Effects of hay intake on calves fed high volumes of milk

Research to date has suggested that access to forage before weaning can limit rumen development and restrict growth in calves fed restricted amounts of milk, but no work has addressed the role of forages in feeding calves fed higher volumes of milk.

Aims: To compare performance and rumen development of calves fed large volumes of whole milk with and without access to hay.

Methodology: Individually housed calves (20 heifers and 10 bulls) were used in the study. Calves were weighed and individual feed intakes were monitored weekly. All bull calves were slaughtered at 10 wk to examine rumen development parameters.

Dry Matter Intake

- Despite eating less starter (2874±67 g vs. 3124±99 at wk 10; P < 0.05), STH calves ate more total DM (starter+hay) once milk volume was reduced.

Body Weight Gain

- STH calves gained greater body weight (P < 0.05) than ST calves. Body barrel (cm) at wk 10 was similar in ST (117.3±1.8) and STH (117.5±1.9) calves.

Rumen Development

- Rumen weights with or without digesta were heavier and rumen pH was higher in STH calves.

Provision of chopped hay to calves fed high volumes of milk at an early age can save costly starter without negatively affecting their body weight gain and is beneficial for rumen development. Further research is warranted to examine the effects of pre-weaning feeding regimen on post-weaning dietary transition and performance of dairy calves.