

Pattama Saichompoo 2012: Effects of Various Carbohydrates Degradability in the Rumen from Ground Cassava and Broken Rice on Growth Performance of Dairy Calves. Master of Science (Animal Nutrition and Feed Technology), Major Field: Animal Nutrition and Feed Technology, Department of Animal Science.
Thesis Advisor: Associate Professor Jeerachai Kanjanaprutipong, Ph.D. 71 pages

Effects of various carbohydrates degradability from ground cassava and broken rice on growth performance of dairy calves were studied. Dietary treatments contained various carbohydrates degradability from ground cassava, ground cassava plus broken rice (50:50) and broken rice. Thirty Holstein calves (18 female and 12 male) were randomly allocated to the dietary treatments due to completely randomized design. The experimental period of the study was 63 days. Dry matter intake for calves fed diet containing broken rice during 8-35 day ($P<0.05$) were higher than those fed diets containing ground cassava plus broken rice (50:50) and ground cassava. Papillae length at cranial ventral sac and papillae width at caudal dorsal sac at both day 30 and 60 greater full ($P<0.05$) and empty ($P<0.01$) rumen weigh at day 60 average daily gain ($P<0.01$) and feed conversion ratio ($P<0.05$) for calves fed diet containing ground cassava were greater ($P<0.01$) than those fed diets containing broken rice and ground cassava plus broken rice. Whole tract digestibility, serum glucose, serum urea and fecal score were not affected ($P<0.05$) by dietary treatment. It can be concluded that calves fed diet containing more easily degradability from ground cassava had better rumen development and thus better average daily gain and feed conversion ratio.

Student's signature

Thesis Advisor's signature