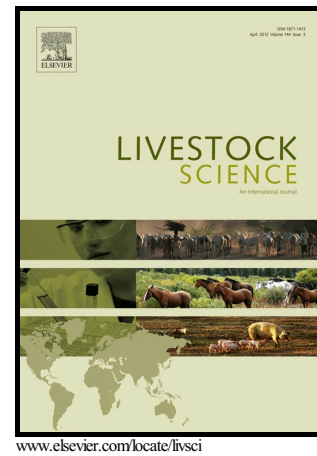


Author's Accepted Manuscript

Breeding beef cattle for an extended productive life: Evaluation of selection criteria in the Retinta breed

R. Morales, F. Phocas, M. Solé, S. Demyda-Peyrás, A. Menéndez-Buxadera, A Molina



PII: S1871-1413(17)30245-7
DOI: <http://dx.doi.org/10.1016/j.livsci.2017.08.014>
Reference: LIVSCI3280

To appear in: *Livestock Science*

Received date: 23 May 2017
Revised date: 12 August 2017
Accepted date: 14 August 2017

Cite this article as: R. Morales, F. Phocas, M. Solé, S. Demyda-Peyrás, A. Menéndez-Buxadera and A Molina, Breeding beef cattle for an extended productive life: Evaluation of selection criteria in the Retinta breed, *Livestock Science*, <http://dx.doi.org/10.1016/j.livsci.2017.08.014>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Breeding beef cattle for an extended productive life: Evaluation of selection criteria in the Retinta breed.

Morales, R.^{a*}; Phocas, F.^b, Solé, M.^c, Demyda-Peyrás, S.^d, Menéndez-Buxadera, A.^a, Molina, A.^a

^aDepartment of Genetics, Veterinary Faculty, University of Córdoba, Spain

^bGABI, INRA, AgroParisTech, Université Paris-Saclay, 78 350 Jouy-en-Josas, France

^cUnit of Animal Genomics, GIGA-R & Faculty of Veterinary Medicine, University of Liège – B34 (+1), Avenue de l'Hôpital 1, 4000 Liège, Belgium

^dIGEVET – Instituto de Genética Veterinaria "Ing. Fernando N. Dulout" (UNLP - CONICET LA PLATA), Facultad de Ciencias Veterinarias, Universidad Nacional de La Plata. Calle 60 y 118 s/n, 1900, La Plata, Argentina

Correspondence. Cid, Department of Genetics, University of Córdoba, Edificio Gregor Mendel. Campus de Rabanales. Ctra. Madrid-Cádiz, km 396, 14071 Córdoba. Spain. Tel.: +34 957 21 10 70; fax: +34 957 21 87 07; v22mocir@uco.es

ABSTRACT:

We characterized genetically the longevity and the productive life of beef cows considering three different traits: length of true life (LTL), the length of productive life (LPL) and a number of calvings (NC), in the Retinta breed. Data considered in the analysis were collected in 30 Spanish herds and consisted of 3,187 cows born between 1993 and 2013: 1,802 cows had complete information while 1,385 cows had censored information. Pedigree information accounted for 7,359 individuals and the genetic evaluation was performed under an animal model using the Weibull proportional hazard model for survival analysis. Results indicated that cow effects (age at first calving, herd, season-year of cow birth), as well as some calf effects (breed group, season-year of birth), were significant ($P < 0.05$) for all traits; however, sex of calves did not affect the traits. The low heritabilities obtained for LTL and LPL (0.14 ± 0.01 and 0.14 ± 0.01 respectively) and modest heritability for NC (0.30 ± 0.01), suggest that a higher response to selection can be expected for NC than for LTL and LPL.

Keywords:

Beef cattle, Functional longevity, Survival, Weibull.

Download English Version:

<https://daneshyari.com/en/article/5542887>

Download Persian Version:

<https://daneshyari.com/article/5542887>

[Daneshyari.com](https://daneshyari.com)