Journal of Animal and Veterinary Advances 6 (11): 1296-1297, 2007
ISSN: 1680-5593

The Study of Important Factor on Reproduction of Azerbaijan Buffalo (*Bubalus bubalis*)

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Abstract: Buffalos are one of cattle, which kept in different part of world, but the most population of this animal is in Asia. Buffalos population is 400000 in Iran and 112393 in Azerbaijan particularly. Azerbaijan buffaloes produce 4355 tons milk and 58771 tons meat in one year. This survey was performed on 833 Azerbaijan buffalo in during 10 years. Considered important factor were age of 1st parturition, period of between of 2 parturition, length of pregnancy period, length of milking period, length of dry period, mean of milk production in one year, mean of daily milk production, mean of fat percentage and economic age. For this survey many populations of Azerbaijan buffalo were selected in different regions of East Azerbaijan randomly and studies were performed on them. Studied buffalos had Indian husbandry. Obtained results of this survey were appeared that the age of 1st parturition is 1260 days after birth, period of between of 2 parturition is 480-540 days, length of pregnancy period is 305-315 days, length of milking period is 206 days, length of dry period is 90-120 days, mean of milk production in one year is 1244 L, mean of daily milk production is 6/04 L, mean of fat percentage is 7/56% and economic age is 10 years.

Key words: Azerbayjan, buffalo, physiology, reproduction

INTRODUCTION

The buffalo belong to the order Artiodactyls, the suborder Ruminatae, the family Bovidae and the sub-family Bovini. Three group animals were described in the sub-order Bovini. They are Bovinal (cattle), Bubaline (Asian buffalo) and Syncerina (African buffalo) (Mason, 1974). The buffalo was domesticated many years ego that it's exact time in unknown. Archeology studies appeared which buffalo domestication was performed 2500 B.C. There is not enough information about Iranian buffalo (Cockrill, 1974). The buffalo has a very important role on living state and economic condition of millions poor villager, especially in Asia (Acharya and Bhat, 1988). The buffalo is multi propose animals, which it has height quality digestive system. Buffalo's digestive system can produce enough energy of low quality foodstuff (Shalash, 1991). Because the buffalo has a important role on daily production in Iran and also in order to this animal is unknown animal yet. In this research, important reproduction factors of female buffalo were studied.

MATERIALS AND METHODS

In this research 326 flocks of buffalo were selected. These flocks were selected of different points of East Azerbaijan. These buffalo's flocks were studied from April 1996 till march 2004. One hundred and fourteen buffalos flocks were deleted of this research (for different reason, for example, flock selling by its farmer) and 212 flocks reminded until end of research period.

In selected flocks 1335 buffalo were under consideration. During research 502 buffalos were exited of this research for different reasons (for example, selling or perishing). Therefore, chiefly 212 buffalos flocks and 833 buffalos were studies until end of research period. In this research, questionnaire forms were prepared and they were given to farmer. This forms had many questions about reproduction important factors. Farmers were asked for completing this forms. Following factors were asked of farmers in given questionnaire forms.

Age of puberty, age of 1st estrus, age of 1st coupling, length of pregnancy period, time of between 2 parturition, length of lactation period, length of dry period, mean milk production in an lactation period, mean of daily milk production.

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Table 1: Important reproduction factors of buffalo

Important factor	Age of first estrus signs	Age of first puberty signs	Age of puberty for first coupling	Length of pregnancy period	Average age of first parturition	Length of period of between two parturition	Length of lactation period	Length of dry period
Day	390±30 Days after the birth	760±30 Days after the birth	760±40 Days after the birth	310±5	1260±40 Days after the birth	510±30	206±20	115±15

Table 2: Important milk production factors of buffalo

Important studied factor	Value
Mean milk production in an lactation period	1244±400 L
Mean of daily milk production	6.04±0.06 L
Average of fat percentage	7.56±0.40%

Obtained information of farmer in questionnaire forms were studied and mean of considered factors were accounted in different buffalos belong to different flocks.

RESULTS

Table 1 and 2 is showing results obtained of this performed research on 833 buffalos belong to 212 buffalos flocks.

First estrus signs of East Azerbaijan buffalo were observed in days, 390±30 after birth. Puberty in female Azerbaijan buffalo in was happening in 2-2/5 years old (760±40 days after birth), but this buffalos almost were coupled in 2.5 years old. Study of questionnaire forms was appeared that mean age of parturition is 1260±40 days after the birth and time between 2 parturition were accented 510±30 days averagely. Also the survey during lactation period of these buffalo was appeared that length of lactation period is 206±20 days and length of dry period is 115±15 days. Value of milk production in a lactation period was accounted 1244±40 L and dairy milk production was 6/04±0.06 L. Mean of milk fat percentage was accounted 7.56±0.4%. Finally this research results were showed that economic age of East Azerbaijan buffalo is about 10 years.

CONCLUSION

The buffalo has an important role on living qualification and economic position of millions poor villagers in the world, especially on Asian villagers. Because 97% of the worlds buffalo's are observing in Asia, this buffalos was known Asian buffalos (Acharya and Bhat, 1988). FAO (1995) reported which world buffalos population is 15115 millions and 97% of this population observing in Asia (FAO, 1995). Iranian buffalos population was reported 510000 in 1996 by Iranian Jihad Keshavarzi Ministry. This buffalos were spread in 5 state of Iran; khoozestan, Ardabil, East Azerbaijan, west Azerbaijan and Gilan (FAO, 1997). Ayazi (1992) and Behiar (1994) reported, age of first estrus in East Azerbaijan buffalo is 450-540 days after birth (Ayazi, 1992; Behyar, 1994). Result of this research was showed that this factor is 420-540 days after the birth. Results of this research were similar to obtained results by Ayazi and Behiar. Arthur reported that age of puberty in cattle is 210-540 days after the birth, in length of pregnancy period in buffalo was obtained 305-315 days, length of pregnancy p eriod in cattle is reported 270-287 days by Arthur *et al*. (1983).

Mean of daily milk production in buffalo obtained 6.04 L, but average this factor in cattle is 25-30 L day^{-1}. To comparing important reproduction factor between buffalo and cattle, we understand that age of first estrus time in buffalo is longer than cattle, age of puberty of buffalo is longer than cattle and also value of daily milk production of buffalo is lesser than cattle. In spite of this, in order to buffalo has high tolerance against endemic diseases and also this animal has high ability for changing low quality foodstuff to energy and benefit material, villagers are preferring raising of buffalo. Now, if we will can to enhancement milk production of buffalo by effective breeding and genetic procedure, the buffalo will can be a very economic and very benefit animal.

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