Estimating 24-hour milk, fat and protein yield from AM or PM milking scheme in Chinese holstein cattle

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Milk recording is essential for herd management and genetic improvement in dairy cattle. In China, a dairy performance- testing program (called DHI) has been under way since the 1990s. There was A4 scheme for sampling in China, which was very cost and time. For improving performance-testing program, we selected five Holstein farms including 2896 cows with two-times-a-day to sampling in each milking. We derived equations for predicting 24 h milk, fat, and protein yields of dairy cows by a multiple regression model. Prediction equations were developed for 60 subclasses of days in milk, parity, and season of calving. The prediction equations were found to be good fitness. The accuracies of 24 h milk weight predictions were from 0.77 based on one morning fat yield to 0.93 based on one morning milk weight and one morning fat and protein yield, The accuracies of 24 h fat and protein yield predictions were from 0.79 based on one morning protein yield to 0.88 based on one morning milk weight and one morning fat and protein yield, and from 0.75 based on one morning fat yield to 0.92 based on one morning milk weight and one morning fat and protein yield. Those prediction equations could be used in Chinese Holstein cattle performance-testing program in future.

Keywords: Chinese Holstein cattle, DHI, Prediction