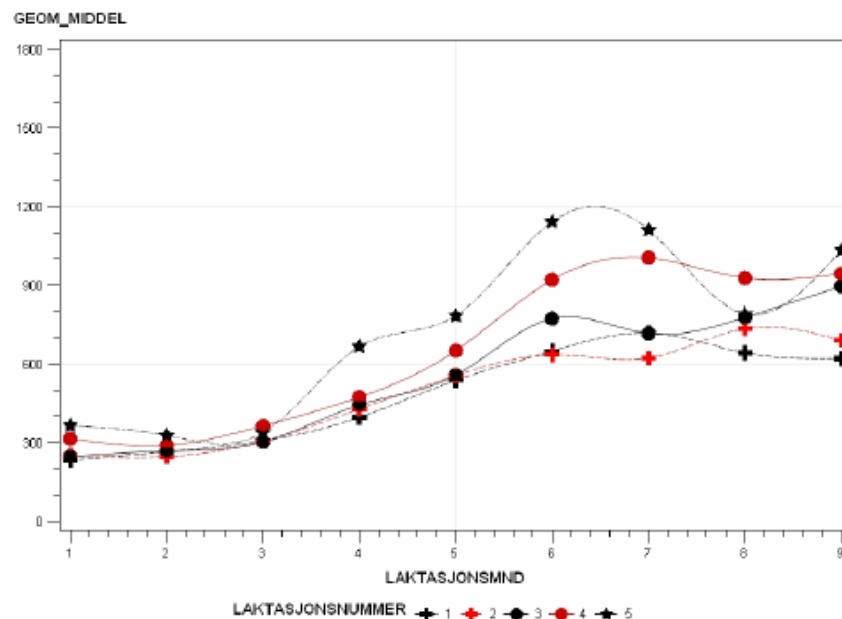


Somatic Cell Count reduced with 150.000 !

Before snatching



After snatching





Conclusions

- Healthier Goats have successfully sanitized 602 herds
- Animal welfare is improved by removal of chronic clinical diseases.
- Increased knowledge about disease control and biosecurity among farmers, veterinary practitioners and husbandry advisors
- Increased milk yield, decreased somatic cell count
- The snatching of kids removes other contagious agents from the flocks as well
- From 2015 TINE will only process milk from sanitized herd.



Thank you for your attention !