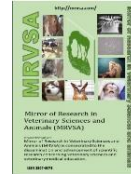




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The reality of camel breeding in Basra governorate

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Abstract

Camel is unique animal. In Holy Quran, Allah Almighty remember people about the creation of camel (AL-GHASHIYAH 17 (Then do they not look at the camels –

how they are created?). This verse remind us about the different aspects of the camel creation, which have aroused the attention o researchers around the world. The camels have gained reputation as the ship of the desert, since ancient times because they have superior ability to withstand thirst for long periods. Basra is one of the important governorate in Iraq and it is located in the south. Basra has very severe weather and low levels of the rainfall especially at al-Zubair desert resulted in a lack of vegetation and the deterioration in the soil. These environmental factors have a negative impact on the breeding of camels in Basra. This study intended to focus on the reality of camel husbandry and field's problem the in Basra governorate. Continuous veterinary work teams and follow up for camels and its behaviors and preview the seasonal movement of Camel herders accompanied b their animals were reported. In addition, some common diseases, especially internal and external parasites, were also reported. In conclusion, this study described the camel's herds in Basra governorate with special focus on the most importan problems that face the breeding of camels in this governorate.

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Keywords: Basra, Camel, external parasites, ship of the desert.

Introduction

There are a good old relationship and respect between a camel and the Arabian people. The location of the first masjid in world (AL medina) was determined according to the sitting place of the camel of Prophet Mohammed, when they allowed this camel to walk freely. The means of life have developed over the years which lead to decrease the importance of the camels. However, the Arabian people still have interest in keeping and

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raising camels especial the pure and expensive breeds and that reflect the respect, appreciation and faithfulness to these animals. The census of camels at Arab world is over 15 million and accounts for about 60% of the total population of camels in the world, however, only scarce studies and research have done. These aspects also have limited support and absence of a coordination and strategy with clear specific objectives and projects, although there are many individual research and efforts. In Iraq, the estimated number of camels up to 58,293. Camels distributed in 51%, 47% and 2% in Al Jazeera, south and Northern deserts respectively. The vast areas of the southern desert are barren land and some of these areas are depend on water wells (groundwater), with an estimated rainfall up to 120 mm / year (Abdullah, 2012). Camels are considered as important source of meat and milk. The interest in raising camels in the Arab world began to decline as a result of changes in the social customs of Arab citizens and consumption patterns that made the camel as a secondary animal. Camels are one of the important livestock in Basra governorate / Iraq. Review of literature revealed scarce information regarding breeding and raising camels in Basra. Therefore, this study was designed to focus on the reality of camel husbandry and different aspects of the field's problem that face breeding of camels in Basra governorate.

Brief history

All Arab tribes are a famous and having the original breeds of the camels. The owners of the camels are proud and distinguish themselves from the owners of sheep herds according to the social custom in the desert communities. There are a famous Arab proverb regarding the camels (milking sitting down and drinking standing up), which mean that people wish that the camel owners will lost his camels and become a sheep owner if they hurt them and this would be a big ashamed (Ahli and Yusuf, 2012). Most scientific studies and references stating that all kinds of the present camels are originated about 50-60 million years ago, from a camel-like animals which lived North America. The Arab was tamed the camels about 5000 years ago in the Arabian Peninsula areas including Hadramout, South Yemen and Oman. The camel has become an integral part of the of the nomadic culture that has spread across the history of the Middle East to North Africa and the Sahara desert and other African countries. The camel is called "ship of the desert". This is a perfect description used to explain the abilities to be patient and resist the hardship, in addition, to serve and obey his owner during his long and severe journeys in the desert especially during summer season. Camels occupied a prominent place of the Arab interest and still has great fortune in the recent years to be one of the animals that gets a big care. Moreover, most Arab countries in the Arabian Peninsula give a camel a special position and respect according to the Islamic religion and Hadith of prophet Mohammed the messenger of Allah (bless him and his family). Prophet Mohammed mentioned to the camels about 109 times in his honest Hadith and said (Camels give A Glory to their owner) (AL sanae, 1983).

Scientific classification

The (Class) Mammalia have most highly developed nervous systems in animal kingdom. Most do not lay eggs, and instead, embryos develop inside the mother and are not released until nearly or fully developed. Mammals have milk glands that provide nutrients for infants. The (Order) *Artiodactyla* have weight of body borne equally by third or fourth foot, rather than most or entirely by third toe. The (Family) Camelidae are large animals with slender necks and long legs, and are strictly herbivorous. They have a three-chambered digestive tract. The genus *Camelus* has bear distinctive fatty deposits, known as humps, on their back. This is including two species: dromedary camels or Arabia camel (*Camelus dromedarius*), which have one hump, and Bactrian camels or Asian camel (*Camelus bactrianus*), which have two humps (Al tabary and Onoasy, 1997)

The geographical boundaries of Basra governorate

Basra governorate is located in the far south of Iraq. It is the second largest governorate in terms of population. It is bordered by Kuwait and Saudi Arabia to the south, Iran to the east and share local borders with all of the province of Dhi Qar, Maysan in the north, and Muthanna to the west (Figure. 1). Basra is located on the ground mixed from terrain between the mountain, hills and desert plain with an area of 19 070 km² and a population of about 3.8 million people (according to 2009 statistics) (<http://hhcom1.co.cc/english/Basrah.htm>). Al Jasham, Al Sadoun, Al Wardan, Al Sawalm, Al Rafeae and Al Bdour are the famous tribe's names that are interested in breeding of the camels (Technical Report, 2015).



Figure.1: Shows map of Basra governorate

Table.1. Shows the geographical distribution of camels herd in Basra governorate

No.	Area name	E	N
1	Allhis	46.97867	30.58380
2	Al legah	46.57133	29.32578
3	Artawi	47.09182	30.58068
4	Salefy	46.35131	30.45004
5	Alrgi	47.04055	30.05551
6	Al butain	47.01324	30.15424
7	Ghelaoh	46.47151	29.58197
8	Al toy	46.86827	29.58483
9	Ghazlani	46.71913	30.11908
10	Ruwaih	46.85419	30.10371

The most important diseases of camels in Basra

1. Camel pox

Camel pox is one of camel diseases known from ancient times. Camel pox occurs in almost every country in which camel husbandry is practiced (Bhanuprakash *et al.*, 2010). In Iraq, camel pox was isolated by (Falluji *et al.*, 1977) from skin poxlike lesions, when a highly contagious skin disease occurred in the camels in the Iraq-Iran border regions. The virus was identified by serological tests and it revealed similarity to that isolated in Iran, Egypt, and Kina. The occurrence of camel pox is variable in Basra governorate and depend on different environmental factors according to field records of the veterinary clinic.

2. Internal parasites

Camels can be infected with different roundworms in the gut. The parasites in the gut cause weight loss, weakness. There are some parasite that has ability to cause diarrhea and death especially in the young animal. Lungworms one of the causes of breathing problems in the camel herd and infected animals develop a short, sharp cough. Camels can also be infected with flukes, which infect the liver especial the camel that come from the northern part of the Iraq. The occurrence of these parasites were reported from different areas in Basra governorate according to Basra Veterinary Hospital records. However, intensity of the herd, the immunity of the animals, weather, other diseases, sex and age are considered as predisposing factors that play important roles in the occurrence of parasitic infestation.

3. Mange

According to Basra Veterinary Hospital records, mange is one of the important parasitic disease that was highly contagious and infects camels of all ages. Mange was also frequently observed in as a sudden infection in herds suffering from shortage of food and health care as well as intensive breeding.

4. Diarrhea

Diarrhea was reported as one of the main causes of mortality in small camels. The method of breeding and management play an important role in the emergence and development of diarrhea in the camel calves. It is essential for the young camel to take sufficient quantity of colostrum to protect them against some diseases. The she camel produces colostrum for 4 to 5 days after birth. Many camel owners do not allow the young camel to freely suckle because they believe this causes the young to suffer from belly pain and diarrhea. Moreover, some owners were prevented the young camel from taking any colostrum and many dead animals were reported (Alani, 1997).

5. Other diseases

The other individual cases of camel diseases in Basra was included: intestinal poisoning, food poisoning, pneumonia, diseases of the reproductive system and Surra, which is a very common disease of camels. The disease is caused by very small parasites, called trypanosomes, which live in the blood of the animal. According to Basra Veterinary Hospital record, the total number of cases treated with tetramizol against internal parasites were 5118 camels. In October 2015, there were a lot of camel breeders who visited the veterinary clinic in Zubair, to register their animals and to acquire the veterinary health card for the purpose of obtaining fodder. Moreover, the total number of camels which were registered up to 1727.

Local camel's names

In Basra/ Iraq, local people used different names to call of the camel these are as follow:

Al nakah: the female camels that have Births

Al baaer: male adulthood

Al hajiah: adult female is more than 5 years

Al fahal: adult male

Al hoar: aged from one month - Year

Alfao: which is more than a year old

Al mafrood: two years of age, where the animal is weaned this age and singled out for mother

Allchi or allchih: animal aged 4 years who stays with his mother and moves with her movement

Althalol: are camels that are quiet and obedient.

Feeding camels

Food and Agriculture Organization data is indicated that about 60% of the total food needs for livestock produced by natural pastures. However, camels are depended entirely on natural pastures in compare to other animals such as sheep and goats (FAO, 2007). Camel husbandry requires skill and experienced team. Camels as animal does not accept people strangers and anyone, does not handle it easily because its ability to distinguish its owner from the others. The good relationship between a camel and its owner is a prerequisite in the assets of the camel breeding. The owner of the camel doesn't preferred to sleep well at night if his camels are hungry. The owners of the camels believe to sleep hungry and his camels bellies is filled in food. Camels food needs are low in compare to other animals due to the higher food conversion rate of the camels, although the poor feeding land areas for the grazing. The camels usually grazing in the early morning and before and after sunset. The camels choose the plant species according to the environment. The pastoral animals exist in most cases in the arid and semi-arid areas which totally dependent on rainfall (Wardeh, 1989). Tendah grass, Al hamdh, nasy, arfag and ramath are the most common herbs that grow in the province of Basra. Thus, the pastures remain the main source of fodder for camels except for the newly born camels which provide with other concentrate food and in

most cases with dry bread. The young camels are not allowed to graze with their dams, therefore they keep them with the male (Al fahal) or Althalol.

Camel milk and meat

The range of the amount of milk produced by female camel in Basra is up to 5 kg in the morning and 5 kg in the evening. The milk is limited for young camel feed and personal consumption. The owner of camels believed that spring milk is sweet while summer milk is more salty due to the quality of the grass in summer. As well as they drink milk without heating but in a direct way (directly after milking) (Technical Report, 2015). On the other hand, the camel is an important source for the production of meat, which is considered the best meat, especially young camels, and below the account of slaughtered camels recorded in the abattoir of Basra (Technical Report, (2015) (Table 2).

Table. 2. Shows the total numbers of the camels slaughtered at the abattoir of Basra.

Year	Slaughtered camels
2010	9
2011	24
2012	1
2013	1
2014	0
2015	0

Mating and childbirth

Mating usually begins in the camels at the five years old. At this age, the estrus cycle appears in the she camel at winter and during November, December and January. During the sexual activity, the he camel becomes very fierce and increased his aggressive tendency against other males. During the period of mating, all camel's owners take caution when they are dealing with a male camel. In general, the ratio of the he camel to the she camel is 2 to 100 in each herd. The duration of pregnancy in camels is 11 months and usually the female gives birth for single calf. The she camel remains a full year without mating after her delivery, in order to maintain their health and also for the purpose of providing milk for her calf. These natural phenomena is help in reduce the proportion of death in newly born camels. Milking process of the she camel is innate behavior and only occurs when the small animals becomes in contact with their dam. The she camel should remain with her calf a full week until this calf become able to stand (Technical Report, 2010-2015).

The problems of camel breeding

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1. The number of camels is slowly decline in Basra due to lack of forage sources, which is the main source of camels feed. The camel's owner is in continuous movement between the different southern governorates in the case of abundance of rain and the growth of pasture. Most camel herd move between Dhi Qar, Samawah and Diwaniya especially in summer, when the rain is absence and lead to scarcity of pasture. This continuous movement of the animals raise the problem regarding the counting the actual numbers of the camels. Application of microchips is the ideal solve of this problem.
2. There are a lots of vast areas in the governorate of Basra which is the natural grazing area for the camel, are located within the oil exploration and production areas. This factor make these areas not suitable for the camels and thus directly affects the breeding process of the camels. Moreover, most owners move their camels more than hundreds of kilometers, to protect them from pollutions.
3. There are scarce in the education of the camel's owners. They are rarely visits the veterinary clinic and seeking treatment for their camels. These factors increase the possibility of the spreading of diseases, especially internal and external parasites because of the poorness of the veterinary care provided for the diseased camels. The education program are required to implement in order to help the owners and increased their knowledge regarding the disease of the camels and to help them to deny the previous idea that the camels are resistance to all diseases.
4. There are many environmental pollutions in Basra governorate. The spreading of the remnants of war such as mines is of the most important problems in vast areas of the Basra, and that lead to a significant mortality in herds. Moreover, there are doubts about the effect of some radioactive material from some of the buried war remnants of previous wars.
5. The spreading of the corona virus disease, is one of the important problem that face owners of the camels in Basra. The outbreaks of this disease have been reported in the Iraqi neighboring countries, and the Iraqi open borders might lead to spread of the disease inside Iraq. The attention should be given to this disease to avoid its spreading into Iraq. More regional and international cooperation are needed to prevent transmission of the disease because it is one of the Trans boundary diseases.
6. The continuous increased in the meat and milk products is a good incentive factor to increase the breeding of camels in Iraq. Basra governorate has particularity in this issue because it has Al Zubair extensive desert. Al Zubair desert has favorable environment for breeding of camels and lead to strength the economy of the Basra.
7. Iraqi veterinary state should develop a national policy regarding breeding of the camels in Iraq. This policy will support and coordinate the camel breeding and help in the control the distribution of the diseases. In addition, national camel's laboratory is required to establish in order to improve the methods of diagnosis of the diseases.

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