

## **Estimating Body Condition Score of Cows from Images with the Newly Developed Approach**

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The Body Condition Score (BCS) is the level of energy reserves in many species, including dairy cattle. For the exact management on dairy farms, the judgment process of BCS is critically important. In this study, the implementation of newly developed approach to estimate body condition score is proposed. Back view images of the cow were used in this system. The area around the tailhead and left and right hooks are segmented automatically and then classified that region for estimating the body condition score. The three main steps conducted are (1) segmentation of cows' images, (2) extraction of region of interest (ROI) by using the convex hull method, and (3) calculation of parameter using moving average method. To confirm this new approach, back view images of various cow types are used and the experimental results confirm its effectiveness with accurate results.