Meat productivity of single camels and their hybrids in the conditions of Karakalpakstan

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Abstract

The article gives information about the results of a study of the meat productivity of dromedary camels in the Republic of Karakalpakstan and also a study of the slaughter yield of the carcass, the mass of the steamed carcass, the mass of the hump to the ratio of live weight, the yield of internal fat. The conclusion about meat productivity depending on the age of animals is provided.

Key words: Age, live weight, meat productivity, internal fat yield, dromedary camels, hybrids, steam carcass mass, hump mass.

1. Introduction

Camel breeding in the Republic of Karakalpakstan mainly develops in the desert (kzyyl-kum) and gypsum (Ustyurt) zones [1]. The main breed is one humped dromedary.

In the Republic of Karakalpakstan, at present, according to this statistics, the Republic of Karakalpakstan for January 1, 2021, 5072 heads of dromedar camels in all categories of farms.

Camel farming is one of the main branches of animal husbandry in the Republic of Karakalpakstan, it is of great importance in the development of vast desert territories with a sharply continental climate, providing the local population with food (meat, milk), and industry with raw materials (wool, leather). The importance of camel breeding is especially increasing in connection with the intensive industrial development of the vast expanses of Kyzylkum and Ustyurt in the northern part of the Republic of Karakalpakstan.

In the harsh and sharply continental conditions of Karakalpakstan, dromedary camels successfully combine qualities such as high working capacity, meat productivity and adaptability to the harsh conditions of deserts and semi-deserts. Therefore, for the production of cheap high-quality camel meat, and their breeding are engaged in many farms, private farms of the Republic.

It should be noted that in the Republic of Karakalpakstan there is not enough work to qualitatively improve the composition of camels. Therefore, it is necessary to carry out a complex of zootechnical measures that would contribute not only to the numerical growth of one-humped camels, but also to improve its breed qualities.

Many researchers have studied how [1; 2; 3; 4; 5] found that with proper maintenance and care, camels grow well in desert and semi-desert conditions, develop and produce high quality products at low cost.

The production of camel meat is one of the factors of cheap production of meat and meat products in the Aral Sea region.

However, a serious obstacle in the development of camel breeding and the production of camel meat and meat products is the neglect of selection and breeding work in the direction of meat productivity in all farms of the Republic of Karakalpakstan.

Camel meat has a high biological and nutritional value, is characterized by marbling with fatty layers deposited in the connective tissue.
2. Material and research methods

Scientific and practical research was carried out in the Ustyurt camel farm of the Kungrad region and the Nurtiliek-Karauxyak camel farm in the Karakuzyak region of the Republic of Karakalpakstan in the period 2018–2020.

Live weight is mainly determined by truck scales, in the absence of scales in the field was determined according to the Patent of the Republic of Kazakhstan No. 15886 Professor Baimukanov's method for determining the live weight of camels. Published 15.08.2008. Biometric processing of the data obtained was carried out according to [6].

3. The scientific novelty of the research lies in the fact that for the first time the age-related variability of the live weight of one-humped camels and their hybrids in the conditions of the Republic of Karakalpakstan was revealed.

![Picture 1. One humped camels in the Ustyurt pasture](image)

Research results

The main serious obstacle in the development of camel breeding and the production of meat and meat products of camel breeding is the neglect of selection and breeding work in the direction of meat productivity in all farms of the Republic of Karakalpakstan.

Selection - breeding work - is one of the largest factors in the massive improvement in the state of affairs in camel breeding.

Live weight is the main indicator that determines meat productivity, survival and, ultimately, obtaining a healthy offspring. For the study of single humped dromedars, we selected queens with a live weight of at least 489 kg of live weight. The results of the study of live weight are shown in Table 1 below.

<table>
<thead>
<tr>
<th>Breed</th>
<th>Number of animals, heads</th>
<th>Live weight, kg.</th>
<th>Limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>One humped dromedary camels Grow:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3 years</td>
<td>13</td>
<td>489,5±13,4</td>
<td>439-511</td>
</tr>
<tr>
<td>5 years</td>
<td>17</td>
<td>506,7±15,5</td>
<td>476-534</td>
</tr>
<tr>
<td>7 years</td>
<td>12</td>
<td>556,5±17,2</td>
<td>523-571</td>
</tr>
</tbody>
</table>

Table 1

"Live weight of dromedary camels, kg."
The analysis given in Table 1 shows that, one humped dromedary camels with age, the live weight increases (3 years old 489.5 ± 13.4 and 7 years old 556.5 ± 17.2). It should be noted that, in comparison, hybrids (dromedary + bactrians) significantly surpass the dromedary in live weight at all ages from their peers.

Meat productivity of animals is determined by early maturity and the ability to quickly fatten. Feeding on spring-summer pastures is facilitated by the addition of weight gain. With equal fatness, the proportion of fat in the carcass of an adult animal is higher than that of growing young animals. The highest indicators of slaughter yield and meat quality were found in young animals aged 2.5-3 years. Therefore, it is recommended to slaughter camels at the age of 2.5-3 years.

Camel meat is mainly used in the domestic market. In terms of chemical composition, nutritional value and taste, it differs little from beef.

Indicators of meat productivity of single-humped dromedars are given in Table 2.

### Table 2

**Results of control slaughter of single-humped camels of different ages**

<table>
<thead>
<tr>
<th>Signs</th>
<th>Breeds</th>
<th>3-годы</th>
<th>5-лет</th>
<th>3-годы</th>
<th>5-лет</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of heads</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>Before slaughter live weight, kg.</td>
<td>489,5</td>
<td>506,0</td>
<td>501,0</td>
<td>576,0</td>
<td></td>
</tr>
<tr>
<td>Steam carcass weight, kg.</td>
<td>229,5</td>
<td>239,3</td>
<td>237,4</td>
<td>277,1</td>
<td></td>
</tr>
<tr>
<td>Carcass yield,%</td>
<td>46.9</td>
<td>47.3</td>
<td>47.4</td>
<td>48.1</td>
<td></td>
</tr>
<tr>
<td>Internal fat mass, kg.</td>
<td>3.6</td>
<td>3.2</td>
<td>4.3</td>
<td>3.9</td>
<td></td>
</tr>
<tr>
<td>Internal fat yield,%</td>
<td>0.7</td>
<td>0.6</td>
<td>0.9</td>
<td>0.7</td>
<td></td>
</tr>
<tr>
<td>Hump fat mass, kg.</td>
<td>27.9</td>
<td>28.8</td>
<td>26.5</td>
<td>31.6</td>
<td></td>
</tr>
<tr>
<td>Humpback fat yield,%</td>
<td>5.7</td>
<td>5.7</td>
<td>5.3</td>
<td>5.5</td>
<td></td>
</tr>
<tr>
<td>Slaughter weight, kg.</td>
<td>261,0</td>
<td>271.3</td>
<td>268.2</td>
<td>312.6</td>
<td></td>
</tr>
<tr>
<td>Lethal output,%</td>
<td>53.3</td>
<td>53.6</td>
<td>53.5</td>
<td>54.3</td>
<td></td>
</tr>
</tbody>
</table>

From the data in tables-2 it can be seen that, according to all meat indicators, hybrids (dromedary + bactrian) outperform with a comparison of peers of one-humped camels. It should be noted that it is advisable to take delivery for meat to 3-year-olds. And by this, the cost of meat is much less than that of a 5-year-old. The slaughter yield of meat fluctuates in one-humped camels of 3-year-old 53.3%, 5-year-old 53.6%, while these indicators, respectively, for hybrids 53.5 and 54.3%.

### 4. Conclusions

In order to solve the food program and provide the population with meat products, pay attention to expanding the area of camel breeding in the Republic of Karakalpakstan. After the time off for young camels, slaughter for meat should be carried out at the age of 2.5-3 years.

**References**