BREEDING TECHNOLOGY OF CAMELS

S. Eshmuratova
Candidate of Agricultural Sciences, Associate Professor
Nukus branch of Tashkent State Agrarian University
sulukhan.eshmuratova@gmail.com
B. Alibekov
Assistant of Nukus branch of Tashkent State Agrarian University

Abstract: *The article presents information about the terminology of camel breeds, hybrid terms, as well as the method of purebred breeding used in the breeding of camels, interbreeding, methods of interbreeding single-humpback and double-humpback camels.*

Key words: *Camel breeds, dromedary-single-humpback, Bactrian-double-humpback, hybrid-camel, breeding methods*

Introduction

Camel breeding is one of the main areas in the economy of the Republic of Karakalpakstan, and it is very important in developing large desert areas with a sharp continental climate and providing the local population with food (meat, milk), and industry with raw materials (wool, leather).

Local people engaged in camel breeding from the ancient times. According to folk wisdom, camels are basic animals compared to all other types of cattle, because they are the same as cows in milk production, sheep in wool production and horse in working.

In our conditions, camels reach sexual maturity at the age of 2-3 years. Female camels were bred in 3-4 years, and male camels in 5-6 years. The gestation period of Dromedars is 13 months, in Bactrian - 14 months. The mother camels can give a calf every 2 years. The lifespan of camels is 35-40 years.

The breeding period of camels is from January to April. Therefore, it is advisable to start breeding from the 2nd decade of January. The condition of camels can be determined with the help of samples (tests). The tide of female camels begins in mid-December and continues up to the beginning of May. In bactrian, sexual activity begins and ends earlier than in dromedaries.

The success of the copulating process depends on the feeding conditions of the animals. Highly obese mother camels recover quickly and the results of copulating are good. Giving birth to twins among camels have not been identified.

In the breeding of camels, purebred breeding, interbreeding methods, and methods of interbreeding single-humpback and double-humpback camels were used.

Interbreeding. Kalmak breed is considered to be the most valuable among double-humpback camels. This breed is used to improve both Kazakh and Mongolian breeds of camels.

In the Republic of Kazakhstan, in the Astrakhan and Volgograd regions, which is bordered with the distribution zones of Kalmak breed camels, from the ancient time mother camels of Kazakh breed and male camels of Kalmak breed have been copulating.

Purebred breeding. The most common method of breeding camels is purebred breeding of Bactrian breeds: Kalmak, Kazakh, Mongolian and Dromedar Arvans of Turkmen breeds. Dromedar Arvans were purebred breeds. The increase in the number of purebred camels allows camels not only to be used as a working animal, but also creating valuable interbreed hybrid - male and female camels. Purebred breeding of camels is especially necessary in the places where the number of hybrids increased as a result of excessive hybridization and where it is not possible to breed camels. Copulating Kazakh and Mongolian camels with Kalmak breed in order to improve them, does not interfere purebred breeding because double-humpback canels do not lose the type, only their physical size and the quality of productiveness increases and creates perspectives for the success of further breeding actions.

From the earliest times, the local people of Kazakhstan, Uzbekistan, and Turkmenistan, on the one hand, and on the other, Iran, Afghanistan, and north India, have used copulating Bactrian and Dromedary camels.

Heterosis - first-generation hybrids, has been known in the practice of camel breeders for its ability to grow rapidly and intensively. Industrial copulating is mainly used in copulating Dromedary and Bactrians for creating the first generation of hybrids. These hybrids, among other species, are

large, strong and hardy animals. Hybrids are not used for cross-breeding.

Scientists believe that interbreeding between single-humpback and double-humpback camels is of great importance in the economy.

Both Kazakhs and Turkmens have a terminology based on the terms of hybrids.

Bactrian - double-humpback camel;

Dromedary - single-humpback camel;

Kospak - the second generation hybrid camels obtained by re-breeding the first generation hybrids with Bactrian camels;

Keznar - hybrid camel of the third generation derived from both kospak camels and dromedary camels;

Kurtnar - hybrid camel of the third generation derived from Bactrian camel hybrids;

Nar - the first generation hybrid camel derived from single-humpback and double-humpback camels;

Lek - single-humpback ovum camel;

Bura - double-humpback ovum camel;

Ingen - double-humpback mother camel;

Maya - single-humpback mother camel;

Koxert - single-humpback male camels obtained by copulating narmayas and dromedary camels;

Kerdar - single-humpback female camels obtained by copulating narmayas and dromedary camels;

Interbreed hybridization - hybrids derived from both single-humpback and double-humpback camel species;

Djarbay - camel born of both male and female hybrids of the first generation, meaning "tulip". Their stem cells are not well developed and their constitution is low.

Sapaldyryk - single-humpback hybrid mother camels - F2, (hybrid mother camel x dromedar)

Camel species, breeds, hybrids, kospaks

№	Name	Gender		Breed
1	Dromedary Turkmen arvan breed	♀	♂	Purebred
2	Bactrian Kazakh breed	♀	♂	Purebred
4	Narmaya or inermaya	♀		**Φ1-** $^1/_2$bactrian **x** $^1/_2$dromedary
5	Nar or iner		♂	**Φ1-** $^1/_2$ bactrian **x** $^1/_2$ dromedary
6	Koxert (single-humpback)	♀	♂	Φ_2- narmaya **x** ¾ dromedary
7	Kerdar (single-humpback)	♀	♂	Φ_2- narmaya **x** $^3/_4$ dromedary
8	Balkospak	♀	♂	Φ_2 -narmaya **x** $^3/_4$ bactrian
9	Sapaldyryk (single-humpback)	♀	♂	Hybrid mother camel **x** dromedary

Nar camels and mayas are similar to dromedaries in appearance, but their humpbacks are longer than theirs. Therefore, from the appearance of hybrids, camels cannot be divided into single-humpback and double-humpback, because hybrids can also be single-humpback.

Hybrids are not copulated by themselves, because the offspring obtained from them is not considered a fully valuable animal. Hybrid male camels of the first generation are castrated, and the females are copulated with bactrian or dromedary.

Two humpback kospaks (3/4 bloody Bactrian) are obtained from copulating hybrids with male Bactrian camels, and in the next breed two-humpback kospaks are born from female hybrid camels and second generation of Bactrian camels.

Single-humpback male koxert and female kerdars are born from copulating Narmayas with dromedars. The next generation of hybrids was called sapaldryk. The second also had heterosis in the subsequent shagylystyryo.

Camels born of both male and female hybrids of the first generation were called "Djarbay", which means "tulip". Their stem cells are not well developed and their constitution and vitality are low.

In areas where Bactrians are spread, first-generation hybrids are obtained by crossing Bactrian with female dromedary camels, and in areas where dromedaries are spread, they are obtained by crossing female Bactrian camels with dromedaries.

Purebred Bactrians – have two separate humpbacks. The distance between the humpbacks is 10 cm. The upper part of the neck is covered with wool, and the lower part of the neck is covered with beards.

Purebred dromedaries - have a hump in the back. There is some wool in the upper part of the neck and a short beard in the lower part, which is half of the neck.

The first generation hybrids are single-humpback. Covering with wool and beard is like Bactrians.

Conclusion

Breeds which are created by copulating first generation hybrids with dromedaries, have single compact humpback like dromedaries. But different from them in covering with wool and beard.

In our farms, there is a real possibility to get kospaks' generation according to a different scheme in practice for camel breeders. In creating high-yielding kospaks, kospak mother camels must be copulated with purebred Bactrians or Turkmen dromedaries, and kospak male camels should not be included in breeding.

It does not take much effort to develop this field. In the current situation, camel breeding is an additional source of cheap milk, meat and wool products, and are considered a tool for agricultural development. Finally, one of the most important aspects of animal husbandry is camel breeding and their main products - milk, meat, wool, which are environmentally friendly, fresh and medicinal.

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