

# Health statistics

of dairy cattle in Sweden 2019-20



# Dairy cattle health statistics 2019/20

## Swedish dairy herds

During 2019/20 there were a total of 303,390 dairy cows in 3,087 herds in Sweden. Of these were 66 percent of the cows and 70 percent of the herds affiliated to the national dairy herd recording scheme. In the herds affiliated to the national dairy herd recording scheme, the average herd size is 94 cows and the average annual milk production per cow is 10,679 kg ECM.

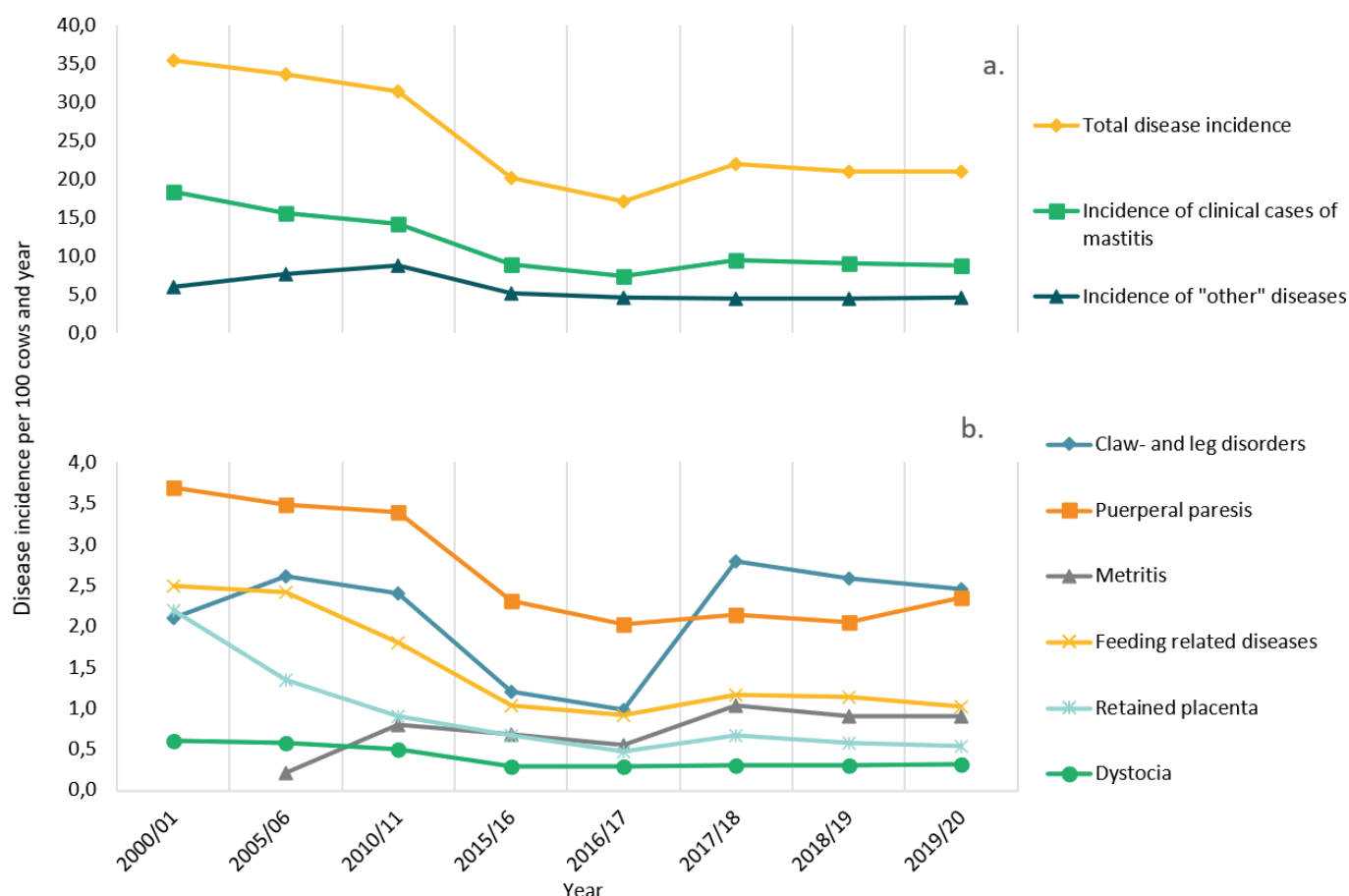
The major dairy breeds are Swedish Holstein (56.8 %) and the Swedish Red and White breed (32.9%). The majority (76%) of the cows are housed in free-stalls, and 54 percent of the herds have free-stall housing systems. In 18 percent of the 2,147 herds that are affiliated to the national dairy herd recording scheme a voluntary milking system is used, 36 percent have milking parlor or rotary, and 46 percent milk their cows in tie-stalls. Organic farming is applied in 18 percent of the 2,147 herds.

In Sweden, the infectious virus diseases bovine viral diarrhoea virus (BVD), enzootic bovine leukosis (EBL) and infectious bovine rhinotracheitis (IBR), as well as tuberculosis, brucellosis and paratuberculosis, have been eradicated through efficient control and surveillance programs. These diseases are all continuously monitored by sampling at the slaughterhouses and/or by taking milk samples at the milk assessment laboratory from randomly selected herds. For other contagious diseases there is a voluntary preventive biosecurity program for farmers to affiliate to. In total, 54 percent of all Sweden's registered milk producers are affiliated to that program. A low spread of infections between and within herds contributes, among other things, to a sustainable and profitable Swedish milk and beef production, safe food, and reduced risk of development of antibiotic resistance.

## Veterinary treated diseases

In Sweden, most treatments of diseases, and all that requires antimicrobial treatment, in dairy cows are initiated and registered by a veterinarian. These records are then transferred to and merged with the national dairy herd recoding scheme. In general, the health status of

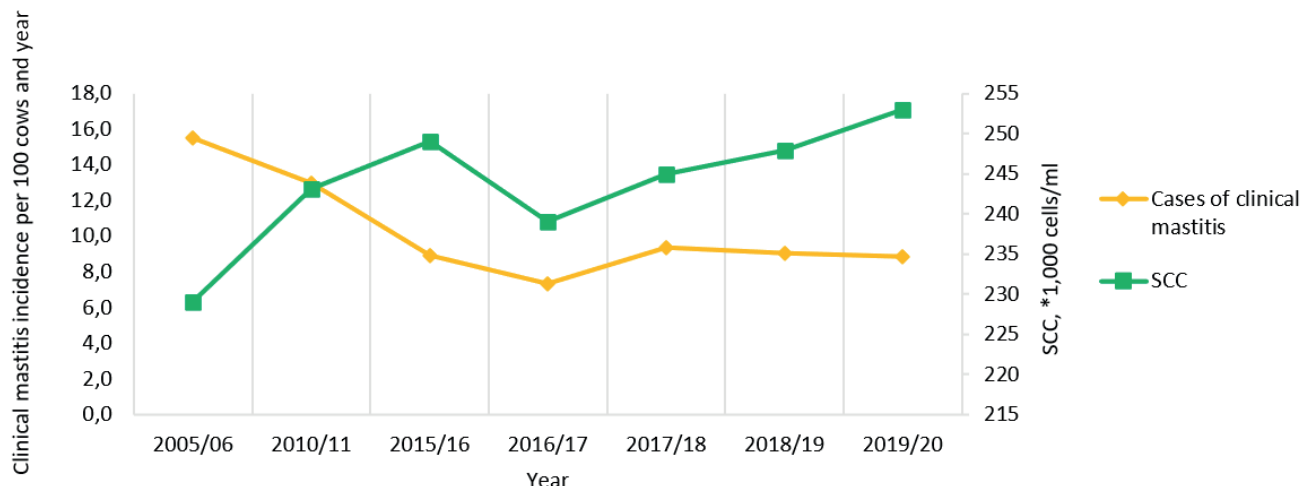
our dairy cows remains good in the milk recoding year 2019/20 with an incidence of veterinary treated cows at just over 20 percent, although a slight increase in the incidence of pleural paresis can be seen (Figure 1a and b).



**Figure 1 a and b.** Disease incidence in total (number of reported disease events per 100 cows and year) and for different disease complexes, in dairy cows enrolled in the Swedish national dairy herd recording scheme in 2000/01 to 2019/20. The disease recordings are mainly based on veterinary reported disease events.

Clinical mastitis is still the most common veterinary treated disease, though the incidence has decreased year by year (Figure 1a and 2). This decrease should indicate a generally better udder health; however, the remaining high, and over the last years slightly increased

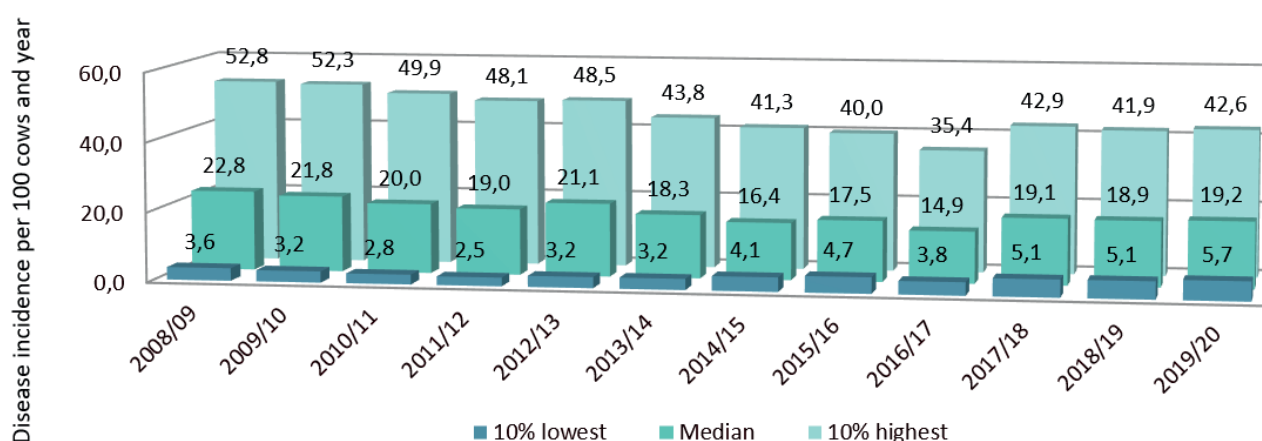
somatic cell count clearly indicates that there are many cows that have mastitis without showing symptoms (subclinical mastitis). This in turn impairs production and milk quality, increases the risk of clinical mastitis and culling.



**Figure 2.** Mean somatic cell count (SCC) at herd level (based on individual cell count registrations at milk recordings) and the incidence rate of clinical cases of mastitis (per 100 cows and year) in herds affiliated in the Swedish national dairy herd recording scheme in 2009/10 to 2019/20.

As there is a large variation in the total disease incidence between herds (Figure 3), from approximately 6 or fewer cows per 100 cows and year in the 10 percent herds with the lowest incidence, to approximately 43 or more

in the 10 percent herds with the highest incidence, there is a continued potential for improvement to get healthier dairy cows.



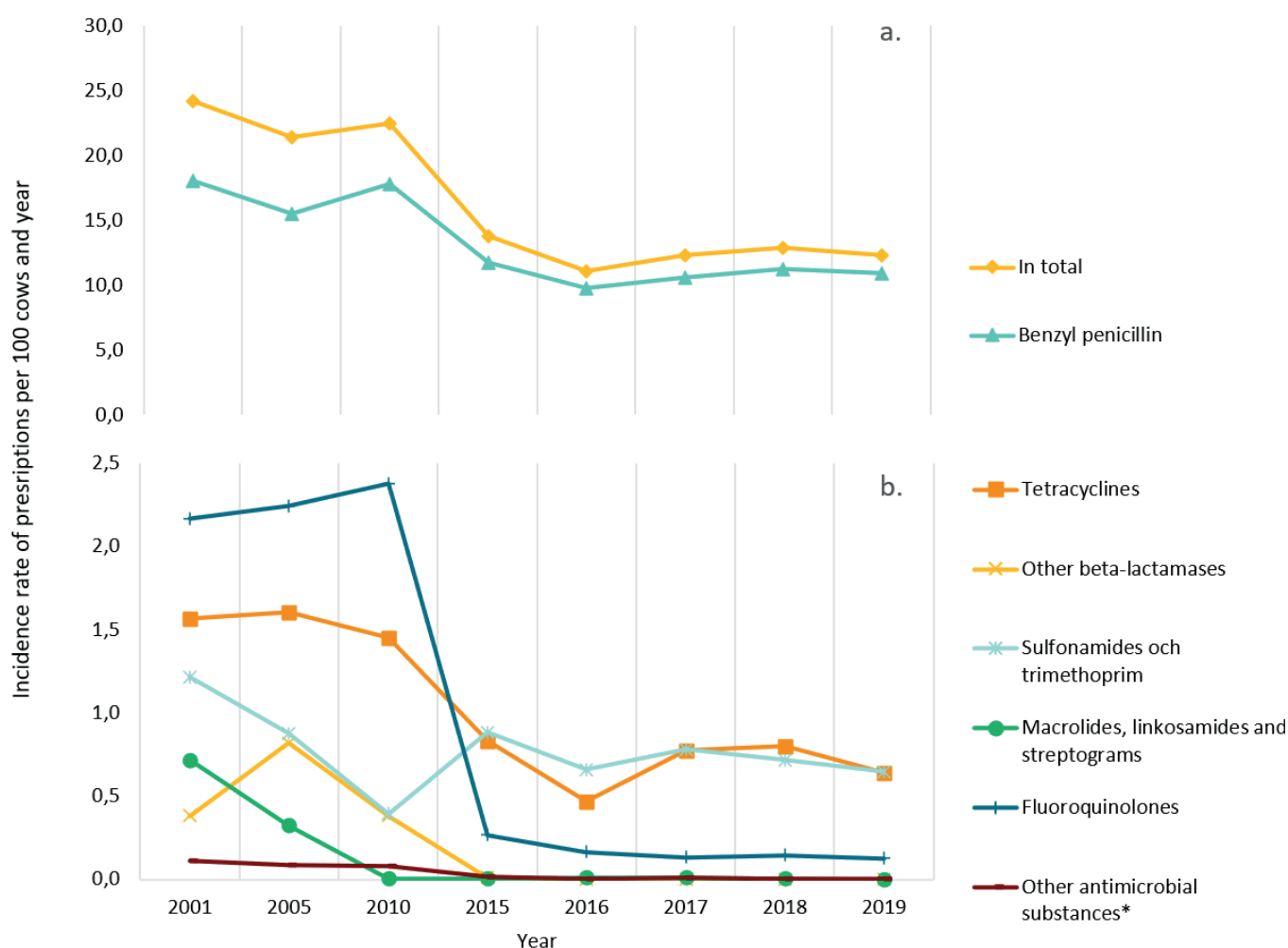
**Figure 3.** The 10th, 50th and 90th percentile for the herd-level total disease incidence rate (number of reported disease events per 100 cows and year) in herds affiliated to the Swedish national dairy herd recording scheme, 2009/10 to 2019/20.

## Use of antimicrobials

The treatment incidence of antimicrobials for systemic use at treatments of dairy cows in Sweden is low; only 12 out of 100 cows are treated (7 out of 100 cows if heifers are included) per year (Figure 4a and b). This is a reduction in treatment incidence compared to 2001 with almost 50 percent. Moreover, in 88 percent of the treatments in 2019 narrow-spectrum benzyl penicillin is prescribed, which is an increase in proportion with almost 20 percent compared to in 2001. Newer generations of cephalosporines were not prescribed at all in 2019, and in only 1.0 percent of the treatment's fluoroquinolones were prescribed. Most (61%) of the antibiotic treat-

ments were due to mastitis, and in 92 percent of those cases benzyl penicillin was prescribed.

The low treatment incidence and the high proportion of benzyl penicillin used shows that the health status of dairy cows is very good in Sweden and that we have good basis for keeping antimicrobial resistance at a low level. However, there is room for improvement as the proportion of penicillin used in some counties could probably be higher for some of the diagnostic complexes.

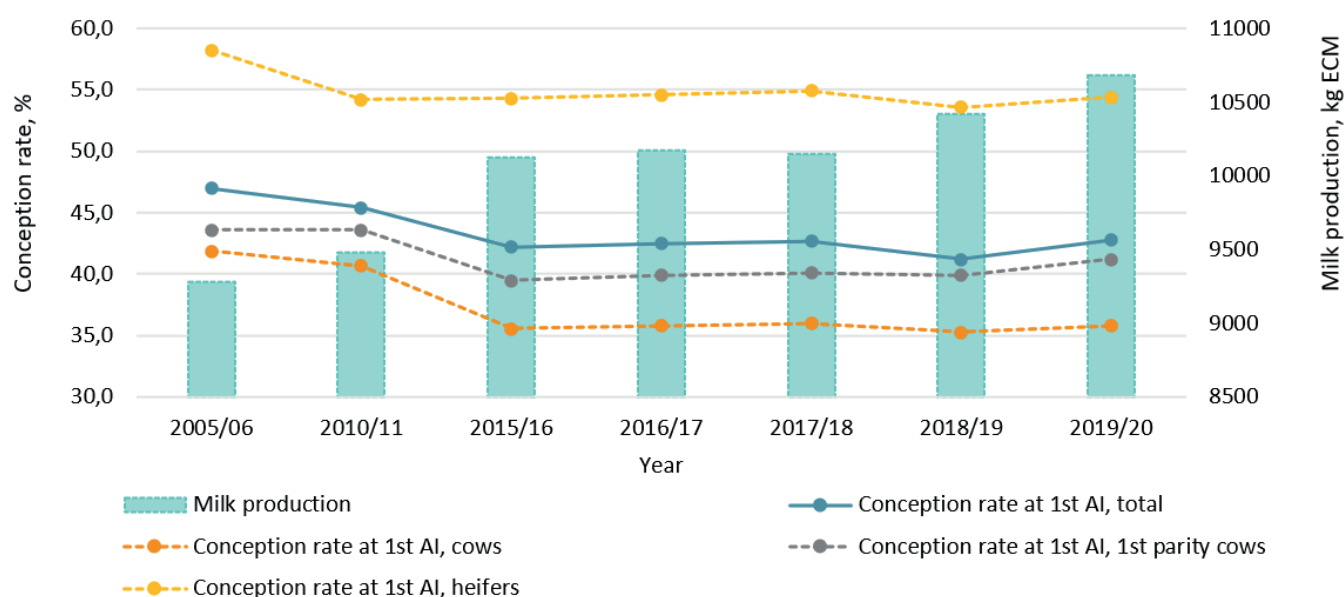


**Figure 4 a and b. Treatment incidences (number of prescriptions per 100 cow-years) for antimicrobial substances for systemic use used for treatments of dairy cows (heifers excluded) in herds affiliated to Swedish national dairy herd recording scheme, 2001 to 2019.**

## Fertility

More than 550,000 inseminations were performed during the year of which 76.3 percent were done by the farmers. On average it takes 1.8 inseminations to get a cow pregnant. More and more of the Swedish farmers seem to take an interest in their herd dynamics and they have a strategy for which animals they want to keep as mother animals and which should not be used as a base for recruitment; over 40,000 inseminations with sex-sorted semen was performed during 2019/20, which is an increase of 40 percent since last year. Average age at first calving is 27.4 months and average calving in-

terval is 13.2 months. Both average age at first calving and calving interval have been approximately the same during the last five years. The average number of days from calving to first insemination was 83 days and number of days from calving to last insemination was 119 days. The conception rate at first insemination was 42.8 percent; 35.8 percent in cows, 41.2 in first parity cows and 54.4 in heifers. Seen over time the conception rate has declined, but this can, to a vast extent, be explained by the increase in average milk production seen at the same time (Figure 5).

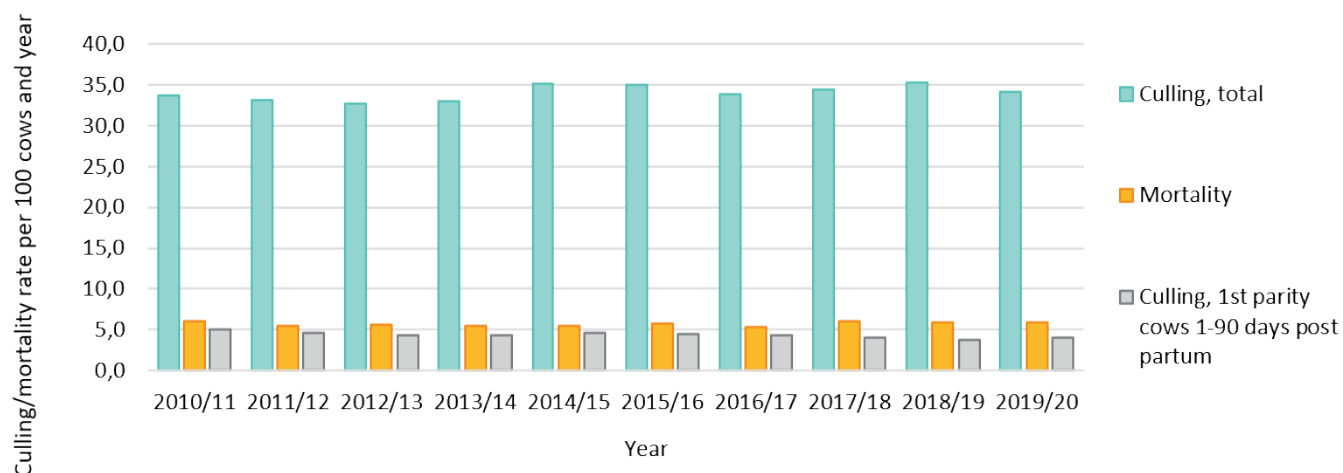


**Figure 5. Conception rate at first artificial insemination in total, for cows, first-parity cows, and heifers, as well as average annual milk production per cow in herds affiliated to the Swedish national dairy herd recording scheme, 2005/06 to 2019/20.**

## Mortality

The number of culled and euthanised cows also provides information on morbidity, especially information on how many cows that do not fully recover from illness. However, a high proportion of culled cows is not always due to poor recovery, it can be a conscious strategy to

get new cows into the herd. Seen over time, the proportion of culled cows in total has not changed much and has fluctuated between 33 - 35 culled cows per 100 cows and year in the last 10 years (Figure 6). The average age at culling for cows is 61.2 months (5.1 years).

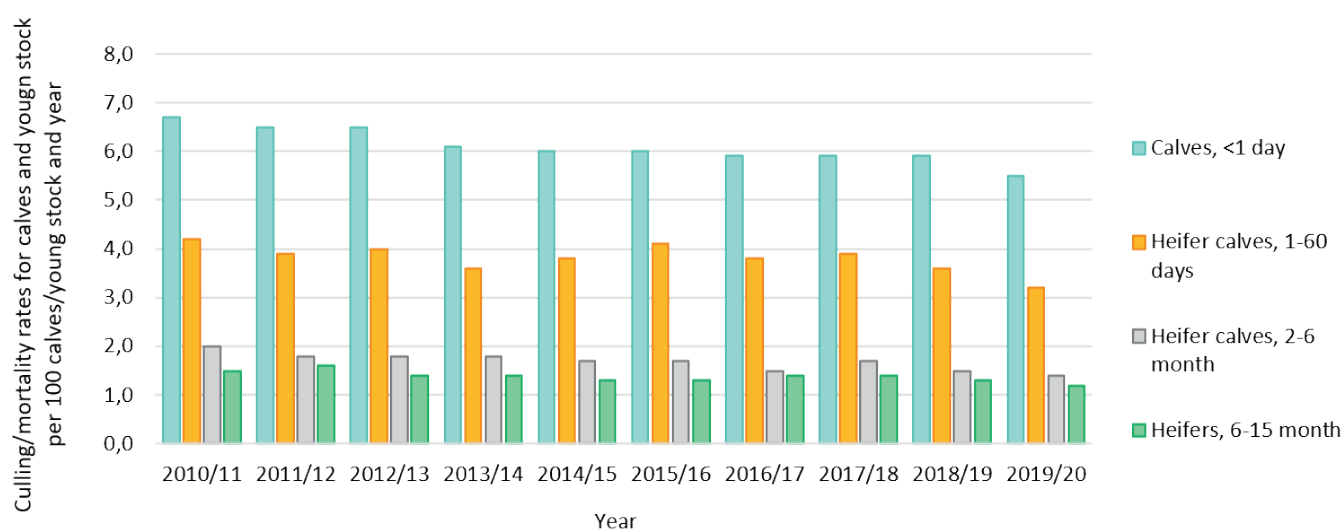


**Figure 6. Culling rate in total (\*not including cow sold, slaughtered at farm, or slaughtered due to high age) and mortality rate for cows, as well as culling rate for primiparous cows within 90 days post partum in 2010/11 to 2019/20.**

## Calves and young stock (heifers)

The health of the calf and young animal is important for the heifer's development into a healthy and high-producing cow. Statistics on the morbidity of calves and young animals are missing in our registers, but mortality measures for these groups of animals also largely reflect the morbidity as it is usually also the sick calves / young

animals that die. The mortality rate of weaned calves / young animals has been at a relatively unchanged level in recent years, but a decrease is seen for all measures this year, especially regarding mortality of calf younger than 1 day old and for calves at 1–60 days of age (Figure 7).

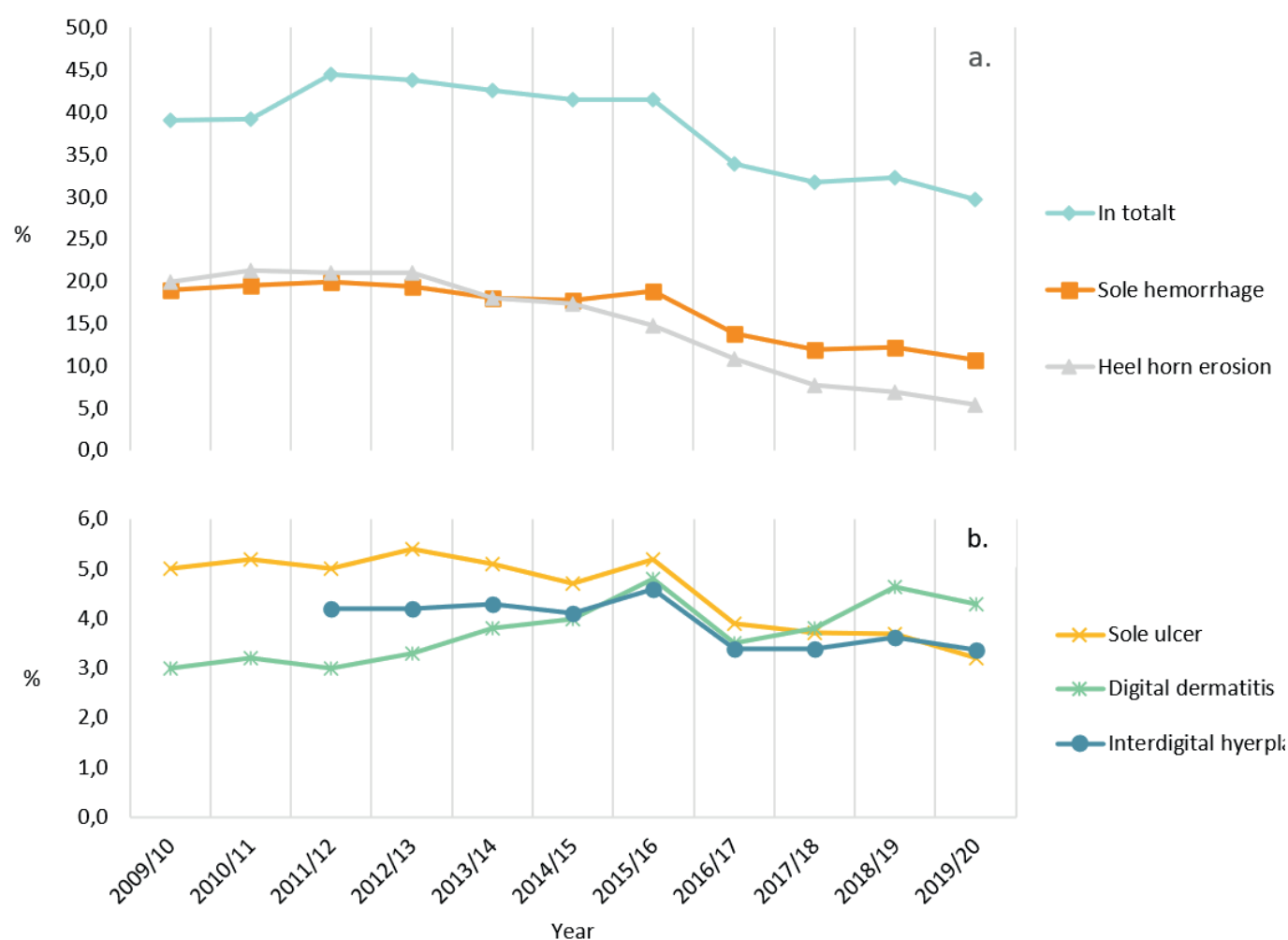


**Figure 7. Culling/mortality rates per 100 calves/young stock per year for calves <1 day old, heifer calves 1-60 days of age, heifer calves 2-6 months of age and heifers 6-15 months of age in herds enrolled in the national dairy herd recoding scheme in 2010/11 to 2019/20.**

## Claw health

In Sweden, and the Nordic countries, most claw trimmers register all trimmings they perform, and this data is then merged with the data in the national dairy herd recording scheme. During 2019/20 the proportion of trimmings where all claw trimmings were recoded as healthy were 70.2 percent out of 385,434 trimming. In total, the proportion of claw disorders have declined mainly due

to a reduction in sole hemorrhage, heel horn erosion and interdigital hyperplasia (Figure 8a and b). The most common claw disorder in 2019/20 was sole hemorrhage (10.8%), while digital dermatitis was recorded in 3.2 percent of the trimmings, heel horn erosion in 5.4 percent, sole ulcer in 4.3 percent and interdigital hyperplasia in 3.4 percent of the trimmings.



**Figure 8 a and b. Proportion of claw health disorders registered at claw trimmings in Swedish dairy herds, 2009/10 to 2019/20.**



