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Amino acid profile of metabolisable protein in lactating dairy cows is affected by dry matter concentration in grass-clover silage

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Highlights

- Grass-clover was ensiled after pre-wilting to different dry matter (DM) contents
- Silage DM content affected silage amino acid (AA) profile
- Silages were fed solely to fistulated dairy cows
- Higher silage DM content increased the digested amount of all individual AA
- Higher silage DM content reduced lysine and histidine proportions of digested AA

Abstract

Our previous study showed that supply of metabolisable protein (MP) to lactating dairy cows increased with increasing dry matter (DM) concentration in grass-clover silage. The aim of this study was to examine how amino acid (AA) profile of MP was affected by silage DM concentration. Eight grass-clover silages with DM concentrations ranging from 283 to 725 g/kg were fed *ad libitum* to four multi-fistulated dairy cows in an incomplete balanced scheme over five periods. Individual AA were analysed in silages, in microbes isolated from the rumen, and in duodenal and ileal chyme,