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## **Risk factors for unassisted on-farm death in Swedish dairy cows**

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### **Abstract**

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*Increased on-farm cow mortality (ie unassisted death and euthanasia) has been demonstrated in Swedish dairy herds during the last decade. Identifying risk factors associated with type of death is needed for future work in reducing cow mortality rates. The objectives of this case-control study were to quantify the relative proportion of unassisted dead cows among cows that die on-farm, and to identify risk factors associated with unassisted death (as opposed to euthanasia). In Sweden, cadavers and animal waste products are being processed into biofuel at destruction plants. Two destruction plants were visited three times in 2011–2012. All dairy cows (n = 556) entering the plants were examined. Farmers that had sent the cows were contacted by telephone to verify type of death. Of the 433 dairy cows included in the analysis, 30% had died unassisted. A stillbirth rate above or equal to the median in the study material (7%) increased the risk for unassisted death. The proportion of unassisted dead cows was lower than that found in other countries. The results indicate that it might be possible to study euthanasia and unassisted death as one group in Swedish dairy cows, because only one factor differentiating between the two types of death was identified. However, unidentified risk factors may still differ and, possibly more importantly, welfare implications may also differ between the two types of death which implies the need to separate them in future studies.*

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**Keywords:** *animal welfare, dairy cattle, destruction plant, interview, mortality, stillbirth*