



HAL
open science

Effects of experimental infection and diet supplementation on meat Creole goat performances

Willy W. Cei, Maurice Mahieu, Harry Archimède, Jean-Christophe Bambou, Abel Hiol, Gisèle Alexandre

► To cite this version:

Willy W. Cei, Maurice Mahieu, Harry Archimède, Jean-Christophe Bambou, Abel Hiol, et al.. Effects of experimental infection and diet supplementation on meat Creole goat performances. 64. Annual Meeting of the European Association for Animal Production (EAAP), Aug 2013, Nantes, France. Wageningen Academic Publishers, The Netherlands, Annual Meeting of the European Association for Animal Production, 64, pp.1, 2013, Book of abstracts of the 64th Annual Meeting of the European Federation of Animal Science. hal-02749449

HAL Id: hal-02749449

<https://hal.inrae.fr/hal-02749449>

Submitted on 3 Jun 2020

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.

Effects of experimental infection and diet supplementation on meat Creole goat performances

W. Ceï, M. Mahieu, H. Archimède, J.C. Bambou, A. Hiol and G. Alexandre

INRA, Animal Genetic UR 143, Duclos, 97170 Petit-Bourg, Guadeloupe; gisele.alexandre@antilles.inra.fr

In the Tropics the major constraint for goat production is gastrointestinal nematodes (GIN) infection. One promising alternative to chemotherapy is the improvement of host nutrition yet the underlying mechanisms remain unknown. The aim of the study was to assess the effects of GIN infection and supplementation on packed cell volume (PCV), average daily gain (ADG) and carcass quality of growing Creole kids. Sixty male goats were reared indoors following a 2×3 factorial design. The factors were the experimental infection levels IE (I: infected and NI: non-infected) and the diets D (G: grass only diet; B: grass plus dried banana and C: grass plus concentrate). Fecal egg counts did not vary among I groups (on average 2,200 ω /g). The PCV and ADG were improved ($P < 0.001$) for NI animals vs. I ones. There was a D effect ($P < 0.001$) and no I×D interaction was observed. There was no significant effect of EI upon the main carcass data, except liver and reticulorumen weights that increased slightly in I compared to NI goats ($P < 0.05$). Same trend was observed for the breast proportion. The absolute values of abdominal fat (related to EBW), meat redness and water losses appear to be affected by IE levels ($P > 0.05$). All carcass data increased significantly with the addition of supplement in the diet ($P < 0,001$) except for carcass cut proportions. Obviously, the C groups performed better than the two others (whatever their EI levels). From one extreme group (GI) to another (CNI) there was an increase of 10.5% of carcass yield ($P < 0.01$). Meat physical parameters are damaged when the I kids received the B diet with higher lightness and water loss than in the G and C groups. Given that the B diet contained less nitrogen (N) than the G one and that the GIN stress affect the animal N metabolism, it could be hypothesized that the IB kids may have suffered from a lack of N. Further studies are required to assess the N nutrition×parasitism interactions upon physiological features and carcass quality of goat.