# Supplemental Data for:

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## Native and reference breeds description

### Danish native breeds

Jysk Kvæg

Jysk Kvæg was firstly recorded in the pedigree herd book in 1881 and were up to 1949 used both for milk and meat production (Sørensen and Hunnicke Nielsen, 2017). In 1949, the breed merged into one herd book for all Danish black and white cattle (SDM) together with the breeds of Black and white cattle originating from Holland, and since then the breed became nearly extinct with only a few purebred animals remaining. The breed has nowadays become part of a conservation-breeding program. In 2016, the original population included 630 females above the age of one year. The phenotype is described with a height of 134 cm and a live weight of 550 kg for adult females and a height of 145 cm and live weight of 1,000 kg for adult males (Sørensen and Hunnicke Nielsen, 2017). Cows calving age is approximately 31 months. The 305-day milk yield is 6,000 kg with 3.9% fat and 3.3% protein (Sørensen and Hunnicke Nielsen, 2017).

RDM-1970

RDM anno 1970 was first pedigree-recorded in 1878 and was widely used in the Danish dairy production in the 20th century. However, from 1970, genetics from American Brown Swiss and Canadian Red were introduced to counteract the severe inbreeding within the population. Then the pure breeding of the original RDM-1970 was given up in the mainstream red breed in Denmark. Today only, a small population exists of the pure RDM-1970. In 2016, there were 224 females above the age of one year (Sørensen and Hunnicke Nielsen, 2017). The phenotype is described with a height of 134 cm and a live weight of 550 kg for adult females and a height of 150 cm and a live weight of 1,050 kg for adult males, with a dressing percentage of 53.9% and EUROP conformation class of 5.8 for bull calves (Sørensen and Hunnicke Nielsen, 2017). The 305-day milk yield is 6,700 kg with 4.8% fat and 3.7% protein (Sørensen and Hunnicke Nielsen, 2017).

### Finnish native breeds

Länsisuomenkarja (Western Finncattle)

This polled beige-brown cattle breed was the dominant Finncattle in the beginning of the 20th century. Länsisuomenkarja association was established in 1906 (Luke, 2015a). The breed has been kept for dairy purpose and it is informally characterized as one of the most productive native dairy breeds. The number of breeding females is 1,160 (Luke, 2022). On average, female height is 133 cm and the live weight 556 kg. The height of the bulls is on average 140 cm and live weight 625-820 kg (Felius, 1995). The annual energy corrected milk yield (ECM) of the breed is 7,660 kg (Nokka, 2021).

Itäsuomenkarja (Eastern Finncattle)

The reddish-brown cattle is known for a broad white line on its back. The pattern is also known as color-sided in other breeds. Itäsuomenkarja, as the name implies, is traced to the eastern part of Finland, where it was prevailing. It is the oldest of the Finncattle breeds as the breed association was established in 1898. Pedigree registration began afterwards, in 1914 (Felius, 1995, Luke, 2015b). It suffered, however, severe losses during the Second World War. As a results of war, a huge evacuation operation was executed to relocate more than four hundreds of thousands Finnish with their cows and bulls to other parts of the country inside the new borders. The breed lost both its geographical area and a significant part of its population. The number of breeding females was 1,556 in 2021 (Luke, 2022). The breed has been kept for milk and meat production. The height of the cows is 118 cm and live weight is 440 kg. Bulls are on average 135 cm and their live weight is 600 kg (Felius, 1995). The annual ECM of Itäsuomenkarja is 4,550 kg (Nokka, 2021).

Pohjoissuomenkarja (Northern Finncattle)

The polled white cattle, the rarest of Finncattle breeds, is often characterized as the sister breed of Swedish Fjällko and Norwegian Sidet Trønderfe og Nordlandsfe (STN). The herdbook was established in 1905. The breed was kept in large herds in North, Finnish Lapland before the Second World War. A massive rescuing operation was carried out in the autumn of 1944 when the cattle was evacuated mainly to Sweden. After the war, only portion of the cattle came back with their owner and crossbreeding with Länsisuomenkarja and

commercial breeds nearly caused disappearance of the pure breed before its rescue in 1980's. As there were no purebred bulls left in 1980s, Swedish Fjällko bulls were used to save the remains of Pohjoissuomenkarja. It is bred for milk and meat (Juvani, 2014; Luke 2015c). The number of breeding females is 842 (Luke, 2022). The height of the cows is on average 110-115 cm and their live weight is 300-400 kg. The height of the bulls is on average 128 cm and live weight 450-650 kg (Felius, 1995). The annual ECM of Pohjoissuomenkarja is 5,650 kg per year (Nokka, 2021).

## Icelandic native breed

Íslenska kúakynið

The native Icelandic cattle has been almost completely isolated from other breeds for over 1100 years, or since the settlement of the island, which makes it genetically distinct from other cattle breeds (Gautason et al, 2020). The breed is most closely related to the northern Nordic indigenous breeds, the Finncattle breeds Länsisuomenkarja, Itäsuomenkarja, Pohjoissuomenkarja and the Swedish Fjällko (Gautason et al, 2020). The population size is approximately 81,000 animals, whereof around 26,000 dairy cows (Statistics Iceland, 2022). The breed is still the commercial cattle breed of the country and is mostly used for dairy production. Meat production is considered a side production and the growth potential is relatively low. The average height and weight are 125 cm and 470 kg of females and 150 cm and 800-1,000 kg for bulls. The average annual milk yield is 6,300 kg (The Icelandic Association of Cattle Farmers, 2022).

## Norwegian native breeds

Sidet Trønderfe og Nordlandsfe (STN)

The breed has its background in the central and northern areas of Norway. It is mainly a dairy breed, adapted to the conditions in valley and mountain settlements in Norway. In 2020 the number of breeding females was 1,806 (Sæther et al, 2021) where 56% were suckler cows and 44% dairy cows (Holene and Sæther, 2021). The live weight of cows is about 430 kg and of bulls 600 kg. The annual milk yield is 4,000 kg (Sæther et al, 2021; FAO, 2022).

Telemarkfe

Telemarkfe is the oldest cattle breed in Norway. It was established in 1856 and it was thought to be especially adapted to the mountains. It was originally a dairy breed. In 2020, the number of breeding females was 485 (Sæther et al, 2021) where 59% were suckler cows and 41% dairy cows (Holene and Sæther, 2021). It is small, with a live weight of cows ranging from 350-500 kg and an annual milk yield of 4,000 kg (Sæther et al, 2021; FAO, 2022).

Dølafe

Dølafe is originally from the southeastern part of Norway. These areas were good grasslands but were still not close enough to cities for easy milk distribution, and so the breed was often used as a dual-purpose breed. In 2020, the number of breeding females was 305 (Sæther et al, 2021) where 56% were suckler cows and 44% dairy cows (Holene and Sæther, 2021). In the early 1900s, it was considered one of the heaviest breeds in the country with a live weight of 350 kg. Today the breed live weight is 500 kg with an annual milk yield of 3,000 kg (Sæther et al, 2021).

Østlandsk rødkolle

Østlandsk rødkolle is a red polled cattle breed and it was the dominant breed in south-east Norway until Second World War. After this, the breed was heavily crossed with Norwegian Red cattle and the breeds were considered the same breed from 1961. In 2020, the number of breeding females was 473 (Sæther et al, 2021) where 90% were suckler cows and 10% dairy cows (Holene and Sæther, 2021). The live weight is 490 kg (Johansson, 1953). The annual milk yield is 4,000 kg (Sæther et al, 2021).

Vestlandsk Raudkolle

Vestlandsk Raudkolle is a red polled cattle breed, originating from the south-west part of Norway. It is considered as a dual-purpose breed. In 1947, Vestlandsk Raudkolle and Vestlandsk Fjordfe were merged to one breed: Sør- og Vestlandsfe. However, in 1990s in the early period of the conservation work, both the original Vestlandsk Raukolle and Vestlandsk Fjordfe were found, and it was decided to separate the breeds again. In 2020, the number of breeding females was 233 (Sæther et al, 2021) where 72% were suckler cows and 28% dairy cows (Holene and Sæther, 2021). The cow live weight is between 350 and 500 kg and its annual milk yield is 4,000 kg (Sæther et al, 2021).

Vestlandsk Fjordfe

Vestlandsk Fjordfe originates from the western part of Norway where the landscape is dominated by fjords, steep hills and nutrient-poor grasslands. The cow is thus small and hardy. Vestlandsk Fjordfe has a big range in colour and size, and it was both polled and horned. In 2020 the number of breeding females was 1,018 (Sæther et al, 2021) where 74% were suckler cows and 26% dairy cows (Holene and Sæther, 2021). Today the live weight is 400-500 kg and the annual milk yield 4,000 kg (Sæther et al, 2021).

## Swedish native breeds

Fjällko

This polled cattle type has probably been kept in northern Sweden since the Viking Age (Hallander, 1989; Upadhyay et al, 2019) and it was named as a specific breed in the early 1800s. A pathological selection towards predominantly white animals a century ago narrowed the breeding base drastically. There is about 2,600 cattle of Fjällko breed at present (Svensk fjällrasavel, 2022). The Fjällko is a dairy cow with a milk protein composition giving rise to a high cheese yield (Hallander, 1989). The yearly milk yield of today is approximately 6,000 kg ECM for the 575 milk-recorded cows (Växa Sverige, 2021). The live weight of adult females is 400-450 kg and the height is 120-130 cm (Hallander, 1989).

Rödkulla

This red polled cattle from central Sweden became officially a breed in 1912. The breeding programmes for Fjällko and Rödkulla were then merged for a long period and the Rödkulla got a unique breed code as late as in 2004. Due to very low number of cattle in the start of the conservation work, some similar-type Norwegian and Finnish sires were used (Hallander, 1989; Sveriges Rödkulleförening, 2021). In 2020, there were 1,856 females and 733 males. Originally, the Rödkulla was a dairy breed with a yearly milk yield up to 5,500 kg ECM but is today more often kept as a suckler cow. The live weight of cows is 400-650 kg (Sveriges Rödkulleförening, 2021).

Väneko

The Väneko is named after the hundreds of Väne (meaning grazing) in south-western Sweden, where a group of animals since the 1850's until the conservation work started in 1992 had largely not been crossed with other breeds (Föreningen Allmogekon, 2021). In 2019, there were 176 females and 25 males (FAO, 2022). The Väneko is horned with a great variation in color, often black or reddish-sided. The live weight is 500-600 kg for cows and 700-800 kg for bulls (Föreningen Allmogekon, 2021).

Bohuskulla

The Bohuskulla is a southern variant of the Fjällko, of which a small remnant was found in south-western Sweden in 1990's and named from the county. The polled Bohuskulla has the same variation in drawing and color as the Fjällko. In 2019, there were 90 females and 24 males (FAO, 2022). The live weight of cows is 400-500 kg, with slightly heavier bulls (Föreningen Allmogekon, 2021).

Ringamålako

The reddish and horned Ringamålako got its name from the hamlet Ringamåla in south-eastern Sweden, where in 1993 a herd was found that for over 40 years largely had kept up with its own bulls and not crossed with other breeds. Two groups of cattle from Rögnaröd and Loshult in the same region have later been

merged with the breed (Föreningen Allmogekon, 2021). In 2019, there was 118 females and 38 males (FAO, 2022). The live weight for cows is 400-500 kg, while bulls are heavier (Föreningen Allmogekon, 2021).

## Reference breeds

Two beef breeds, Charolais and Hereford, and one dairy breed, Holstein, was included as reference breeds in Denmark, Sweden, Finland, and Norway. In addition, red dairy cattle were used as further reference breeds in Norway and Sweden. As there is only one cattle breed of any importance in Iceland, no reference breed was included from Iceland.

### Charolais

Charolais was developed in the middle-east France in the 19th century based on local French breeds and some import of British shorthorn, but since the middle of the late 19th century the breed has been developed through selective breeding, and the breed is today the most used beef breed in France. In the 1960s a huge export of Charolais cattle and semen took place, and the breed also settled as one of the largest beef breeds in numbers in the Nordic countries. Charolais is denoted as a late maturing beef breed meaning it has capacity for fast growing in intensive rearing systems. The live weight for cows is 750 kg, while live weight of adult bulls is from 1,150 kg (FAO, 2022).

### Hereford

Hereford is a British breed developed in Herefordshire around year 1800. The breeding goal of the Hereford cattle have gone through different directions since then. At the beginning, it was a quite heavy beef cattle type. However, in the 20th century it became important that they developed fast under semi-extensive environments. This created the small and quite fat type of Hereford cattle. Since the 1970s the breeding goal has again been larger and less fat cattle, and this is also the present type of Hereford in the Nordic countries. However, Hereford is still regarded as an early maturing beef breed. The live weight for cows is 675 kg, while the live weight of adult bulls is 1,075 kg (FAO, 2022).

### Holstein

Holstein dairy cattle is the numerically largest dairy breed in the western world. In Europe, the breed is based on the gene pool of national black and white cattle, which were substituted with the gene pool from US Holstein through semen import, which became available in the 1960s where freezing of semen became possible. Today, nearly all genes in the Nordic Holstein populations can be traced back to US Holstein, which originally was imported from Holland as a dual-purpose breed and selected towards today's dairy type over more than 100 years. The Holstein of today are tall animals with mature cow weight of approximately 700 kg (FAO, 2022) and an annual milk yield of 11,000 kg of ECM in the Nordic countries (RYK, 2022; Växa Sverige, 2021).

### Red dairy cattle

The Norsk rødt fe (NRF) is the main commercial dairy breed in Norway and the Svensk röd och vit boskap (SRB) is the second biggest commercial dairy breed in Sweden. They are composite breeds heavily based on import of Scottish Ayrshire, starting in late 1800s. The imported breeds were crossed with the local native Scandinavian breeds, and after the Second World War NRF and SRB were spread through the whole Norway and Sweden, respectively, with artificial insemination, and quickly outcompeted the other breeds with higher milk and meat yield. Both breeds are considered as dual purpose, although milk yield is weighed higher in the breeding programs than the carcass traits. Annual milk yield is slightly above 8,000 kg for NRF and slightly above of 10,000 kg of ECM for SRB (Sæther et al, 2021; Växa Sverige, 2021).

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## Supplemental Table 1

Reference cattle in Denmark, Finland, Norway, and Sweden – breeds, categories, numbers, and age (mean and standard deviation (SD))

| Country | Denmark | | | Finland | | | Norway | | | Sweden | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | # of animals | Age Mo. | SD Mo. | # of animals | Age Mo. | SD Mo. | # of animals | Age Mo. | SD Mo. | # of animals | Age Mo. | SD Mo. |
| Holstein | | | | | | | | | | | | |
| Young bull < 12 mo | 681,159 | 10.0 | 0.79 | 1,824 | 9.23 | 2.59 | 1,893 | 7.0 | 1.56 | 82,380 | 9.1 | 1.17 |
| Bull > 12 mo | 226,313 | 14.4 | 3.85 | 338,033 | 20.5 | 3.65 | 14,821 | 19.3 | 4.23 | 404,588 | 19.8 | 7.44 |
| Steers | 10,173 | 27.1 | 6.39 | 63 | 22.5 | 5.06 | 30 | 23.5 | 2.87 | 90,081 | 26.9 | 5.29 |
| Heifers[a] | 120,930 | 23.2 | 6.60 | 53,256 | 22.0 | 7.64 | 1,118 | 20.2 | 4.20 | 61,485 | 28.5 | 11.81 |
| Young cow < 48 mo[a] | 216,672 | 33.7 | 5.33 | 38,855 | 34.2 | 5.15 | 7,137 | 36.1 | 7.46 | 82,669 | 34.8 | 4.76 |
| Cow > 48 mo | 727,690 | 65.5 | 17.96 | 160,510 | 68.3 | 20.19 | 5,519 | 64.1 | 15.20 | 333,786 | 67.4 | 20.06 |
| | Red dairy cattle | | | | | | | | | | | |
| Young bull < 12 mo | | | | | | | 88,399 | 7.3 | 1.67 | 27,359 | 9.2 | 1.22 |
| Bull > 12 mo | | | | | | | 790,444 | 19.8 | 4.16 | 231,608 | 20.2 | 8.10 |
| Steers | | | | | | | 12,082 | 23.0 | 4.73 | 80,208 | 27.4 | 5.55 |
| Heifers[a] | | | | | | | 89,471 | 19.8 | 4.57 | 41,612 | 28.3 | 9.53 |
| Young cow < 48 mo[a] | | | | | | | 340,177 | 36.5 | 7.63 | 52,248 | 35.1 | 4.571 |
| Cow > 48 mo | | | | | | | 393,122 | 68.1 | 18.13 | 234,081 | 68.2 | 20.35 |
| Charolais | | | | | | | | | | | | |
| Young bull < 12 mo | 295 | 11.0 | 1.00 | 140 | 9.2 | 2.78 | 1,585 | 7.9 | 1.87 | 1,243 | 10.7 | 1.49 |
| Bull > 12 mo | 1,452 | 20.7 | 17.59 | 22,526 | 21.7 | 9.28 | 32,529 | 19.8 | 9.20 | 39,319 | 19.6 | 12.98 |
| Steers | 5 | 27.1 | 9.09 | | | | 89 | 23,2 | 5.60 | 1,365 | 24.1 | 7.15 |
| Heifers[a] | 773 | 19.8 | 7.12 | 12,427 | 18.8 | 6.66 | 8,745 | 18.3 | 4.70 | 21,844 | 23.4 | 8.33 |
| Young cow < 48 mo[a] | 883 | 34.2 | 5.15 | 940 | 33.7 | 5.07 | 6,965 | 35.2 | 8.87 | 2,958 | 34.1 | 4.66 |
| Cow > 48 mo | 5,397 | 96.6 | 39.96 | 6,404 | 93.5 | 36.22 | 9,054 | 90.0 | 33.98 | 18,213 | 93.5 | 40.73 |
| Hereford | | | | | | | | | | | | |
| Young bull < 12 mo | 131 | 10.9 | 1.21 | 113 | 10.2 | 1.54 | 3,907 | 7.7 | 2.22 | 485 | 9.5 | 2.46 |
| Bull > 12 mo | 1,488 | 23.8 | 20.17 | 32,529 | 22.9 | 9.50 | 29,325 | 20.4 | 8.61 | 28,349 | 23.1 | 18.39 |
| Steers | 40 | 23.6 | 8.96 | 3 | 36.4 | 5.41 | 490 | 23.7 | 5.87 | 2,931 | 25.9 | 5.21 |
| Heifers[a] | 488 | 22.4 | 9.41 | 14,465 | 19.5 | 6.76 | 8,110 | 18.7 | 4.85 | 13,359 | 25.7 | 9.86 |
| Young cow < 48 mo[a] | 2,316 | 34.2 | 5.32 | 1,255 | 33.3 | 5.00 | 6,743 | 35.7 | 9.87 | 2,502 | 33.9 | 4.65 |
| Cow > 48 mo | 12,883 | 89.9 | 36.44 | 9,007 | 95.9 | 36.83 | 11,542 | 93.4 | 35.06 | 13,271 | 89.3 | 35.64 |

[a] In Norway a heifer is a female between 12 and 24 mo. and a young cow is between 24 and 48 mo., whereas calving instead of age separate the two categories in the other countries.

## Supplemental Table 2

Danish native cattle – breeds, categories, numbers, and age (mean and standard deviation (SD))

| Breed | Categories | # of animals | Age Mo. | SD Mo. |
|---|---|---|---|---|
| RDM | Young bull < 12 mo | 39 | 10.6 | 0.88 |
| | Bull > 12 mo | 137 | 23.6 | 17.49 |
| | Steers | 17 | 28.7 | 5.96 |
| | Heifers | 23 | 29.9 | 9.30 |
| | Young cow < 48 mo | 47 | 34.1 | 4.81 |
| | Cow > 48 mo | 183 | 77.3 | 30.33 |
| Jysk kvæg | Young bull < 12 mo | 47 | 10.1 | 0.81 |
| | Bull > 12 mo | 127 | 22.7 | 11.41 |
| | Steers | 28 | 30.5 | 7.25 |
| | Heifers | 39 | 33.1 | 12.79 |
| | Young cow < 48 mo | 57 | 35.6 | 5.91 |
| | Cow > 48 mo | 322 | 89.4 | 35.08 |

## Supplemental Table 3

Finnish native cattle – breed, categories, numbers, and age (mean and standard deviation (SD))

| Breed | Categories | # of animals | Age Mo. | SD Mo. |
|---|---|---|---|---|
| Länsisuomenkarja | Young bull < 12 mo | 392 | 8.0 | 2.87 |
| | Bull > 12 mo | 5,589 | 21.9 | 5.92 |
| | Steers | 26 | 23.0 | 5.96 |
| | Heifers | 1,636 | 25.0 | 11.20 |
| | Young cow < 48 mo | 1,087 | 33.3 | 5.03 |
| | Cow > 48 mo | 3,007 | 72.2 | 25.26 |
| Itäsuomenkarja | Young bull < 12 mo | 225 | 8.7 | 2.36 |
| | Bull > 12 mo | 1,685 | 23.2 | 9.93 |
| | Steers | 28 | 24.5 | 10.18 |
| | Heifers | 398 | 28.2 | 13.57 |
| | Young cow < 48 mo | 252 | 33.5 | 5.53 |
| | Cow > 48 mo | 785 | 78.5 | 30.42 |
| Pohjoissuome | Young bull < 12 mo | 785 | 8.5 | 2.46 |
| | Bull > 12 mo | 2,150 | 21.9 | 8.81 |
| | Steers | 85 | 45.7 | 36.56 |
| | Heifers | 776 | 24.8 | 12.36 |
| | Young cow < 48 mo | 380 | 32.8 | 5.38 |
| | Cow > 48 mo | 1,144 | 75.4 | 27.87 |

## Supplemental Table 4

Icelandic native cattle – breed, categories, numbers, and age (mean and standard deviation (SD))

| Breed | Categories | # of animals | Age Mo | SD Mo. |
|---|---|---|---|---|
| Íslenska kúakynið | Young bull < 12 mo | 368 | 9.6 | 3.00 |
| | Bull > 12 mo | 28,417 | 25.5 | 4.20 |
| | Steers | 0 | | |
| | Heifers | 3,688 | 25.7 | 7.80 |
| | Young cow < 48 mo | 8,147 | 37.5 | 6.60 |
| | Cow > 48 mo | 17,610 | 74.7 | 24.00 |

## Supplemental Table 5

Norwegian native cattle – breed, categories, numbers, and age (mean and standard deviation (SD))

| Breed | Categories | # of animals | Age Mo. | SD Mo. |
|---|---|---|---|---|
| STN | Young bull < 12 mo | 2,282 | 7.1 | 2.14 |
| | Bull > 12 mo | 3,034 | 19.8 | 8.26 |
| | Steers | 371 | 22.2 | 6.77 |
| | Heifers | 731 | 18.5 | 5.45 |
| | Young cow < 48 mo | 1,567 | 35.5 | 7.97 |
| | Cow > 48 mo | 2,096 | 78.8 | 26.34 |
| Telemarkfe | Young bull < 12 mo | 484 | 7.5 | 2.23 |
| | Bull > 12 mo | 547 | 18.7 | 9.68 |
| | Steers | 42 | 18.6 | 3.57 |
| | Heifers | 141 | 18.5 | 5.43 |
| | Young cow < 48 mo | 292 | 36.4 | 7.98 |
| | Cow > 48 mo | 470 | 80.4 | 30.25 |
| Dølafe | Young bull < 12 mo | 214 | 7.3 | 2.06 |
| | Bull > 12 mo | 337 | 20.5 | 7.47 |
| | Steers | 31 | 18.7 | 5.43 |
| | Heifers | 40 | 19.3 | 4.70 |
| | Young cow < 48 mo | 76 | 36.0 | 8.08 |
| | Cow > 48 mo | 185 | 88.2 | 30.46 |
| Østlandsk Rødkolle | Young bull < 12 mo | 419 | 7.4 | 1.55 |
| | Bull > 12 mo | 482 | 19,5 | 7.33 |
| | Steers | 6 | 21.0 | 3.80 |
| | Heifers | 71 | 18.5 | 5.43 |
| | Young cow < 48 mo | 122 | 35.0 | 8.03 |
| | Cow > 48 mo | 212 | 87.4 | 38.0 |
| Vestlandsk Raudkolle | Young bull < 12 mo | 205 | 7.0 | 2.09 |
| | Bull > 12 mo | 253 | 19.3 | 6.70 |
| | Steers | 15 | 22.7 | 4.94 |
| | Heifers | 43 | 17.6 | 5.30 |
| | Young cow < 48 mo | 103 | 34.1 | 7.51 |
| | Cow > 48 mo | 161 | 74.8 | 25.5 |
| Vestlandsk Fjordfe | Young bull < 12 mo | 757 | 7.9 | 5.53 |
| | Bull > 12 mo | 1,179 | 21.0 | 8.73 |
| | Steers | 188 | 21.7 | 3.14 |
| | Heifers | 295 | 18.4 | 5.46 |
| | Young cow < 48 mo | 440 | 36.2 | 9.24 |
| | Cow > 48 mo | 702 | 82.3 | 31.56 |

## Supplemental Table 6

Swedish native cattle – breed, categories, numbers, and age (mean and standard deviation (SD))

| Breed | Categories | # of animals | Age Mo. | SD Mo. |
|---|---|---|---|---|
| Fjällko | Young bull < 12 mo | 238 | 7.7 | 2.46 |
| | Bull > 12 mo | 772 | 25.7 | 11.69 |
| | Steers | 256 | 29.0 | 8.89 |
| | Heifers | 164 | 28.6 | 10.54 |
| | Young cow < 48 mo | 184 | 33.5 | 5.74 |
| | Cow > 48 mo | 701 | 88.0 | 40.78 |
| Rödkulla | Young bull < 12 mo | 138 | 8.3 | 2.12 |
| | Bull > 12 mo | 660 | 24.9 | 12.52 |
| | Steers | 178 | 26.9 | 5.99 |
| | Heifers | 197 | 27.0 | 9.23 |
| | Young cow < 48 mo | 76 | 33.9 | 4.92 |
| | Cow > 48 mo | 475 | 101.2 | 42.35 |
| Väneko | Young bull < 12 mo | 6 | 8.8 | 0.44 |
| | Bull > 12 mo | 24 | 29.6 | 8.63 |
| | Steers | 7 | 40.3 | 23.05 |
| | Heifers | 11 | 32.4 | 15.26 |
| | Young cow < 48 mo | 6 | 38.2 | 1.85 |
| | Cow > 48 mo | 29 | 92.1 | 32.34 |
| Bohuskulla | Young bull < 12 mo | | | |
| | Bull > 12 mo | 11 | 21.3 | 5.60 |
| | Steers | 5 | 27.9 | 2.39 |
| | Heifers | 4 | 36.4 | 5.45 |
| | Young cow < 48 mo | | | |
| | Cow > 48 mo | 2 | 76.2 | 31.46 |
| Ringamålako | Young bull < 12 mo | 5 | 10. 8 | 0.90 |
| | Bull > 12 mo | 32 | 26.1 | 12.87 |
| | Steers | | | |
| | Heifers | 6 | 22.3 | 10.58 |
| | Young cow < 48 mo | | | |
| | Cow > 48 mo | 5 | 102.5 | 35.99 |