Methods to estimate 24-hour yields for milk, fat and protein in robotic milking herds

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Summary

The flexibility in milking interval and milking frequency, which makes robotic systems so popular, poses some unique challenges to milk recording agencies. The aim of this study is to determine an accurate, cost effective method to estimate 24-hour milk, fat and protein yield. Analysis of the data suggests that the optimal estimate of the milking rate is obtained using milk weights from the current plus 12 most recent milkings or the last 4 days. Also, the length of the sampling period for fat and protein can be 14 to 16 hours with loss in accuracy in the range of 0.10 to 0.14 kilogram deviation in absolute 24-hour yield.