



Abstract

Twenty-four Pelibuey × Katahdin lambs (36.4 ± 2.9 kg initial weight) were used in a 77 d feeding trial in a randomized complete block design to evaluate the influence of a standardized synbiotic-glyconutrient combination (GLY) on growth performance, dietary energetic, and carcass characteristics of lambs finished during a period of high ambient temperature. Dietary treatments consisted of a high-energy basal diet supplemented (% of diet dry matter basis) with 0% versus 0.4% GLY. Throughout the study, the average temperature humidity index (THI) was 76.23, corresponding to the “alert” range, but daily maximum THI exceeded 80 for 2 to 6 h of each day of the 77 d study. Daily GLY intake averaged $0.10 \text{ g GLY} \cdot \text{kg}^{-1}$ live weight. Supplemental GLY increased ($P = 0.04$) daily water intake, but dry matter intake was not affected. Supplemental GLY increased ($P < 0.03$) initial 56-d, and overall (77-d) average daily gain, gain efficiency and estimated dietary net energy. Lambs fed GLY had greater ($P \leq 0.05$) hot carcass weight and fat thickness, and decreased ($P = 0.02$) kidney-pelvic-heart fat. Supplemental GLY did not affect ($P \geq 0.16$) shoulder tissue composition or relative weight of visceral mass. Synbiotic-glyconutrient combination improved growth performance, dietary energy, and carcass weight in lambs finished in high ambient temperatures. Enhancements in growth performance and dietary energetics were most appreciable during the first 56 d of the 77 d finishing period.

Résumé

Vingt-quatre agneaux Pelibuey × Katahdin (poids initial de $36,4 \pm 2,9$ kg) ont été utilisés pendant une étude d'alimentation de 77 jours de design expérimental par blocs complets aléatoires afin d'évaluer l'influence d'une combinaison normalisée symbiotique-éléments glyconutritifs (GLY) sur la performance de croissance, l'énergie alimentaire et les caractéristiques de carcasse des agneaux en finition pendant une période de grande température ambiante. Les traitements

alimentaires consistaient d'une diète de base forte en énergie avec suppléments (sur une base de % des matières sèches) de 0 et 0,4 % GLY. Pendant toute l'étude, l'indice moyenne de température et d'humidité (THI — « temperature humidity index ») était de 76,23, ce qui correspond à la plage « alerte », mais le THI maximal quotidien dépassait 80 de 2 à 6 heures chaque jour de l'étude de 77 jours. La consommation moyenne de GLY était de 0,10 g GLY/kg de poids vif. Les suppléments de GLY ont augmenté ($P = 0,04$) la consommation quotidienne d'eau, mais il n'y a pas eu d'effet sur la consommation des matières sèches. Les suppléments de GLY ont augmenté ($P < 0,03$) le gain moyen quotidien lors des 56 premiers jours ainsi que le gain moyen quotidien de la période complète de 77 jours, le gain en efficacité, et l'énergie nette alimentaire estimée. Les agneaux ayant reçu le GLY avaient de plus grands ($P \leq 0,05$) poids de carcasse chaude et épaisseurs de gras, et une diminution ($P = 0,02$) du gras rein-pelvien-cœur. Les suppléments de GLY n'ont pas eu d'effet ($P \geq 0,16$) sur la composition des tissus de l'épaule ni sur le poids relatif de la masse viscérale. La combinaison symbiotique-éléments glyconutritifs a amélioré la performance de croissance, l'énergie alimentaire, et le poids de carcasse chez les agneaux en finition pendant une période de grandes températures ambiantes. Les améliorations de performance de croissance et d'énergétique alimentaire étaient particulièrement notables pendant les 56 premiers jours de la période de finition de 77 jours. [Traduit par la Rédaction]

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