Accepted Manuscript

Influence of post-weaning feeding management of beef heifers on performance and physiological profiles through rearing and first lactation

J.A. Rodríguez-Sánchez, A. Sanz, J. Ferrer, I. Casasús

PII: S0739-7240(18)30027-4

DOI: 10.1016/j.domaniend.2018.05.001

Reference: DAE 6311

To appear in: *Domestic Animal Endocrinology*

Received Date: 5 August 2017

Revised Date: 7 April 2018

Accepted Date: 2 May 2018

Please cite this article as: Rodríguez-Sánchez JA, Sanz A, Ferrer J, Casasús I, Influence of post-weaning feeding management of beef heifers on performance and physiological profiles through rearing and first lactation, *Domestic Animal Endocrinology* (2018), doi: 10.1016/j.domaniend.2018.05.001.

Influence of post-weaning feeding management of beef heifers on performance and physiological profiles through rearing and first lactation.

J.A. Rodríguez-Sánchez*, A. Sanz, J. Ferrer, I. Casasús

Centro de Investigación y Tecnología Agroalimentaria (CITA) de Aragón – Instituto Agroalimentario de Aragón (IA2, CITA-Universidad de Zaragoza). Avda. Montañana, 930, 50059 Zaragoza, Spain.

*Corresponding author: José A. Rodríguez-Sánchez

e-mail: jarss79@gmail.com

ABSTRACT

The aim of this study was to examine the effects of two post-weaning feeding management approaches (FEED: 0.8 [HIGH] vs. 0.6 [MOD] kg/d target ADG) on the performance of heifers of two beef breeds (BREED: Parda de Montaña [PA] vs. Pirenaica [PI]) calving at 2 yr. Twenty-five heifers previously creep-fed before weaning (6 mo) were assigned to two planes of nutrition from 6 to 15 mo of age. At 15 mo they were inseminated, and then received similar diets until weaning of their first calf (4 mo post-calving). Several parameters were measured to analyze growth and development (BW; ADG; size measures at 6 mo, 15 mo, calving and weaning), performance at puberty and first breeding, and dam and calf performance in the first lactation (calving traits, ADG, milk yield). Metabolic (glucose, cholesterol, NEFA, β-hydroxybutyrate and urea) and endocrine status (IGF-I and leptin) were assessed in plasma samples collected every 3 mo from 6 mo to calving and monthly during lactation. No interaction between BREED and FEED was observed. Heifers from the HIGH feeding treatment had higher post-weaning ADG than those on the LOW diet. At 15 mo they had greater BW, heart girth and external pelvic area, but they did not differ thereafter. All