



Compiled last year by:  
Olav Østerås,  
Håkan Landin,  
Erik Rattenborg,  
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Jarle Reiersen.  
And many others.

# TINE Rådgiving

## Djursjukdata i Norden.

## Dairy Cattle Health Data in the Nordic countries



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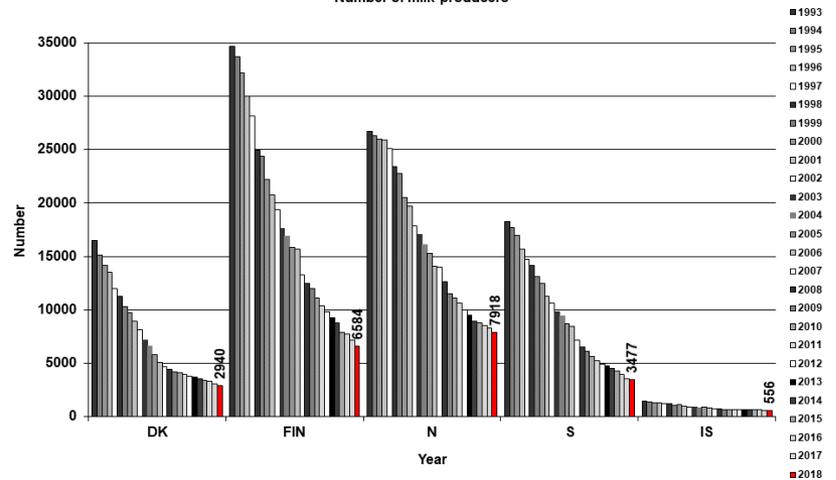
# The Nordic Dairy Cattle Population



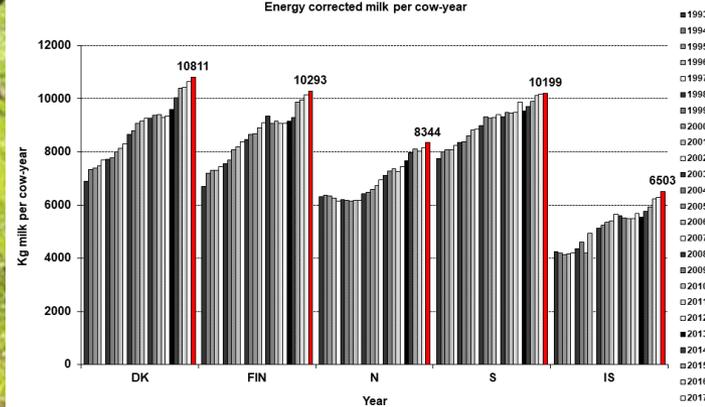
**In 1993: 97,552 herds; in 2018: 21,475 herds, a reduction of 78 %**  
**In 1993: 1,989,532 dairy cows; in 2018: 1,402,306 dairy cows (red. 29 %)**  
**In 1993: 11,811 mill tons of milk; in 2018: 12,001 mill tons of milk (incr. 1 %)**



Number of milk producers



Energy corrected milk per cow-year

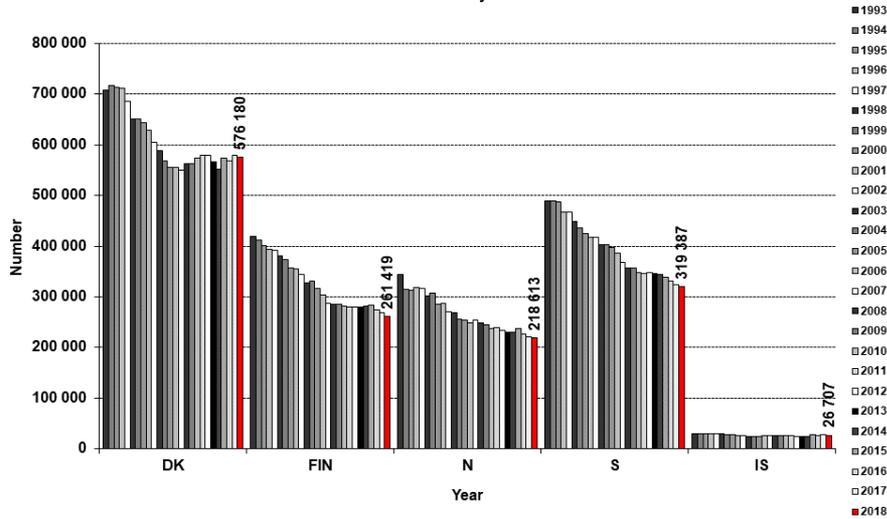




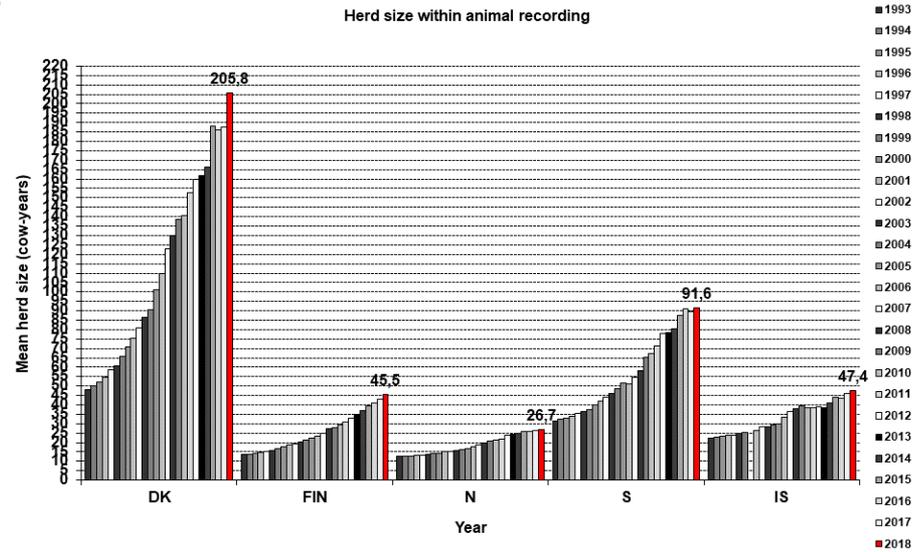
# Structure changes



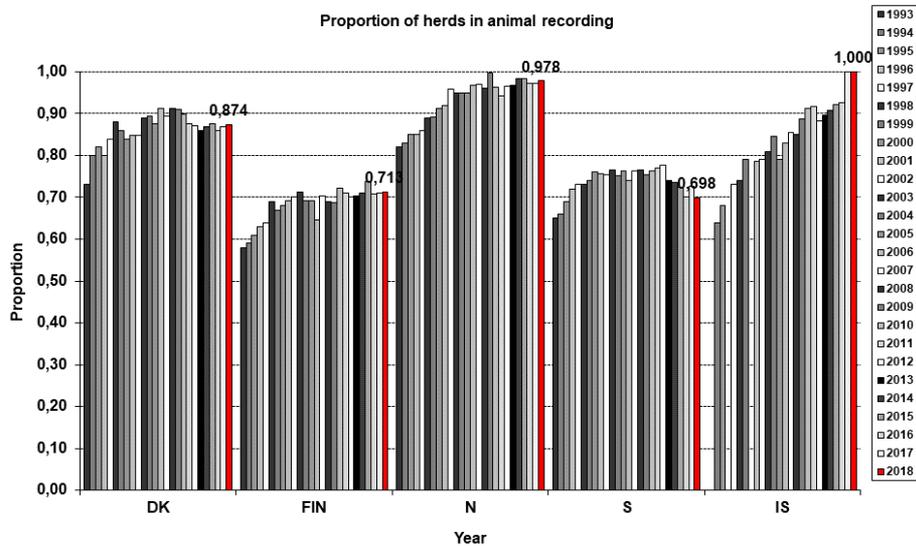
Number of dairy cows



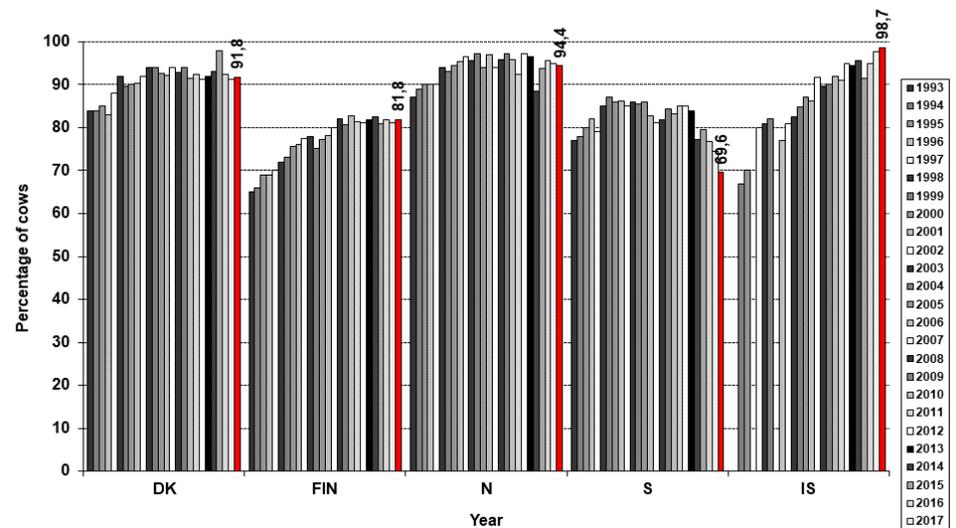
Herd size within animal recording



Proportion of herds in animal recording



Proportion of cows in animal recordings

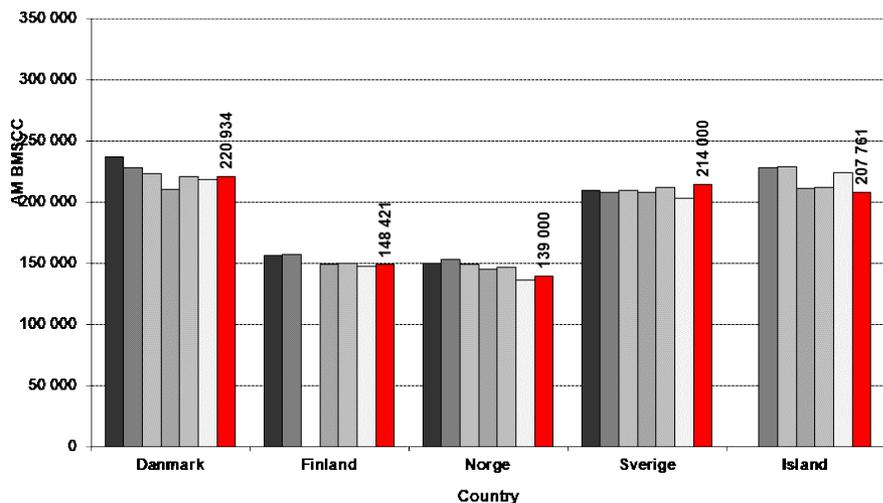




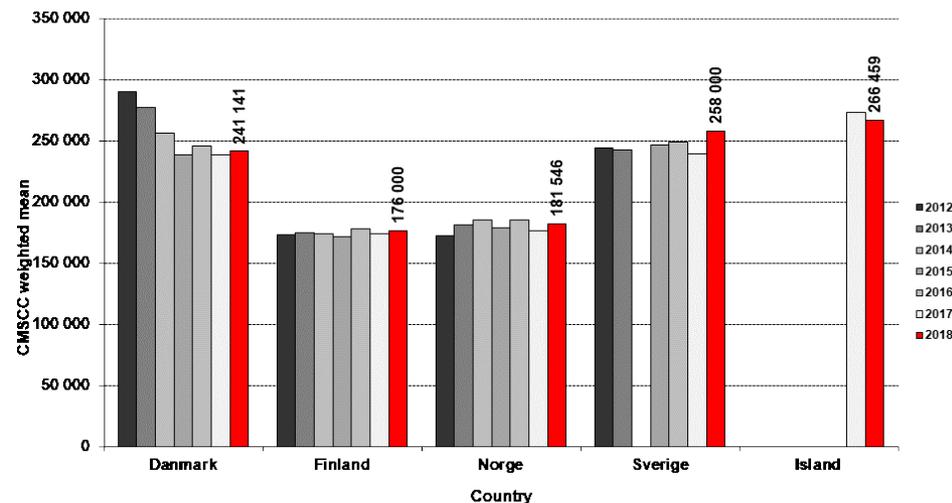
# Why so large difference between BMSCC and CMSCC



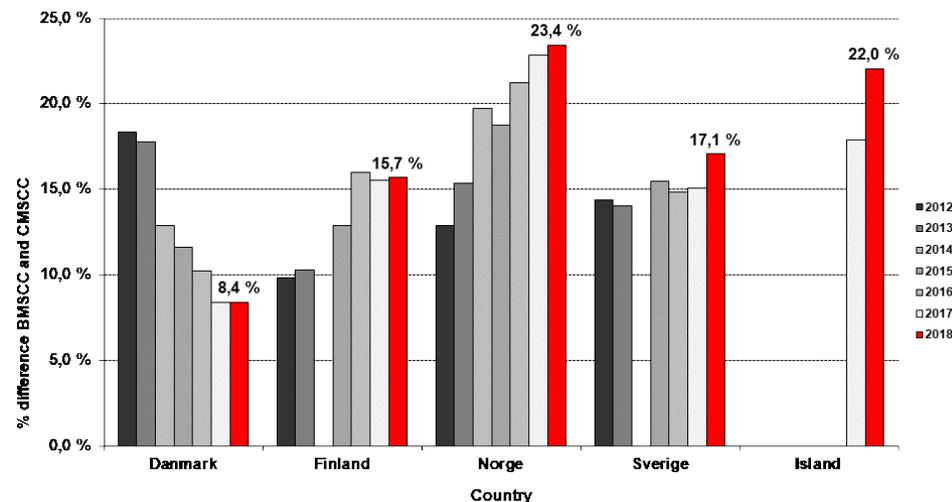
Aithmetic mean BMSCC



CMSCC weighted mean



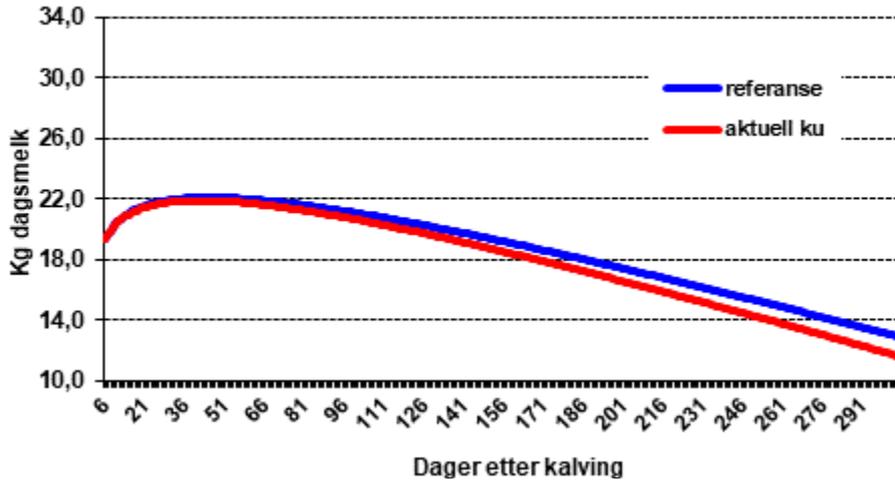
Diff arithmetic weighted mean BMSCC by CMSCC



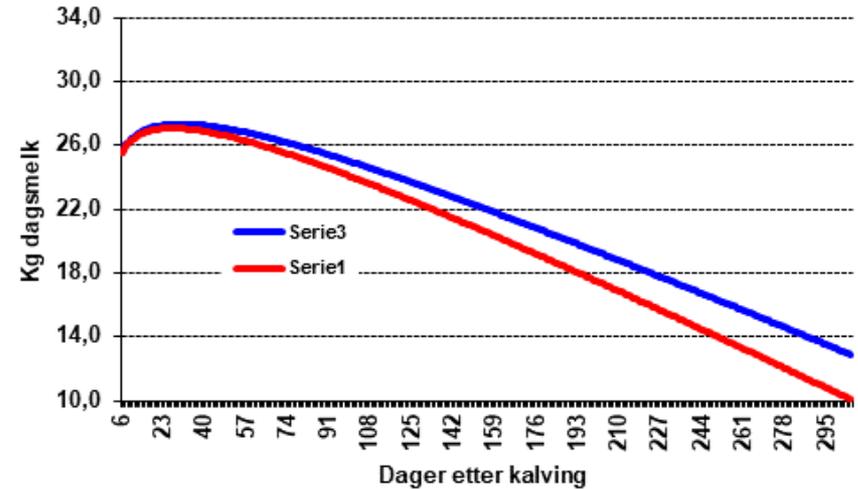
- Quotas in Norway
- Premium quality => sorting of milk
- Clinical Mastitis => withdrawal time
- Feeding calves with high SCC milk
- Errors in recording system
- What is the impact of GHG emission?



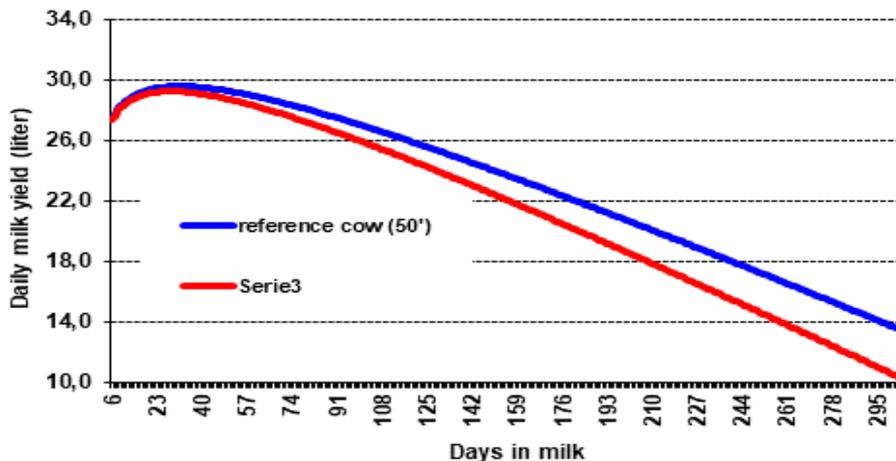
1. laktasjon 400,000 SCC reduction 200 liters



2. laktasjon, 400,000 SCC, reduction 430 liters



3<sup>rd</sup> lactation, 400,000 SCC reduction 492 liters



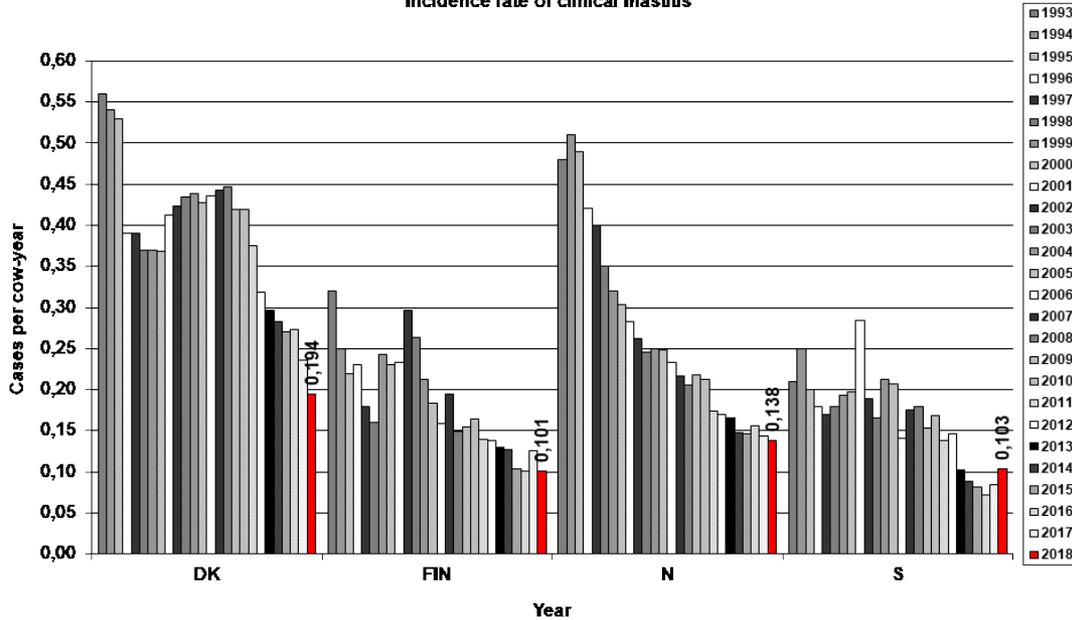
## What is the impact on GHG emission?

- Less intensity more feed
- Production of SCC is not for free
- Increased culling rate, increased replacement
- Increased food loss

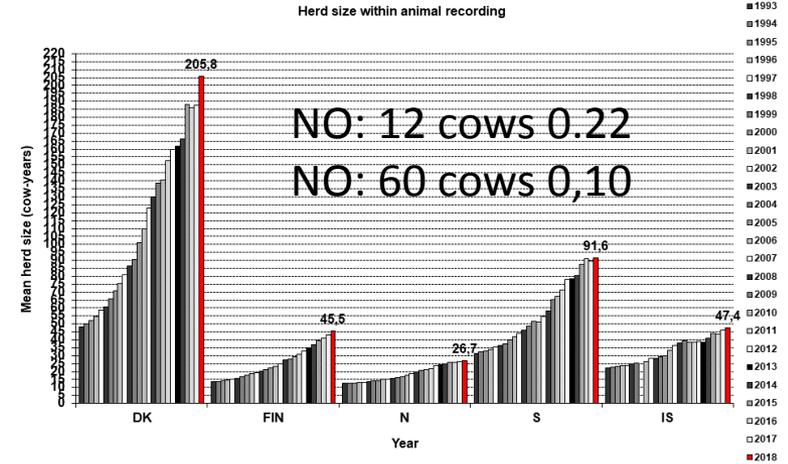
# Clinical mastitis – Why that difference ?



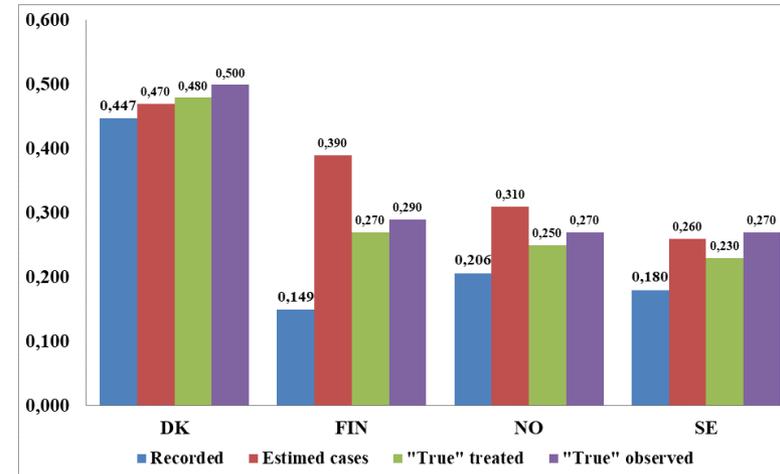
Incidence rate of clinical mastitis



Herd size within animal recording



- Herd size, in NO less in larger herds
- Different attitude to treatment
  - Treatment protocol
  - Management
  - Premium payment
  - Attention to single animals
- Different composition of age





Acta vet. scand. 2004, 45, 201-210.

## Cumulative Risk of Bovine Mastitis Treatments in Denmark, Finland, Norway and Sweden

By J.P. Valde<sup>1</sup>, L.G. Lawson<sup>2,3</sup>, A. Lindberg<sup>4</sup>, J.F. Agger<sup>2</sup>, H. Saloniemi<sup>5</sup> and O. Østerås<sup>1</sup>

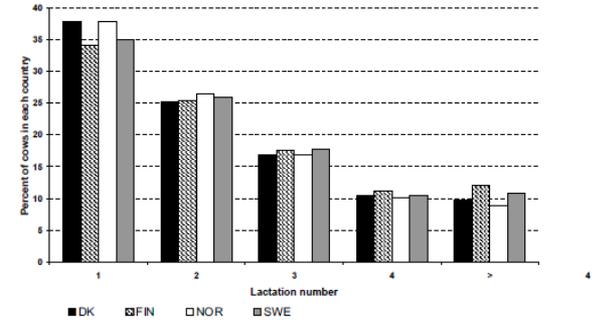
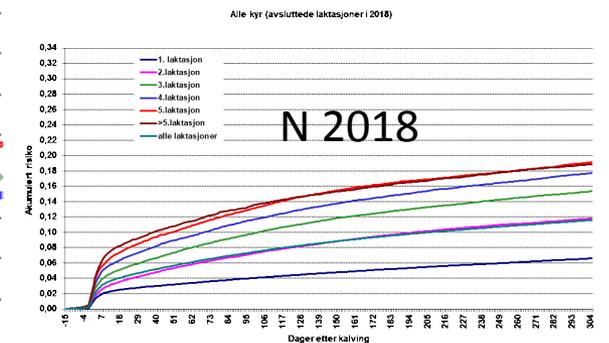
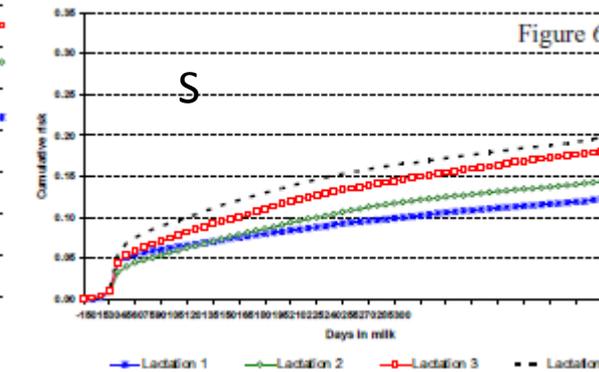
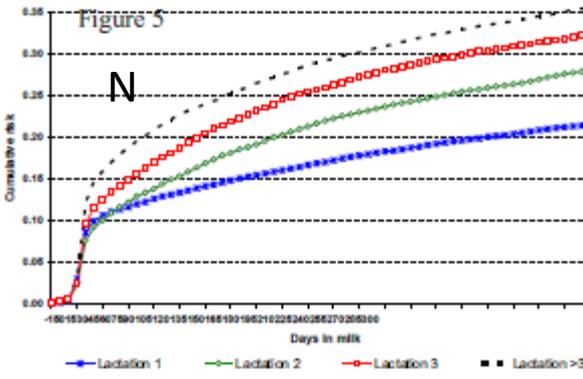
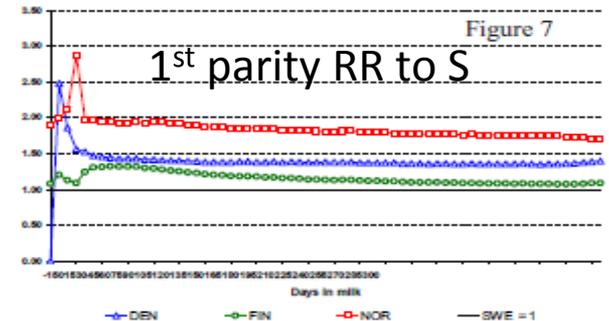
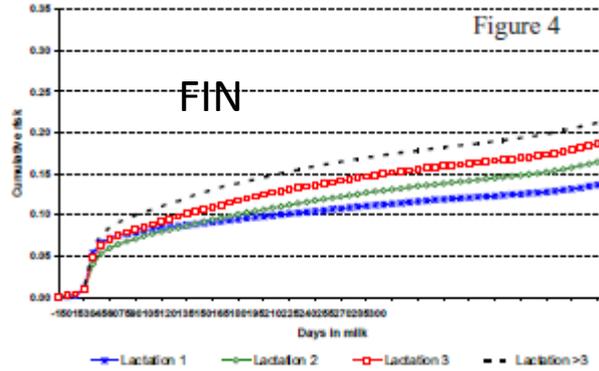
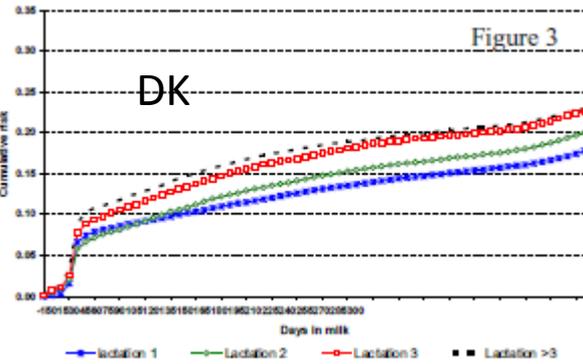


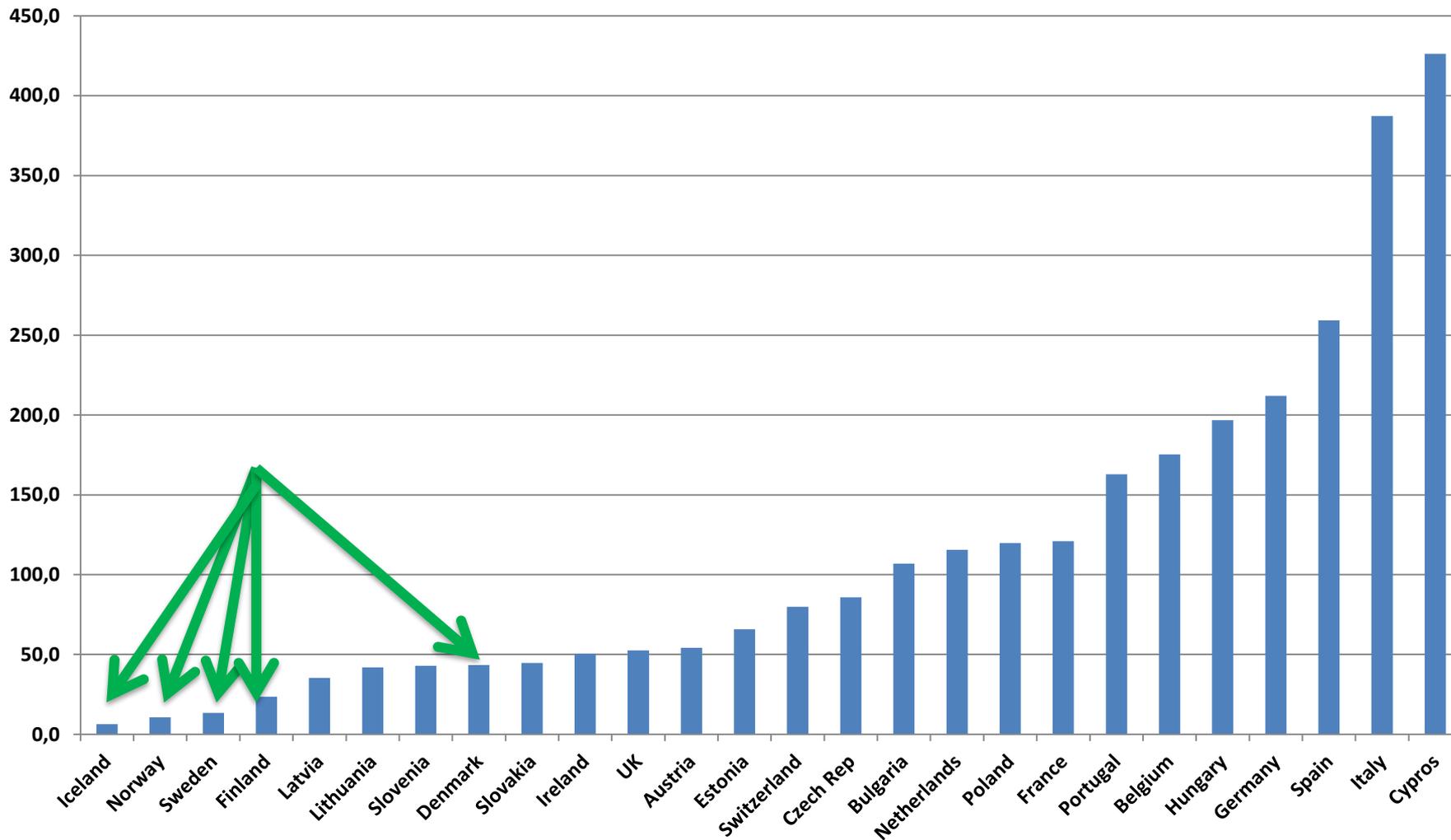
Figure 1. Parity distribution (per cent) by country for lactations started in 1997 among cows in the Nordic countries.



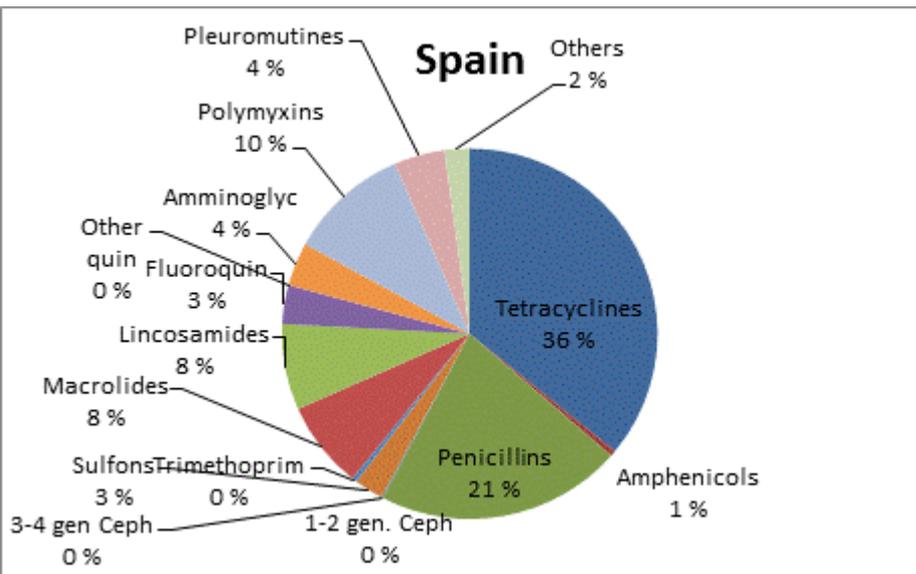
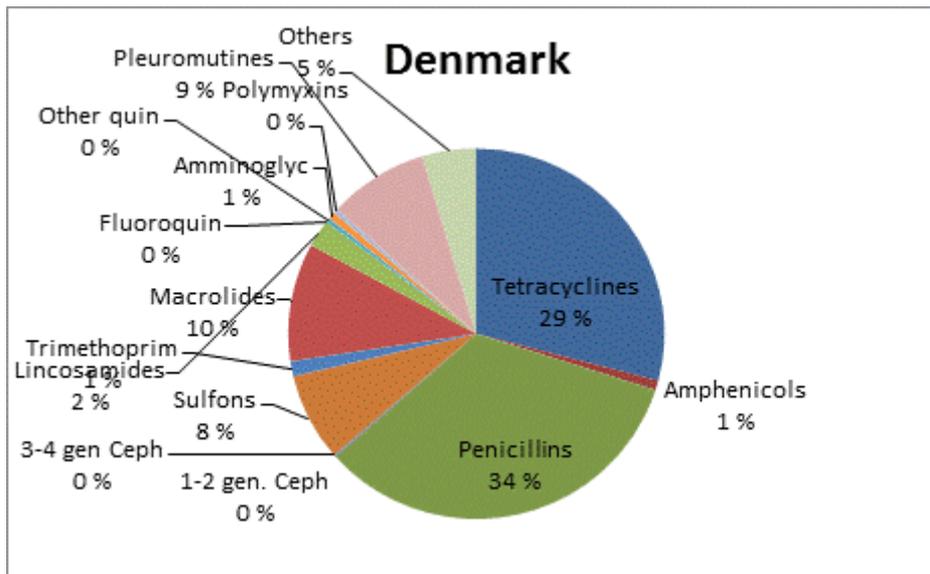
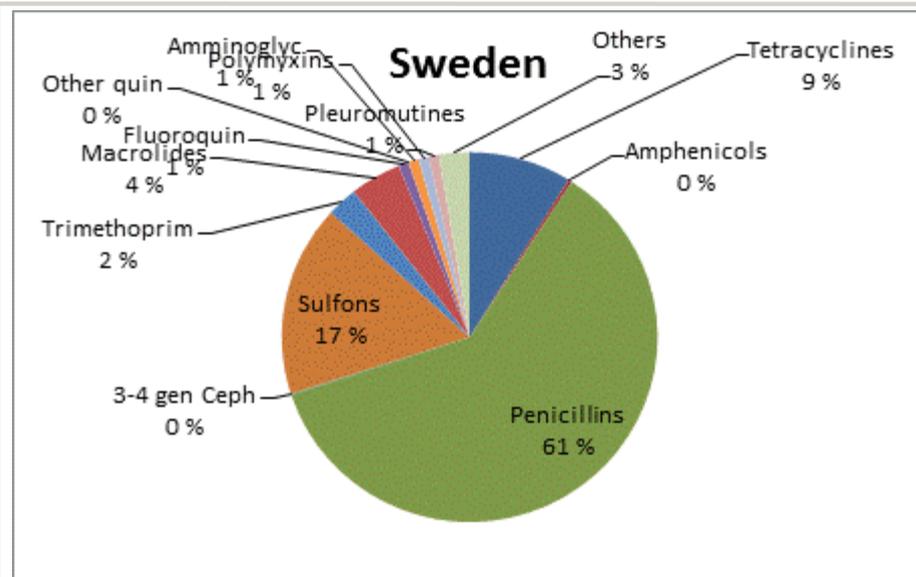
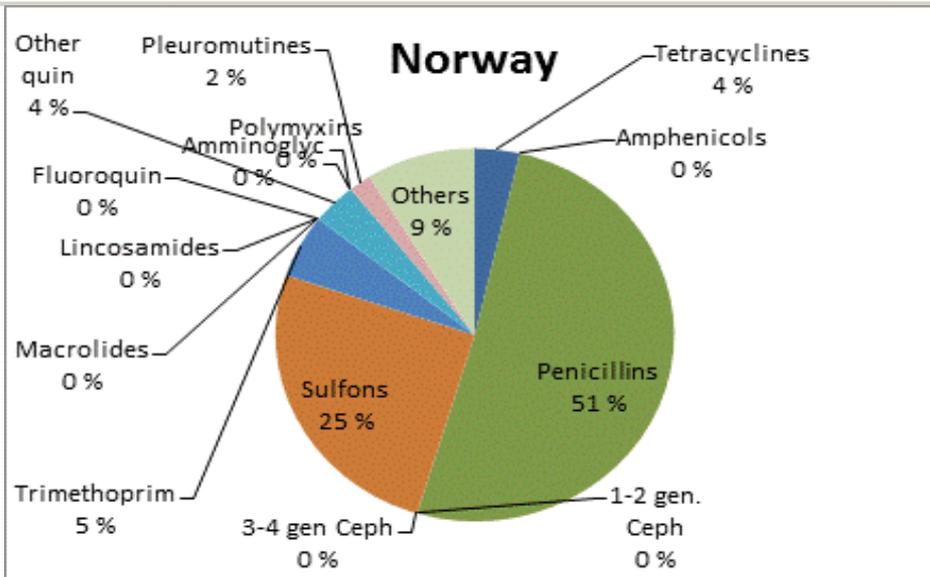




mg/PCU minus fish (PCU)

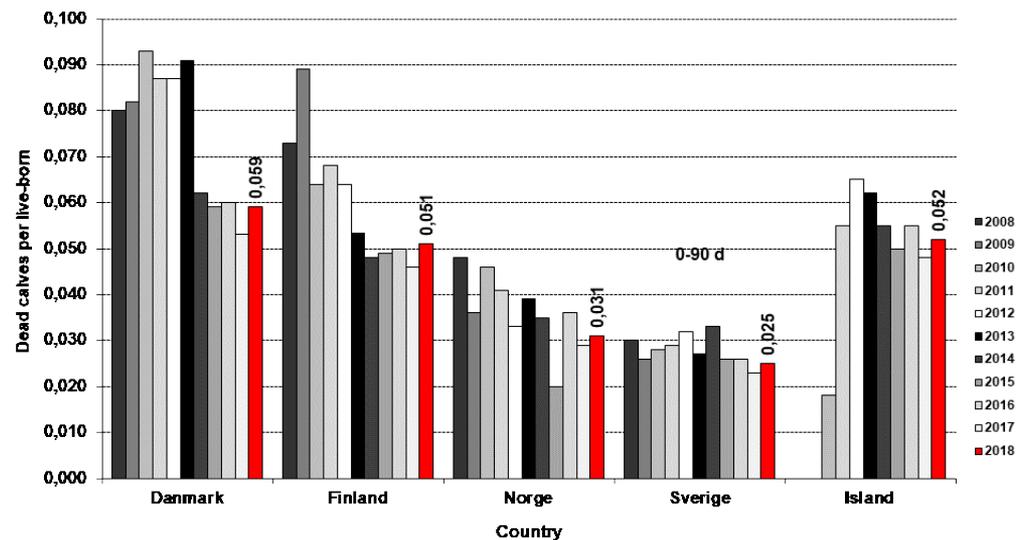
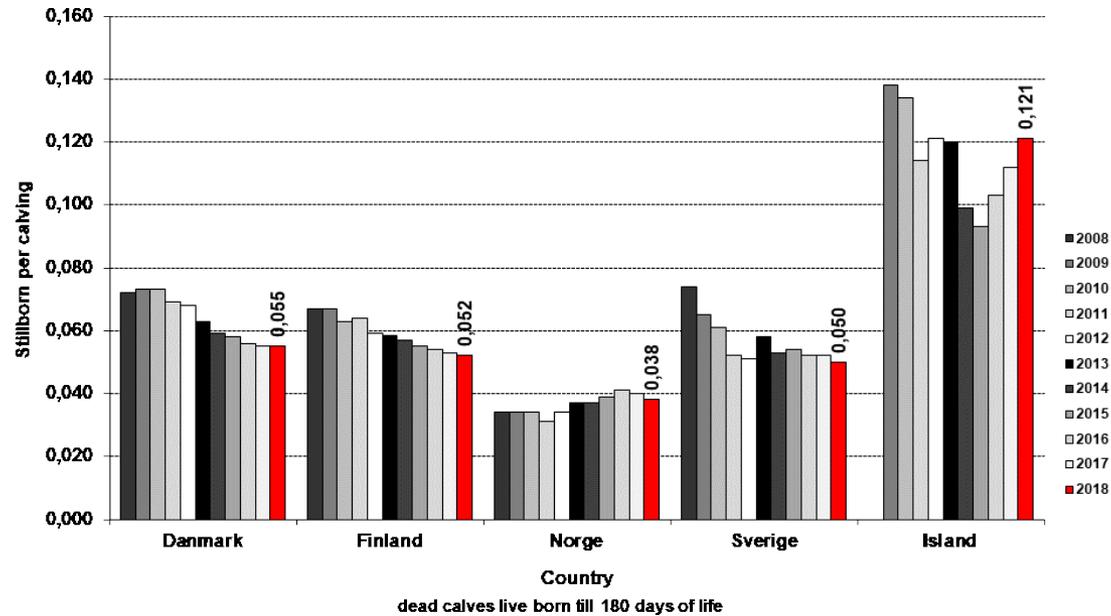


# Ab usage in Europe



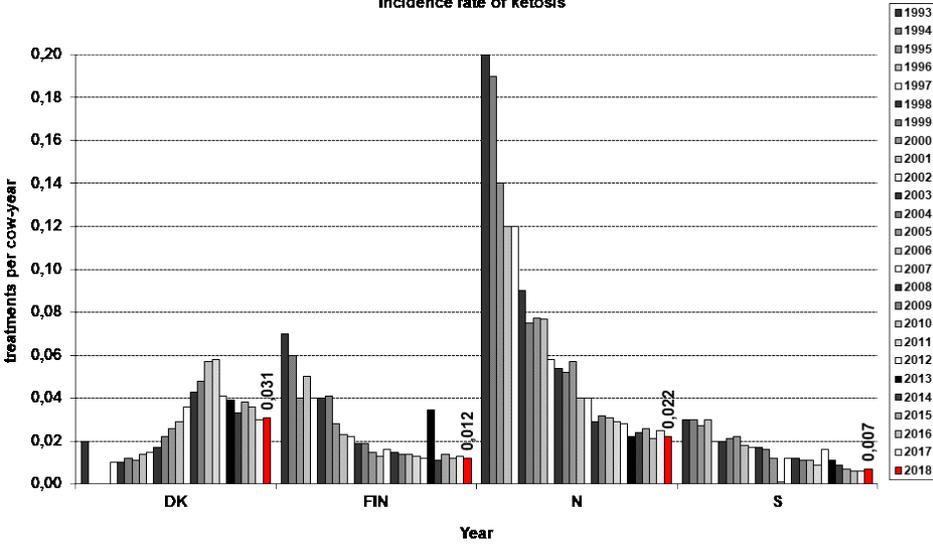


## Stillborn

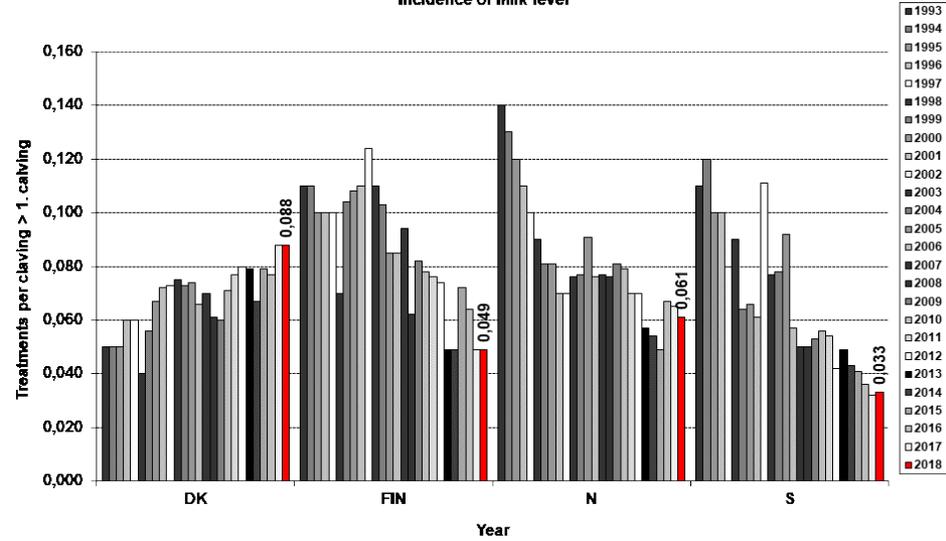




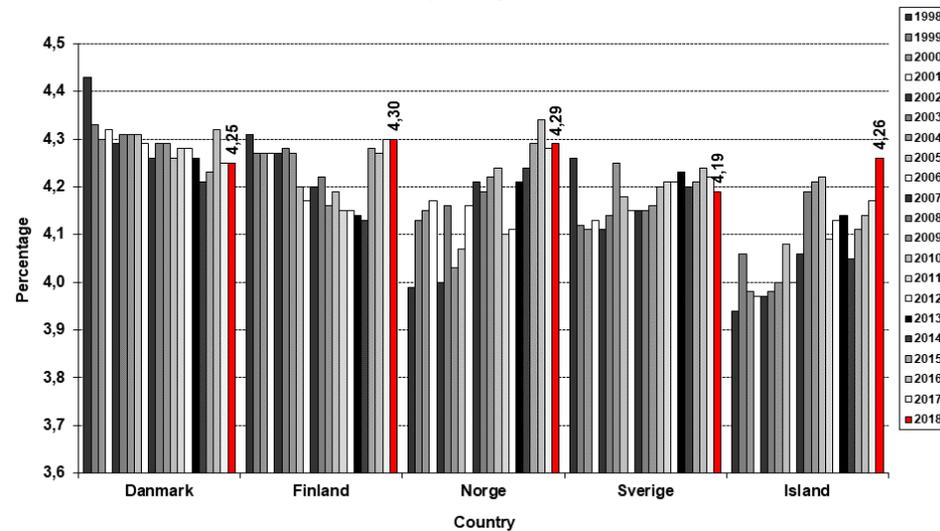
Incidence rate of ketosis



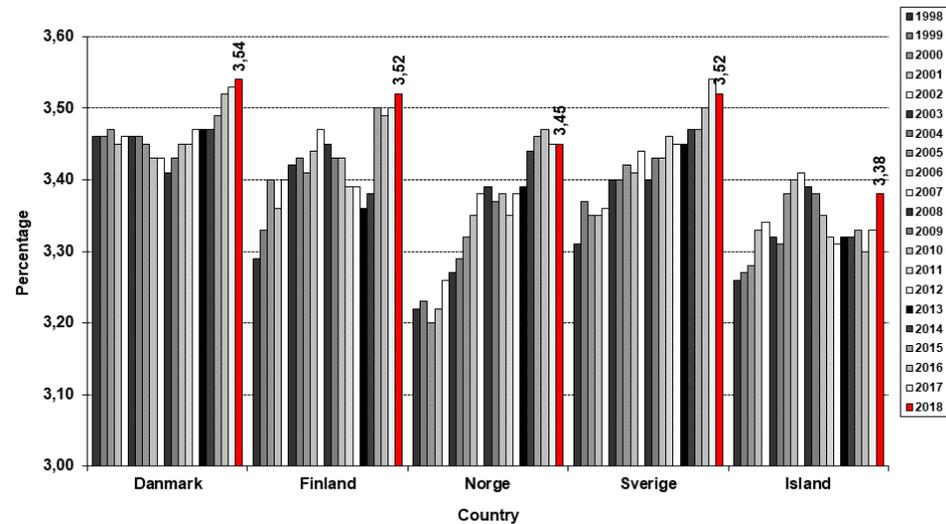
Incidence of milk fever



Fat percentage in milk



Protein percentage in milk

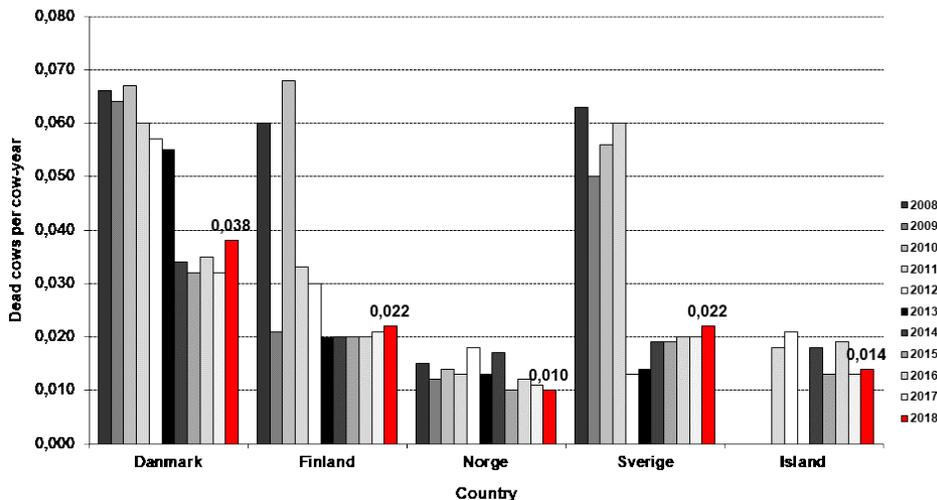




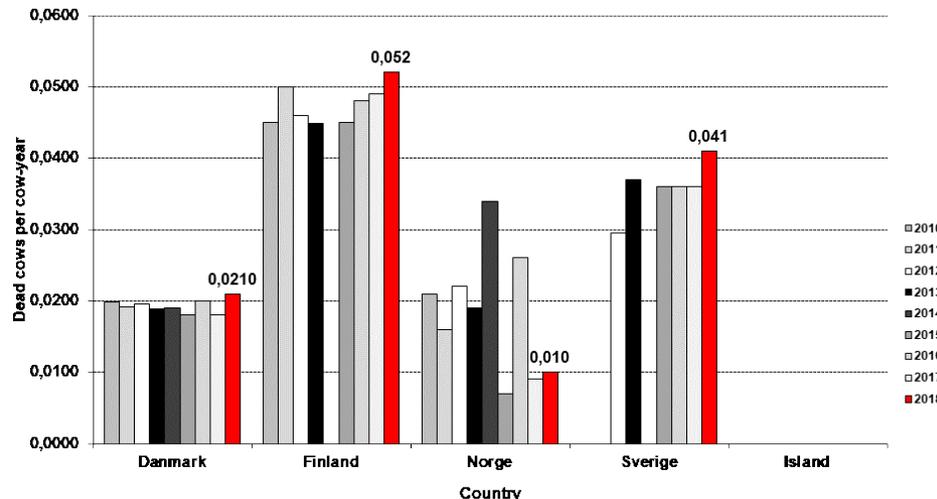
# Dead cows - culling



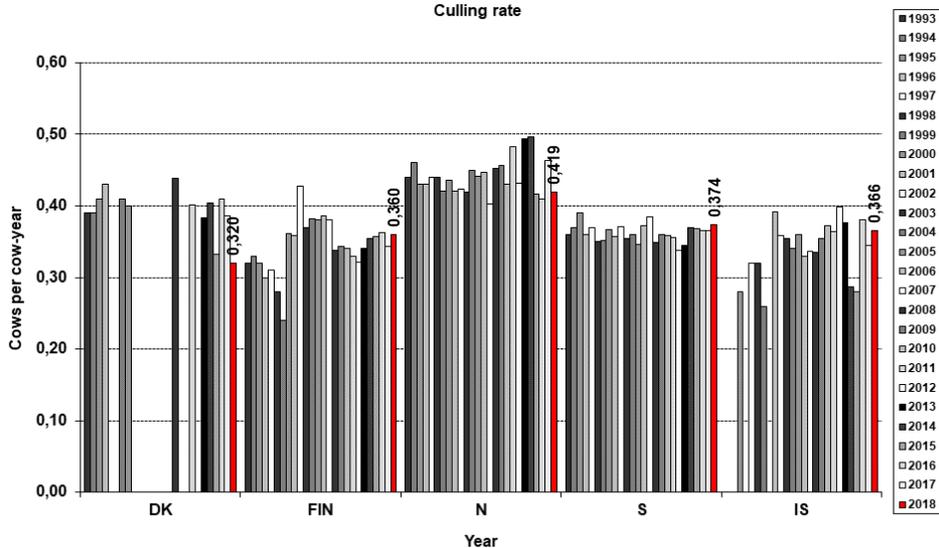
Dead dairy cows



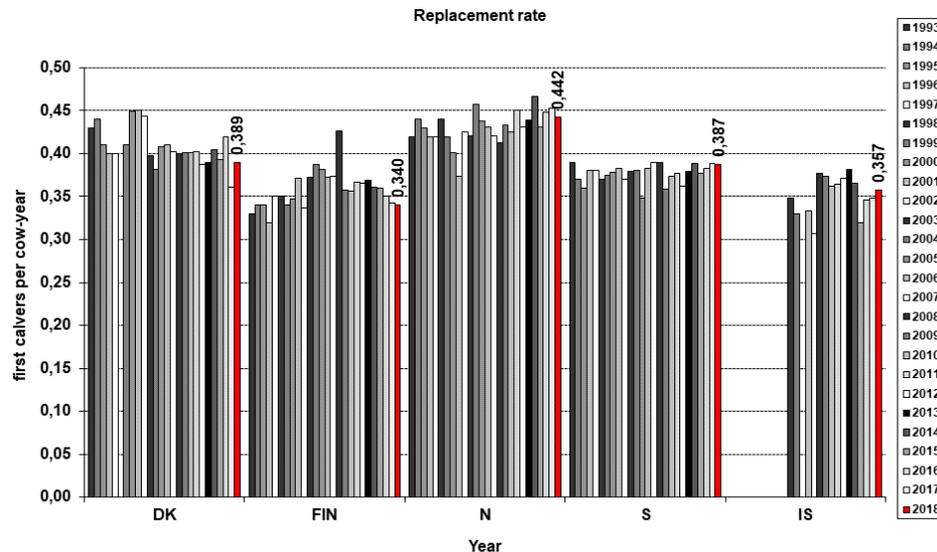
Authentic dairy cows



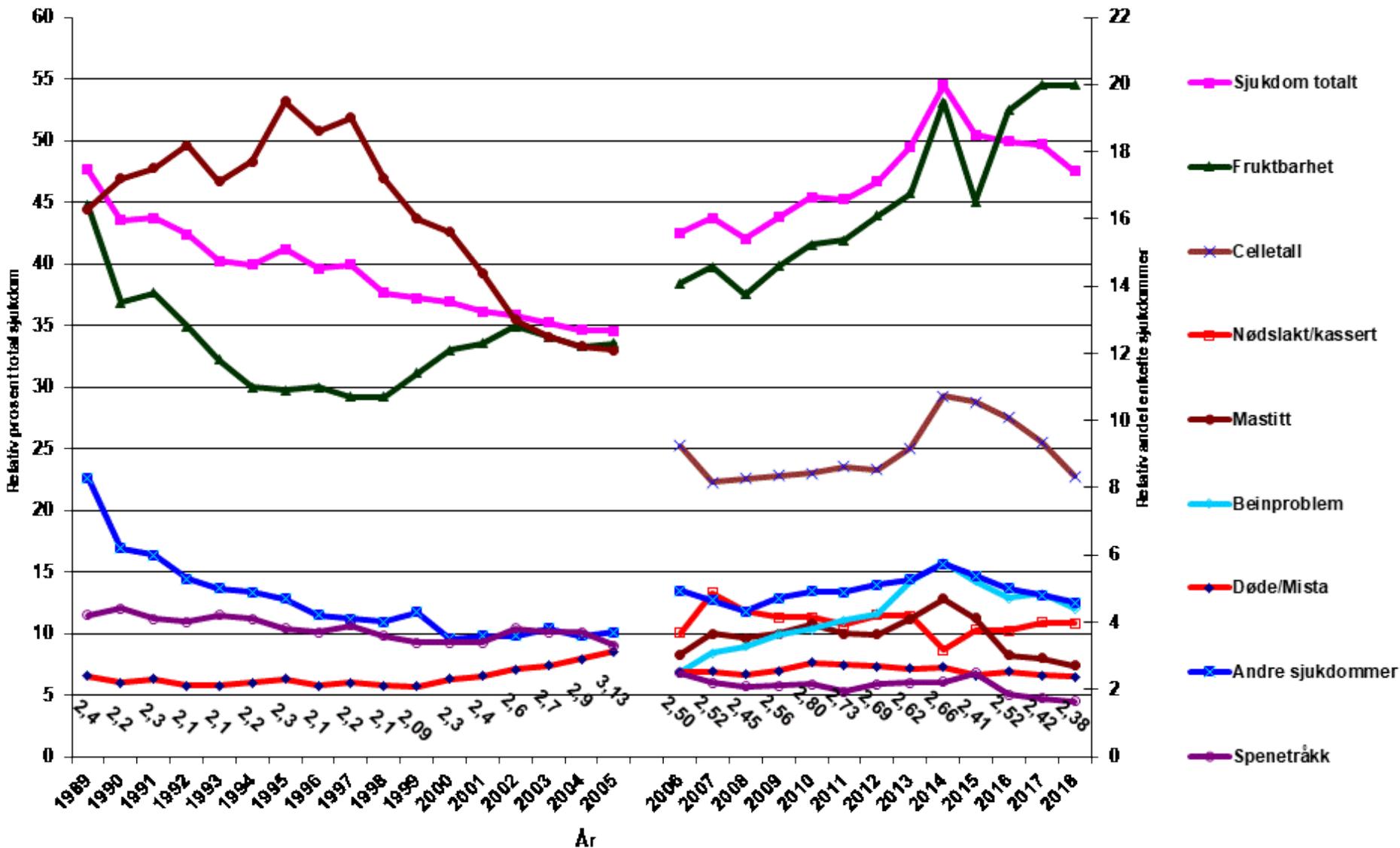
Culling rate



Replacement rate



# Culling reasons





- 1. There has been a huge effectivity increase in the Nordic dairy production the last 25 years**
- 2. The health situation have improved very much**
- 3. The use of antibiotic is decreased (ex. 40 % in husbandry in Norway for mastitis appr. 75 %) at the same time penicillin resistant *S.aureus* is reduced by 80 %.**
- 4. There has been a huge difference between the Nordic countries**
- 5. Uncovering this difference has been very motivated, we have learned from each other, discussed and improved the work**
- 6. NMSM group have been very efficient in motivation and over all making the people aware that they are on the right track**
- 7. The Nordic countries are the only countries in the world that have such data, and have compiled it in the same way**
- 8. This work has also have some impact on the international society**
- 9. One example is the worldwide blanket dry cow therapy in ending and selective dry cow therapy is increasing. Scandinavian countries has been a good example.**
- 10. Without data, no knowledge. Without knowledge no improvement.**
- 11. Most countries do not even know where they are??**