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Learning To Bonitize Breeding Camels

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ABSTRACT

This article provides information on the bonitization of breeding animals, specifically camels, including only purebred camels and their hybrids. It discusses methods for assessing their breeding qualities and determining which class they belong to.

Keywords:

dromedary camel, Bactrian camel, bonitization, breed, origin, typicality, body measurements, live weight, exterior, wool productivity, milk yield, offspring quality.

Main part. In the bonitization of breeding animals, including camels, only purebred camels and their hybrids are assessed.

This process is conducted based on primary reporting forms of breeding records and camel husbandry instructions. The aim of bonitization is to evaluate their breeding qualities and determine the class to which they belong.

Before conducting the bonitization, a calendar plan is developed, and the process is carried out in accordance with zoo-veterinary regulations.

For each purebred camel, productivity in terms of milk and wool is studied, and the results are calculated. Depending on the climate, the bonitization is conducted in October. The first bonitization of camels is carried out at the age of 2.5 or 3.5 years, focusing on the following parameters: origin and typicality, adaptability,

body measurements and live weight, exterior and body parts, wool productivity.

The second bonitization is conducted for camels aged 6 years and older, assessing: origin and typicality, adaptability, body measurements and live weight, exterior and body parts, wool productivity, milk yield, offspring quality.

Determining the Class of Camels. Based on the bonitization results, camels are classified into three classes: Elite selected (best) – top-quality camels of the breed, first class – breeding camels meeting breed standards, second class – satisfactory camels not meeting breeding standards and excluded from breeding programs.

Camels are assigned to a class based on their evaluation scores, as outlined in Table 1.

Table 1

Bonitization Scale for Classifying Breeding Camels

Indicators	Elite		First class		Second class	
	Male	Female	Male	Female	Male	Female

	camels	camels	camels	camels	camels	camels
Origin and typicality	8	6	6	6	4	3
Adaptation quality	8	8	6	6	5	5
Body measurements and live weight	8	7	6	5	4	3
Exterior and body parts	8	7	6	5	4	3
Wool productivity	8	7	6	5	4	3
Milk yield	-	7	-	5	-	4
Offspring quality	8	7	6	5	4	3

Each characteristic of the camels is evaluated individually based on the minimum required score for that specific trait to determine their class. For instance, if a camel meets the minimum required score for all six characteristics to qualify as "Elite" but falls short on one characteristic, only meeting the requirements for "First Class," the camel can only be classified as "First Class."

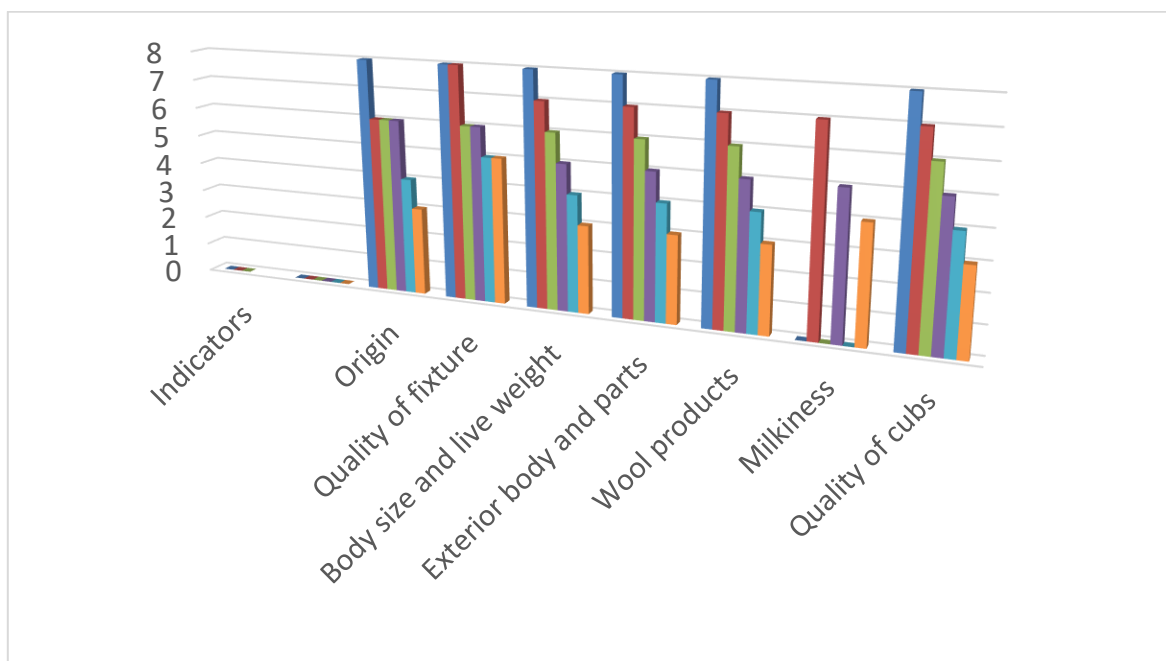


Diagram-1

If a camel meets the requirements for "First Class" in all characteristics and falls short of the "Elite Class" by just one point in one characteristic, it can still be classified as "Elite Class."

Camel measurement and live weight evaluation scale. The assessment of camels based on size and live weight is conducted using a standardized scale. Measurements are taken on a flat and firm surface. For wild or skittish camels, measurements are carried out using specialized equipment. During measurement, camels should stand freely, with all legs evenly bearing weight and the front legs parallel, firmly planted vertically.

The tools used for measurement include: measuring stick (lidtin), caliper (vilkena caliper), measuring tape (made of specialized material).

Both one-humped dromedaries and two-humped Bactrians are evaluated using a 10-point system. The following body measurements are recorded: height, oblique body length, chest girth, pastern circumference. The measurements are recorded as following: height: for bactrians: measured from the ground to the highest point between the two humps using a measuring stick, for dromedaries: measured from the ground to the highest point of the withers.

According to the live weight. The live weight of male one-humped camels is scored as follows: 640 kg: 10 points, 620 kg: 9 points, 600 kg: 8 points, 576 kg: 7 points, 550 kg: 6 points, 520 kg: 5 points, 500 kg: 4 points, 470 kg: 3 points. The live weight of female adult one-humped camels is scored as follows: 610 kg: 10 points, 580 kg: 9 points, 560 kg: 8 points, 540 kg: 7 points, 520 kg: 6 points, 490 kg: 5 points, 470 kg: 4 points, 450 kg: 3 points. If male and female adult camels are compared according to the live weight, male camels weigh 25-30 kg more than female camels. Therefore, in terms of body measurements and live weight, male camels have a distinct advantage over females.

One humped Arvana camels are evaluated using a 10-point system according to the body measurements and live weight. Males and females are compared with each other and analyzed as following: height at withers: male camels: 201 cm: 10 points, 198 cm: 9 points, 195 cm: 8 points, 192 cm: 7 points, 189 cm: 6 points. Male camels are on average 7 cm taller than females.

According to the oblique body length:

Male camels: 171 cm: 10 points, 168 cm: 9 points, 166 cm: 8 points, 165 cm: 7 points, 161 cm: 6 points, 158 cm: 5 points, 156 cm: 4 points, 153 cm: 3 points.

Female camels: 168 cm: 10 points, 165 cm: 9 points, 163 cm: 8 points, 160 cm: 7 points, 158 cm: 6 points, 155 cm: 5 points, 152 cm: 4 points, 150 cm: 3 points. Male camels are 3 cm longer on average than female camels in oblique body length.

According to the chest girth:

Male camels: 227 cm: 10 points, 224 cm: 9 points, 220 cm: 8 points, 217 cm: 7 points, 214 cm: 6 points, 210 cm: 5 points, 207 cm: 4 points, 203 cm: 3 points.

Female camels: 221 cm: 10 points, 218 cm: 9 points, 214 cm: 8 points, 211 cm: 7 points, 208 cm: 6 points, 204 cm: 5 points, 201 cm: 4 points, 198 cm: 3 points.

According to the pastern circumference:

Male camels: 23.5 cm: 10 points, 22.6 cm: 9 points, 22.5 cm: 8 points, 22.3 cm: 7 points, 22.0 cm: 6 points, 21.5 cm: 5 or 4 points, 21.0 cm: 3 points. Male camels have a pastern

circumference that is, on average, 3 cm larger than that of female camels.

Two humped Bactrian camels are evaluated using a 10-point system according to the body measurements and live weight. Males and females are compared with each other and the result is as following:

Height at withers: male camels: 199 cm: 10 points, 195 cm: 9 points, 192 cm: 8 points, 188 cm: 7 points, 185 cm: 6 points, 181 cm: 5 points, 178 cm: 4 points, 175 cm: 3 points.

Female camels: 193 cm: 10 points, 190 cm: 9 points, 187 cm: 8 points, 184 cm: 7 points, 178 cm: 6 points, 175 cm: 4-5 points, 172 cm: 3 points.

According to the body length: male camels: 178 cm: 10 points, 173 cm: 9 points, 170 cm: 8 points, 167 cm: 7 points, 163 cm: 6 points, 160 cm: 5 points, 158 cm: 4 points, 156 cm: 3 points. Female camels: 171 cm: 10 points, 168 cm: 9 points, 152 cm: 3 points. Male Bactrian camels are 3 to 5 cm longer than females on average, indicating a consistent structural advantage.

Evaluation by chest circumference: male camels: 251 cm: 10 points, 246 cm: 6 points, 228 cm: 5 points, 224 cm: 4 points, 220 cm: 3 points. Female camels: 248 cm: 10 points, 245 cm: 9 points, 239 cm: 8 points, 236 cm: 7 points, 232 cm: 6 points, 228 cm: 5 points, 224 cm: 4 points, 220 cm: 3 points. Male camels have a chest circumference that is, on average, 3 cm larger than females.

According to the pastern circumference: male camels: 24 cm: 10 points, 23.5 cm: 9 points, 23 cm: 8 points, 22.5 cm: 7 points, 22 cm: 6 points (also 5 points in some cases), 21.5 cm: 4 points, 20 cm: 3 points. Female camels: 22 cm: 10 points, 21.5 cm: 9 points, 21.6 cm: 8 points, 21 cm: 7 points, 20.5 cm: 6 points, 20 cm: 5 or 4 points, 19.5 cm: 3 points. Male camels surpass females in pastern circumference by 0.5 to 2 cm on average.

Conclusion: The bonitization of pedigree camels using a 10-point system considers their lineage, adaptability, body measurements, live weight, exterior features, body parts, wool productivity, milk yield, and offspring quality. The classification of camels into elite, first-class, and second-class is based on these

criteria. For an elite classification, a camel's adaptability score is required to be 5 points, while body measurements, live weight, exterior features, body parts, wool productivity, and offspring quality scores range from 3 to 4 points. For milk yield, a score of 4 points is also assigned.

In conclusion, if one humped male camel is compared with two humped, they have differences as the following: height: one-humped camels surpass two-humped camels by 3 to 5 cm, body length: two-humped camels exceed one-humped camels by 3 to 5 cm, chest circumference: two-humped camels have a chest circumference that is 0.5 to 1.0 cm larger, live weight: two-humped camels outweigh one-humped camels by 90 to 120 kg.

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