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The welfare of culled dairy cattle sent to market and its impact on economic return

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Abstract

The aim of this study was to assess the welfare of culled dairy cattle sent to an auction in the UK and identify associations between animal-based measurement and economic gain. The population of cull dairy cows sold at a Scottish livestock market were assessed on ten occasions for measures including body condition, mobility, hair loss and lesions, swelling, body cleanliness, claw conformation and total time in pre-sale pens. Details on breed, age, breeding status, farm, weight and price were gathered from market reports and cattle passports. Questionnaires sent to farms gathered information on reason for culling, retirement period (a finishing period to improve body condition), and number of lactations, among other variables. Measures such as bodyweight, breeding status, and breed type influenced price paid, with heifers and larger animals receiving higher prices. A negative effect over price paid was due to reduced mobility and hair loss scores, suggesting that some animal-based indicators of compromised welfare may be associated with a lower economic return from the cows sent to market. No influence of retirement length on price paid was noted. Reason for culling also did not influence price paid, but considering the association found between welfare and price paid, this suggests that the farmers' reason for culling may not be necessarily revealed by the visual appearance of the cow. This study reveals reasons for culling and quantifies the welfare of dairy cows at market and demonstrates how measures of breeding status and body size, as well as measures of welfare, influence the buyers' decisions and prices paid at auction.

Keywords: animal welfare, auction, culling, dairy cow, economic return, market