

Milk Production of Crossbreed Mexican Ewes After Parturition under an Intensive Production Unit on the Highlands of Mexico. An Informative Note

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Abstract: With the objective of studying milk production in Mexican ewes (Suffolk X Hampshire X Rambouillet), in an intensive production unit, 20 ewes were selected at random, 12 h after lambing the new born was withdrawn and thereafter ewes were hand milked twice a day at 6:00 am and at 6:00 pm. End of milk production was considered when ewes produced less than 200 mL. Total milk produced was 1,242.88 L. Average production per day/ewe was. 547 L. Milking days of the selected ewes was 106. It was observed that the amount of milk produced and the number of milking days was similar to production reported for some milking breeds.

Key words: Crossbreed, parturition, intensive production unit

INTRODUCTION

In North America, sheep as a species are not considered traditionally speaking milk producers. This general attitude towards sheep disregard the production of milk and cheese, in third world Latin American countries. And when ewe milk production is considered as another option, in this study, ewe milking will appear to traditional breeders of this countries, as a new and original idea for augmenting ewe productivity. However it is necessary to recall that ewe milking was first reported approximately 2,000 years before our time in Europe and in the Middle East^[1].

In 1983 world milk production was 501,890,000 tons, cows contributed with 456,757,000 tons, buffaloes produced 29,188,000 tons, while goats produced 8,262,000 tons and sheep 7,683,000 tons^[2].

In 1984 the production of ewe's milk was in the order of 1.7% of the total milk world production, goats produced a total of 8.3 million tons of milk and for 1990 milk production was 8 million tons. Countries like Italy for the year 1987 reported ewe's milk production of 490,350,000 Litres. While Spain in 1988 reported ewe's milk production of 263 millions litres, France produced a total of 153 million litres of ewe's milk in 1989 Casu and Boyazoglu^[3-7].

There are several ovine breeds specialised in milk production, among which the Lacaune (French breed) is reported to produce an average of 176 litres of milk Purroy^[8], but it has been reported that it is capable of producing up to 450 and 500 litres during a 7-month lactation period. Another breed, the Comizana (Italian

breed), has been considered as the very best for milk production, with reports of producing 161 litres during a lactation period of 100 days after the first lambing and 225 litres during a lactation period of 180 days in multiparous ewes. While milk production of the Churra breed (Spanish) are varied, reports document production of 70 and up to 150 litres in a 150-day lactation period, however there other Spanish breeds like the Manchega and Lacha that are capable of producing up to 200 litres in a 150-day lactation period. Cottier^[9,10,8].

The ovine species as milk producers are milked twice a day and at the end of the lactation period, when milk production declines, milking can be reduced to once a day^[1].

There are several ways in which milk production systems are handled in the different parts of the world. In central Europe milking is carried out at the end of lactation, that is after weaning of the lambs. In the Mediterranean zone within the flock milking is commenced early after lambs are marketed, but when the lamb is destined to increase the flock, milking is performed later. In those ewe flocks destined exclusively to milk production, weaning is carried out abruptly between four and six weeks postpartum and thereafter, the ewes are milked for a period of three and up to five months. In Israel, the lamb is allowed to suckle and the lactating ewe is milked, in order to collect the milk left over by the suckling lamb. And during the second month, the ewe is milked twice a day and the lamb is allowed to be with the ewe only for a few hrs. Furthermore, the lambs are weaned on the third month and the ewe is continued to be milked

for 3 or 4 more months. As for Germany the ewe is milked since immediately after parturition and the lamb is fed for one month with only a portion of milk produced^[8].

Taking in consideration the information given and considering that in many of the third world countries and especially in Mexico, ewe milking is scarcely known and the milk production of the Mexican ewe is also not documented. Therefore, in this study we are reporting the production of milk of the ordinary Mexican crossbred ewe. The duration of lactation and the average production per day was studied.

MATERIALS AND METHODS

20 Mexican ewes were used, age varied from 2 to 4 years old, they were housed in open paddocks under natural photoperiod (19° North Latitude, 99° longitude west). They were fed with corn silage (2 kg/day), oat hay (400 g/day) and 400 g/day of grain (sorghum- Soya meal), water ad libitum. After parturition lambs were withdrawn 12 h after they were born. Milking was carried out by hand twice a day, at 6:00 am and at 6:00 pm. Milk production was measured and registered daily.

Arbitrarily, it was considered that the ewes were lactating when milk production was 200 mL or more per day, when the milking ewe was not able to reach this production it was therefore, considered that lactation period was terminated.

Statistical evaluation was carried out using a descriptive analysis.

RESULTS

The total milk produced was 1,282.88 litres. Daily production was 547 litres and the average daily production was 547.9 litres with a range of 264 and up to 1.175 litres. The average milking time was 106 days, with a range of 60 to 147 days (Table 1).

Milk production reached a maximum on the third week of lactation and thereafter a continuous decline was observed until the eleventh week and thereafter a further increase in milk production was observed.

DISCUSSION

Average milk production per day in the 20 milked crossbreed ewes was 0.547 litres. If we compare these data with that of other breeds; such as Laucane (2.14-2.38 litres/day), Comisana (1.61 litres/day), Basco-Bearnaise (0.655 litres/day), Manech (0.635 litres/day),

Table 1: Milk production of mexican ewes under intensive production in the highlands of Mexico

	Aver./ewe	Max.	Minim.	Std. Dev.
Total produced	1.282.8 L	641.4 L	171.4 L	159.7 L
Daily production	547.9 L	1.147.2 L	2.64.5 L	2.70.7 L
Milking days	105.7	147	60	33.8

Corsa (0.532 litres/day), Delle Langhe (0.852 litres/day), Dorset Horn (0.725 litres/day), Awassi (0.625 - 0.937 litres/day), East Friesian (1.923 - 2.692 litres/day), Churra (0.466-1.0 litres/day), manchega and Lacha (up to 1.33 litres/day) Geenty^[11,8,12,13] there is the possibility of making a comparison of the results obtained in this study with the milk produced by some of the breeds mentioned above, it can be observed therefore, that milk production of the crossbreed Mexican ewe is similar to that of some ewes rated as specialised milk producers. Total milk production recorded during the period of study and also the average daily milk produced, would be considered as acceptable, taking into consideration that the ewes used in this study were never selected for this trait. Furthermore, it should be noted that the ewes used in this study received no special consideration in relation to the rest of the flock neither (feeding and husbandry). It is possible to add that the average in the duration of the milking time in days (106 days) can be compared to the average reported for ewes of specialised breeds, the latter showing between 95 and up to 230 days of milking time^[8].

While doing individual evaluation of the milked animals, it was possible to appreciate that some had good milking yields, reaching daily averages of 1.175 litres/day and maintained milk production for 146 days, showing tendencies for increasing both, average production and duration of their milk production. In the same way it was observed that there were other animals that were hardly able to maintain milk production within the limit here established, that is; 0.264 mL/day with a duration of only 60 days. (Table 1).

Peak production was reached on the third week as reported in other studies, that is; that they reached peak lactation at 10 and 20 days of lactation, these variations solely reflect variations in nutritional support, because variations in feeding can decrease milk production, even though there is the possibility for the mobilisation of the ewe's body reserves^[8,12].

It can be concluded that the crossbreed Mexican ewe are capable of milk production, even though such production objective is not what they are not destined for.

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