Correlations between feed conversion efficiency, rainfall, nitrogen (N) application, and mobilised body energy (MELWL) of a cutand-carry feedlot cattle farming system at spt 16 Tawau, Sabah and implications for feedlot nutrient management?

ABSTRACT

Little is known about factors influencing pastoral systems in cattle production in Sabah. Metabolic energy budgeting (MEB) was introduced to assess feed conversion efficiency (FCE) of a cut-and-carry feedlot cattle farming system at SPT Tawau, Sabah and its correlations with rainfall, Nitrogen (N) application, and mobilised body energy (MELWL) were assessed. The results indicated that there is a trend that high farm rainfall, N application, and MELWL will improve FCE. The relationship, however, is complex where all three variables as well as the farm management procedures may act in synergy. High N application during low rainfall, for example, will not lead to high FCE, but when rainfall increases, the benefit of the N added will be apparent. High MELWL will lead to low FCE, but with nutrient correction (with supplement), the production cycle that has high MELWL may yield a better overall FCE. It is recommended that more research be done to establish farm management guidelines with better perspectives on N application, farm rainfall and pasture harvesting, as well as the understanding of the energetics and the role of dietary supplements on the recovery of body weight for improving beef production of the cut-and-carry feedlot cattle farming system in Sabah.