

What are the factors affecting the length of productive life in dairy cattle?

Problem

The amount of time that dairy cows spend in the herd is mainly determined by management decisions made by individual farmers. The identification of factors that are taken into account in culling decision-making is of great importance to prolong the length of productive life (LPL) in dairy cattle. The latter is defined as the time between the date of first calving and the culling date.

Solution

In order to identify risk factors for culling, we investigated the influence of production, reproduction, morphology and health traits on LPL using survival analysis.

Outcome

- Health status, production, reproduction and conformation traits affected LPL in dairy cattle (Figure 1).
- Milk production had a crucial role in culling decision: farmers are more prone to cull cows with low milk production, even if they have other good characteristics.
- Being selected for alpine pasturing decreased risk of culling in the Swiss production systems.
- Among the investigated breeds, Holstein Friesian cows exhibited the highest risk to be culled.

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Publication

Influence of production, reproduction, morphology, and health traits on true and functional longevity in French Holstein cows. *Journal of Dairy Science*.

[Video](#)

Keywords

Culling risk, dairy cows, length of productive life, resilience

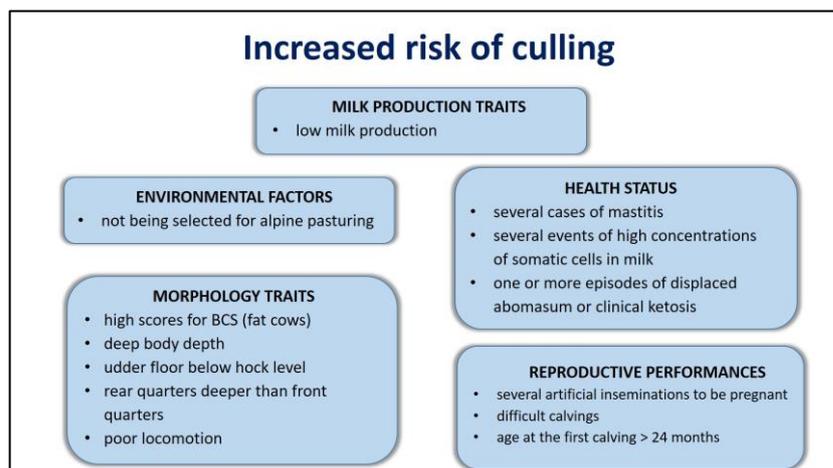


Figure 1: Factors that increase risk of culling in dairy cows

Practical recommendations

In the long term, resilient cows are able to maintain their normal productive life (e.g. to grow towards sexual maturity, to reproduce successfully, to recover from a disease) when confronted with environmental perturbation, reducing the risk to be culled. Hence, LPL can be proposed as an indicator of long-term resilience.