**Milk production and sustainability**

**Lactation production**

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

**Sustainability**

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

**Heat detection and insemination performance**

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

**Fertility performance**

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

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**Results of udder health between countries**

**Heat detection and insemination performance**

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

**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%
- Pregnancy rate at 24%

**Fertility**

- **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.

**Dairy 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.

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**Best insemination rate = U.S.** with 55%
- **Best PR = U.S.** with 23.3%, then Denmark, Canada and UK
- **Best CR = U.S.** with 47.3%

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