Effect of feed push-up during nighttime hours using automated feed pusher on milk yield and milk components of Holstein cows [1]

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Received: Jun. 8, 2021; Accepted: Dec. 28, 2021

Abstract

Poor feed ingestion during summer daytime can be improved by feed push-ups using an automated feed pusher at nighttime. This could stabilize the feeding management, compared with the conventional manual push-ups. In this study, we aimed to assess the effects of feed push-up during nighttime hours using an automated feed pusher on milk yield and milk components of dairy cattle. Lactating Holstein cows were housed in semi-open free stalls and fed with total mixed ration (TMR). Parity and lactating records were also collected. The feed push-up during nighttime hours significantly increased milk yield (overall 16%), energy corrected milk (ECM) (overall 10%), milk fat yield (overall 9%), lactoprotein (8%), lactose yield (overall 16%), lactose concentration (overall 1%), casein yield (overall 8%), solid-not-fat (SNF) yield (overall 13%), polyunsaturated fatty acid (PUFA) concentration (overall 8%), and free fatty acid (FFA) concentration (overall 13%). However, we also observed minor decrease in milk fat concentration (overall 4%), milk protein (overall 4%), casein concentration (overall 4%), SNF concentration (overall 1%), and saturated fatty acid concentration (overall 5%) using automated feed pusher in nighttime. We believe that an automated feed pusher is beneficial for commercial dairy farms, with the advantage of improving milk yield and milk quality.

Key words: Nighttime feed push-up, Automated feed pusher, Milk yield, Milk component.

(1) Contribution No. 2687 from Livestock Research Institute, Council of Agriculture, Executive Yuan.
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