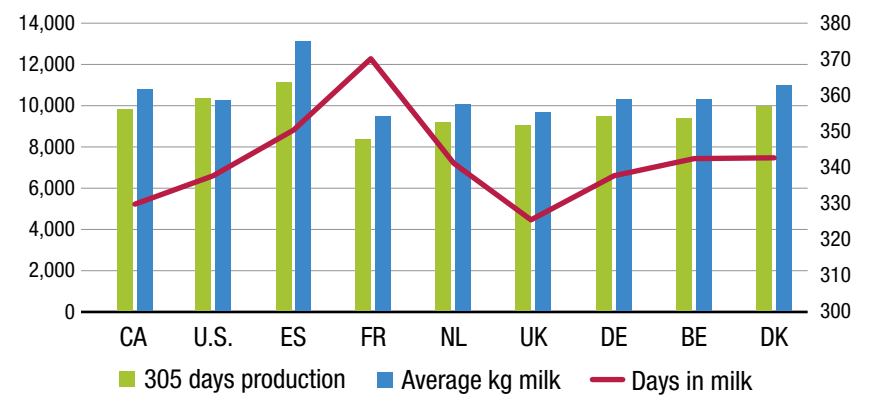


Milk production and sustainability

Lactation production

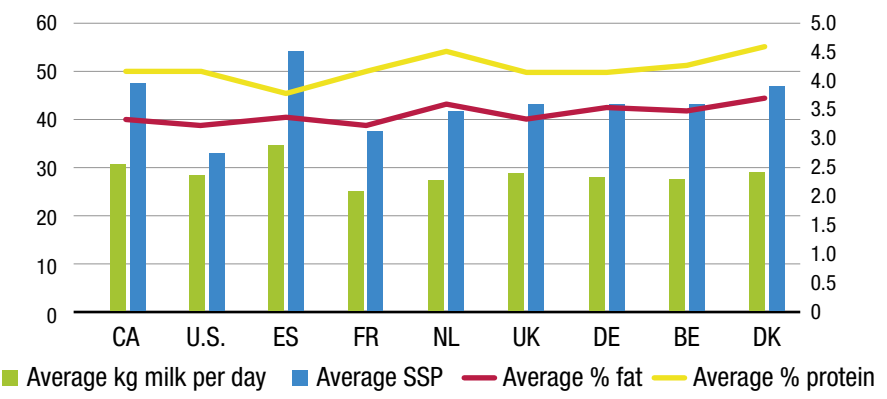
Average production during lactation and 305 days production, combined with days in milk for finished lactations



Highest lactation production and average daily milk yield = Spain
Denmark and Canada came in second and third; however, looking at the level of milk production relative to the number of days in lactation, the UK has fewer days in milk, followed by Canada. This indicates Canada is more efficient in production over Spain, U.S. and Denmark. Also note that although France has the lowest values in milk production and milk yields, it has the highest number of days in milk.

Milk production

Daily milk production per cow and average standard peak production (SPP) per cow

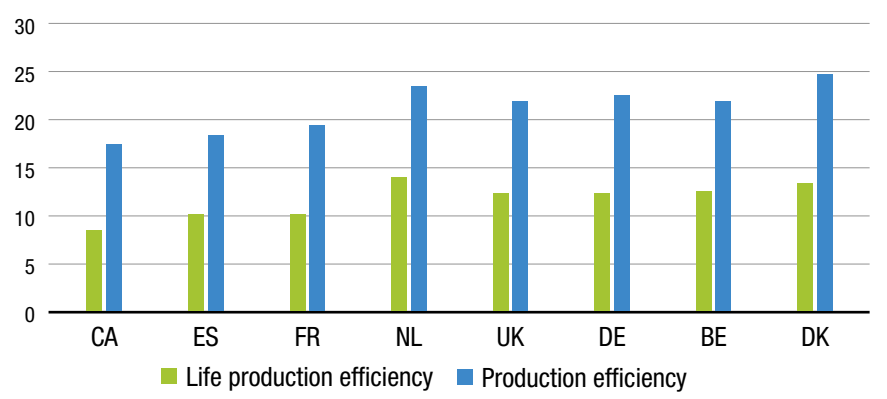


Highest standard peak production = Spain with 54 kilograms
Second is Denmark and Canada with 47 kilograms.

Highest milk producer of fat and protein = Denmark
Denmark produces more solids per kilogram of milk than other countries with the Netherlands in second. Belgium, Germany and Canada seem to produce the same levels of fat and protein.

Sustainability

A comparison of the production efficiency and life production efficiency between countries (Values from U.S. have not been considered)

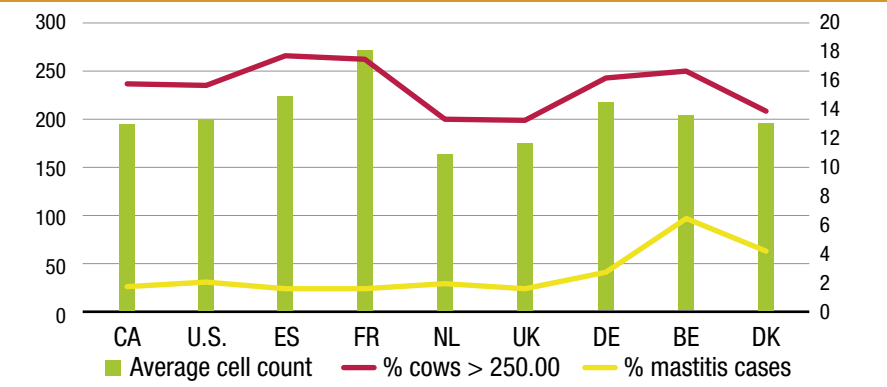


Highest production sustainability = Denmark with 24.5 kilograms of milk per day (first calving until culling date)

Highest life production efficiency = Netherlands with 13.9 kilograms of milk per day lived (birth until culling date)

Udder health

Results of udder health between countries



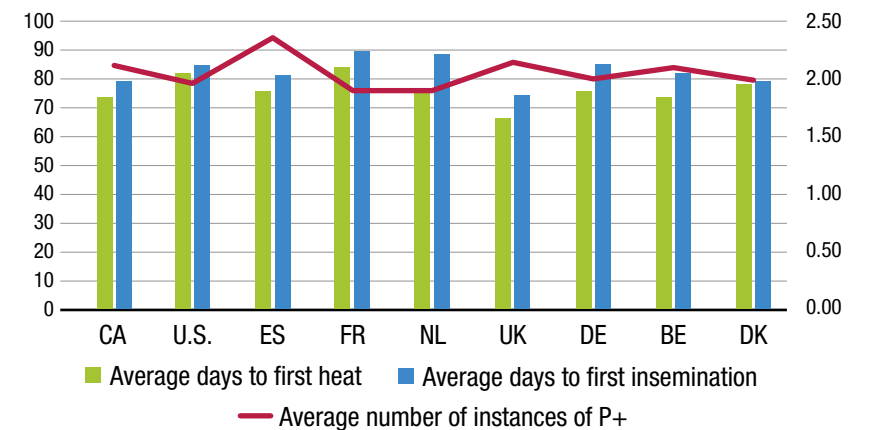
Best performance = Netherlands has the lowest SCC, least number of cows with greater than 250,000 SCC and 2% mastitis; however, the UK and Spain share the lowest mastitis cases at 1.5%.

Note: the Netherlands has been running an antibiotic reduction plan for more than 10 years, focusing on mastitis prevention and control.

Fertility

Heat detection and insemination performance

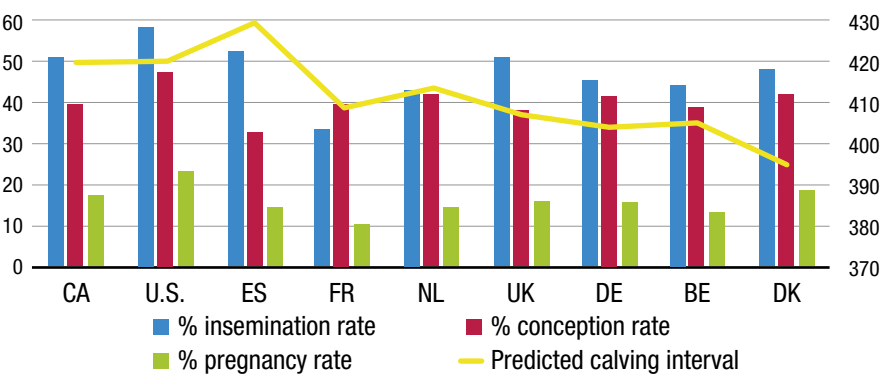
Days to first heat and first insemination, combined with number of inseminations to pregnancy



Best fertility = UK (shortest period between calving and first heat/insemination)
Denmark and Canada are a close second with their average days to first service under 80 days in milk. Spain follows with 81 days, Belgium at 82 and Germany and the U.S. at 85 days with France and Netherlands following. However, looking at insemination efficiency, countries such as France, Netherlands and the U.S. wait more to first service at under two inseminations per pregnancy, with Denmark at two exactly, making it the most efficient.

Fertility performance

The three main fertility KPI's by country, combined with the predicted calving interval



Key performance indicators (KPI's) ideal values are: insemination rate (IR) at 65% or more, conception rate (CR) at 40% and pregnancy rate at 24%.

Best IR = U.S. with 55%
Best PR = U.S. with 23.3%, then Denmark, Canada and UK
Best CR = U.S. with 47.3%

Shortest calving interval = Denmark
Countries with best IR and OK performance in CR also have the highest PR. Highest production cows have lower fertility, which may be why U.S. dairy producers work harder on fertility performance to achieve results, making them overall the best fertility performer.