

## THE STRUCTURAL SITUATION AND FEEDING PRACTICES IN CATTLE FARMS IN DIYARBAKIR PROVINCE IN TURKEY

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### Abstract

The objective of the study was to determine the structure of farms, feeding practices and the use of feed resources in cattle farms in Diyarbakir Province. This research has been conducted in 17 districts of Diyarbakir. Totally, 465 cattle farms which have more than 25 cows were investigated. Interviews were conducted face-to-face with farm owners during the autumn season in 2013. Results show that cattle farms in the region are consisted of family based small scaled enterprises (83%), cooperative (12%) and private big farms (5%). Current cattle breeds in farms were 11% of local breeds, 31% of cross breeds and 58% of pure breeds. The average milk production per cow was 5.25 liters for local breeds, 7.25 for cross breeds and 10.65 liters for pure breeds, respectively. In addition, the 26% of cattle farms experienced problems in obtaining feeds. We observed that 70 and 88 of % of farms purchasing forage and concentrate feeds respectively. In addition, forage crops are grown in only 10% of studied farms. As a roughage source hay, poor quality hay, silage and other roughage at the rate of 69, 18, 12 and 1% were used in farms respectively. Results from this study showed that farmers had insufficient knowledge on the feed preparation and animal feeding practices.

**Key Words:** *Cattle farm, Structural Situation, Feeding, Diyarbakir Province*

### Introduction

Adequate and quality food production is still expected to be the greatest power in determining the future of the countries that swept the globalization policies. It is obvious that the countries can produce their own food in sufficient level will have more say in determining the future of countries of the world. Dairy farming is the most important livestock production in Turkey. Approximately 91.4% of the milk production has been obtained from cattle in Turkey according to TurkStat (TUIK, 2013). This value is 98% for the European Union (EU) and 85% for world-wide. Cattle breeding have an important factor for the meat production. The similar situation is in Turkey according to the statistical data of the end of 2013 where approximately 87.2% of the red meat has been obtained from cattle. Number of ruminant livestock animals for Turkey and researched zones are given in Table 1. Turkey's ruminant livestock resources in 2013 consisted of 14.415.257 head of cattle, 29.284.247 head of sheep, and 9.225.548 goat heads. The proportions of local, cross-breed, and pure breeds are 16.3% (local), 42,4% (cross) and 41.3% (pure), respectively at the end of 2013 in Turkey. There are significant differences between the regions regarding cattle farming in Turkey. In Marmara and Aegean regions cattle breeding are often intensive in modern conditions. Whereas, in Eastern and Southeastern Anatolia regions conditions are more extensive and cattle raising is made largely at the small family farms.

Table 1. Number of local, cross-bred and pure cattle, sheep and goats by agricultural zones in 2013 (TÜİK, 2013)

Species	Turkey	Southeastern Region	Diyarbakir
<b>Total cattle</b>	14.415.257	963.540	334.876
<i>Local</i>	2.348.487	320.712	143.001
<i>Cross bred</i>	6.112.437	346.036	112.229
<i>Pure</i>	5.954.333	296.792	79.646
<b>Buffalo</b>	117.591	11.130	9.950
<b>Sheep</b>	29.284.247	4.844.744	741.312
<b>Goat</b>	9.225.548	2.066.310	231.415

Diyarbakir is one of the largest cities in Southeastern Region in Turkey. Situated on the banks of the River Tigris, it is the administrative capital of the Diyarbakir Province and with a population of over /about 1 million. The province of Diyarbakir extends over an area of 15.355 km<sup>2</sup>. This region is one of the most heavily grazed parts of Turkey. The climate is semi-arid and the pastures dry out very quickly at the end of June. There is some nomadic type of grazing in the region. Since there is short spring and summer grazing, some of the livestock are moved to Eastern Anatolian pastures or to high mountain pastures of the South Eastern Taurus Mountains in the west. About 6% of the pasture area of Turkey is situated in this region (Karagöz, 2006).

Generally, crop production and livestock are performed together by the farmers in Diyarbakir province. All types of livestock operations can be performed in this zone due to the suitability of the climate and geographical features. In this province cattle and sheep breeding is the most common types of animal production. High proportion of cattle is raised under traditional systems. Most cattle farms are still under traditional management relying mainly on extensive grazing, and receiving poor quality feed. However, this indicates a structural change in the livestock sector through a move to more intensive systems.

The main goal of this study was to determine the structure of dairy farms and the practices of animal feeding and the use of feed resources in dairy cow farms in Diyarbakir Province, Turkey.

### Material and Methods

This research has been conducted in 17 districts of Diyarbakir. Totally, 465 cattle farms which have more than 25 cows were investigated. Interviews were conducted face-to-face with farm owners during the autumn season in 2013. The farms selected randomly. Interviews were conducted face-to-face with dairy farmers. The questionnaires with 25 questions were asked and the answers given to farmers were recorded. The data obtained at the study were analyzed by using SPSS 15.0 for windows.

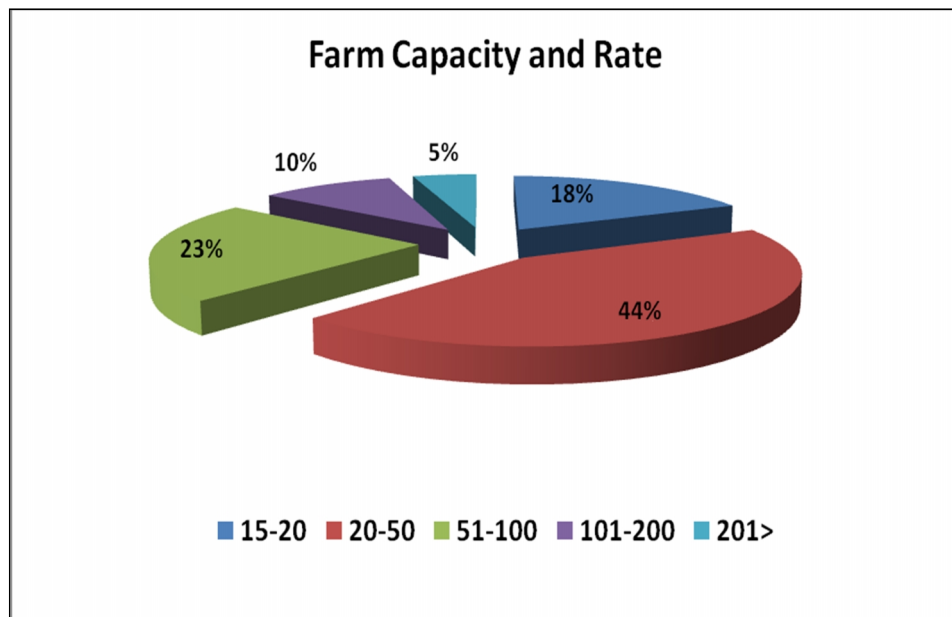
### Results and Discussion

An extensive cattle farming is common in the Diyarbakir region. The most of cattle farms has been found as the family based enterprises. Cattle farms in the region consisted of family based small scaled enterprises (83%), cooperative (12%) and big farms (5%). The number of cattle in each of the regions of the Turkey fell year on year. The number of cattle in Southeastern region and Diyarbakir province has increased between 2009 and 2012. While the number of local breeds decrease, the number of pure and cross- breeds increased by the

years. About 58% of pure breed with high yielded, 31% of cross-breeds and 11% of local breeds constitute the cattle population of Diyarbakir province.

Livestock kept or produced in smallholder farming systems are an important component of the agricultural economy in the developing world. The role of livestock on smallholder farms varies widely, providing draught power for crop production or as a production activity for subsistence needs or market sale under systems ranging from extensive pastoralist to intensive, peri-urban feeder and dairy systems (Mcdermott et al., 1999). Number of cattle farms in the Diyarbakir respect to their capacity of the existing situation and rate is given in Figure 1.

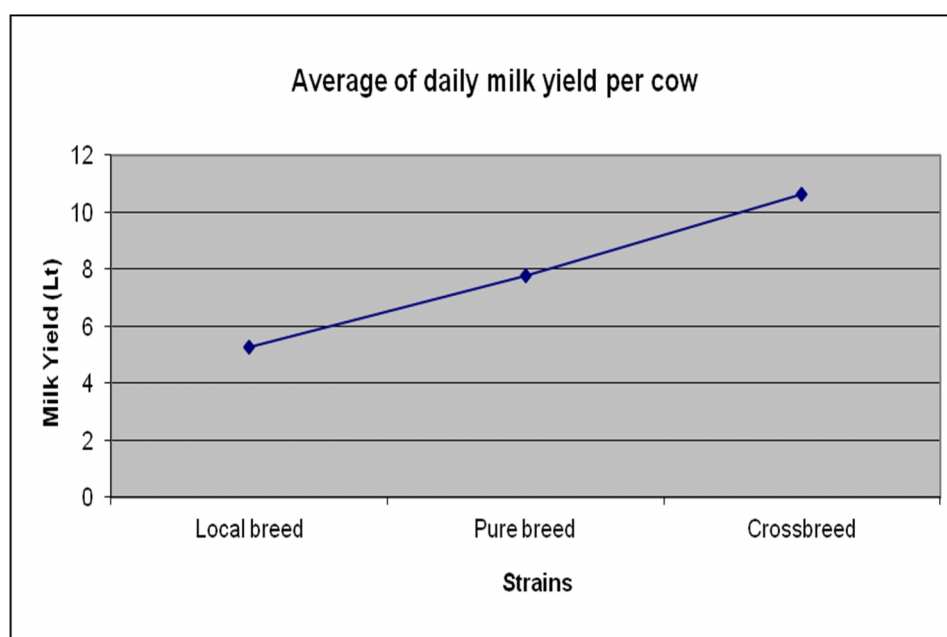
Figure 1. Number of cattle farms in the Diyarbakir respect to their capacity of the existing situation and rate



According to the results obtained, the distribution of cattle enterprises are as follows; 204 cattle holdings (44%) having 25-50 of cattle, 108 holdings (23%), having 51-100 head of cattle, 85 cattle holdings (18%), having 15-20 head of cattle, 46 cattle holdings (10%) having 101-200 head of cattle and 22 cattle holdings (5%) having more than 201 head of cattle. The farms having between 15 to 20 and 25 to 50 head of cattle were small ancient farms performing under primitive indoor barns in villages. Farms having more than 51 head of cattle were new established partly modern and modern ones.

Average of daily milk yield per cow during the lactation period was given in Figure 2. The average milk production per cow was 5.25 liters for local breeds, 7.25 for cross breeds and 10.65 liters for pure breeds, respectively. Results shows that pure breeds have the highest milk yield.

Figure 2. Average of daily milk yield per cow per by lactation period



The major factor for improvement in production is to optimize the efficiency of utilization of the available feed resource. Feeding is the most important and probably the most confusing part of raising cattle. This is because there are a wide variety of feedstuffs, ration types and alternatives, and methods of feeding cattle. Feed cost representing approximately 60 to 70 percent of the cost of producing milk. We observed that 70 and 88 % of farms purchasing forage and concentrate feeds respectively.. In addition, 26 % of dairy farms experienced problems in obtaining feeds and forage crops are grown in only 10% of farms. We determined that Hay, poor quality hay, silage and other roughage at the rate of 69, 18, 12 and 1 % were used in farms respectively. We observed that only 15% of farmers have knowledge about ration formulation, remaining of farmers have not any knowledge on ration formulation techniques.

### Conclusion

As a result, cattle farmers in had insufficient knowledge on the preparation feeds, animal feeding practices Diyarbakir province. At the same time serious errors in animal nutrition and feeding practices causes severe yield losses and productivity in farms.

### Acknowledgments

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