

5th International Conference "Agriculture for Life, Life for Agriculture"

Researches regarding the Reproduction Outline and Indices in a Beef Herd in the South of Romania

Paul-Rodian TAPALOAGA^{a,*}, Dana TAPALOAGA^a,
Makki Khalaf Hussein AL DULAIMI^b

^aUniversity of Agronomic Sciences and Veterinary Medicine of Bucharest, 59 Marasti Blvd, 011464, Bucharest-1, Romania

^bAl-Furat Al-Awasat Technical University, Bagdad, IRAQ

Abstract

Worldwide, having as aim the more and more cost effective animal rearing, specialized breeds are used by practising and experimenting modern methods of animal breeding and reproduction. Planning the adequate reproduction activity to each farm purpose in view leads to some high technological indices.

The aim of the present paper is the one of assessing the best methods of reproduction planning activity in a beef herd. There were analyzed the reproduction indices in a Charolais livestock, allotted to three categories of females: primiparous 36 females, 29 secundiparous females and 15 multiparous, a total of eighty-two reproduction stock. The study was conducted during three years and the reproduction indices were the following: length of pregnancy, service-period, calving interval, fertility rate, and sex ratio of the offspring. The animals come from import, from a total livestock nucleus of 21 heifers and a bull, the farm livestock increasing gradually to 96 heads. The females were used maximum five calving, and then culled. The age of females' introduction to reproduction is 22-24 months, the first calving being achieved at 2,5 years, maximum 3 years. There were used the grouped calving system and individual calving system along the year.

Following the three years study, even the reproduction indices did not differ significantly, by the grouped calving system obtained in early spring with the aid of synchronized heats, the early calves used better the grazing season offering increasing amounts of meat with less costs.

© 2016 The Authors. Published by Elsevier B.V. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

Peer-review under responsibility of the University of Agronomic Sciences and Veterinary Medicine Bucharest

Keywords: length of pregnancy, service-period, calving interval, fertility rate, sex ratio.

* Corresponding author. Tel.: +4021.318.25.64; Fax: +4021-318-0466.
E-mail address: rodiantapaloaga@yahoo.com

1. Introduction

Nowadays, the worldwide consumption of animal products led to strong changes in the production structure. Thus, animal husbandry has become a main branch in all the countries with intensive agriculture. Having as aim a cost-effective exploitation of animals, there were created new breeds of animals, there were practiced various methods of animal breeding, there were experienced and implemented the most modern technologies, all of them in order to obtain as higher as possible livestock products. (Tapaloaga, 2014).

From the data provided by the F.A.O. and various international economic organizations, great significance shall be granted, in the context of animal husbandry, to cattle species as important source of meat and milk. It is well known that for decades, scientists all over the world have been investigating beef cattle efficiency. As the knowledge of beef cattle energy expenditures and nutritional needs expands, a more complete understanding of the efficiency of the beef production system is nowadays understood.

While there are several ways to evaluate the efficiency of cows, most are based on weaning a calf with minimum inputs, most importantly feed. Two areas stand out to measuring efficiency in beef cattle: the reproductive efficiency, more exactly the cows' ability to become pregnant and produce a calf every year and feed efficiency, the conversion of feed into energy used for maintenance, weight gain, milk production, and to support reproduction. To achieve these, a large number of researches were done for finding the best ways to obtain high reproductive indices.

In parallel with this concern, factors that influence the process of reproduction in domestic animals have been studied. These factors have more importance in the new conditions of exploitation of animals. In particular, we analyze the way the reproduction indices evolved: the length of pregnancy, service-period, calving-interval, fertility rate, and the ratio of sexes.

2. Materials and methods

For beef ranches or farms, the simple direct calculation of percentage of all mature heifers and cows that wean calves in any particular year provides a comprehensive picture of reproductive performance.

For the trials, we have chosen a number of 36 cows at their first pregnancy, 29 cows at the second pregnancy and 17 cows at the third pregnancy. The research has been carried out for during 2013-2015. All cows benefit for identical conditions of maintaining and feeding during the entire studied period. In order to achieve the proposed goals, we monitored the reproduction activity in the farm and we analyzed the data necessary to calculate the following reproduction indices: the length of pregnancy, service-period, calving-interval, fertility rate, and the ratio of sexes.

These indicators were looked separately for each age group, setting the main statistic parameters in the group.

3. Results and discussion

The pregnancy is a complex physiologic process between two partners – mother and foetus - and it lasts from fecundation to parturition (Tapaloaga, 2011). During all the pregnancy period, the maternal organism is more used, being the one which assure all the conditions for the development of the foetus (protection, nutrition, respiration, elimination of the metabolic products). When some disorders of the maternal and foetal functions appear, the pregnancy is interrupted and the abortion comes. It is known that the lifetime productivity of a cow is influenced by age at puberty (Fig. 3), age at first calving and calving interval. First calving marks the beginning of a cow's productive life. Age at first calving is closely related to generation interval and, therefore, influences response to selection.

The first measure of reproductive efficiency analyzed in the paper was the length of the pregnancy. The recorded data are shown in table 1 and figure 1 and it could be noticed that the lower mean value of this parameter was recorded in heifers' category, 284.36 days and the highest, in the cows at the second gestation, 286.12 days. The mean value for the whole studied herd was 285.75 days.

Download English Version:

<https://daneshyari.com/en/article/4492178>

Download Persian Version:

<https://daneshyari.com/article/4492178>

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