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## **Introduction**

Since its domestication nearly 3000 B.C., the camel has rendered valuable services to a large sector of the world community. **(El-Karouri ,1979)**

The virtues of the camel are fairly unknown outside the communities where it is used, and knowledge about this animal deserve to be spread to a wider audience, this is especially true with respect to its capacity as a producer of meat and milk. **(Gohl, 1979).**

The extraordinary physiological features of the camel make the animal uniquely suitable to desert environment of the area that it inhabits. Therefore the development of humans' intense dependency on the animal is quite obvious. As is, for that matter, its intimate relationship with the Arabs, shown in their language and the variety of artistic forms. **(Al Mansoury, 2004).**

The Bedouins constructed their world around the camel, they perceived their world as always changing and constantly contested and threatened by the uncontrollable vagaries of nature and compelling needs of their camels and those of hungry groups living nearby. Camel played an important role in family ritual and social custom. No marriage in the desert was possible without camels. Bride price, blood money and other social transactions were calculated in currency of camels. **(khalaf ,1999).**

Camel racing is a deep rooted traditional sport that finds its origin in the desert culture of the Arabian Peninsula, North Africa and Middle East. It is closely associated with the unique heritage of the

Arab countries and the traditional life style of Bedouins.(**Al-Juboori ,2013**).

In recent years, there has been increasing interest in camel racing in the Arabian Gulf countries. The sport of camel racing is developing more along the lines of thoroughbred horse racing. Racing camels usually join the race events according to their age, sex, breeds, owners and distances. The distance of an official race is between two and twenty km. (**Tharwat ,2013**).

Since the 1960s. And during the past three decades in particular the people of UAE have seen dramatic changes. These developments have provided them with all the benefits of a modern developed society. At the same time, however , both government and people are determind that their heritage shall be preserved, in line with **H.H.Shikh Zayed Bin Sultan Al-Nahyan** belief that “ *a people that knows not its past can have neither a present nor a future*” by holding on to their heritage , the people are able to draw upon their confidence in their past to overcome the challenges of the present and future. Changes to camel racing from a traditional Bedouin challenge to organized sport began in 1980 from within Unitd Arab Emirates. The emergence of a substantial cash price for the winner is the important development that began these changes. (**Al- Mansoury ,2004**).

According to Food and Agricultural Organization (FAO) statistics (2013), there are more than 27million one humped camel in the world, From which there are approximately 20.000 racing and 50.000 breeding camels in the Unitd Arab Emirates (UAE) alone.



There is a demand for fast racing camels in the United Arab Emirates (UAE). The traditional Arab sport of camel racing is today an industry, which has created a whole new profession in camel breeders, trainers, nutritionists, veterinarians and researchers in emirates. It is estimated that some 120000 people are directly employed in activities directly connected with camel racing. **(khalaf,1999)**

Development of camel industry in the United Arab Emirates, new techniques of veterinary care like embryo transplantation, animal diets ..etc., has put the United Arab Emirates in the front of the international scientific agenda. It has also contributed significantly to global knowledge not only in veterinary medicine but also dietetics and other related areas. **(Al Mansoury ,2004).**

Racing camels are bred for speed and require special diet to cope with the energy demand of racing. **(Fowler ,2010).**

Little work has been undertaken to date on metabolic & physiological demands of racing camels. Most of owners depend on traditional programs of feeding & feed stuffs as hay, green alfalfa, barley and it's very common to feed them dates, honey, olive oil, milk, eggs and some other herbs. This is believed to increase both physiological and physical performance of the animal. **(Omar *et al.*,2008).**

Feeding, watering and training are performed to the camels daily in controlled programs to reach maximum physiological & physical performance. It requires high levels of energy to meet the short term, high energy demands for explosive exercise for short distances. **(Wardeh ,1996).**

Although the physiological adaptations of the camel have been studied extensively, changes associated with exercise were largely ignored until relatively recently, now the desire to breed and train faster camels has led to research projects along the lines of those used to improve the human and equine athlete. **(Higgins *et al*,1992).**

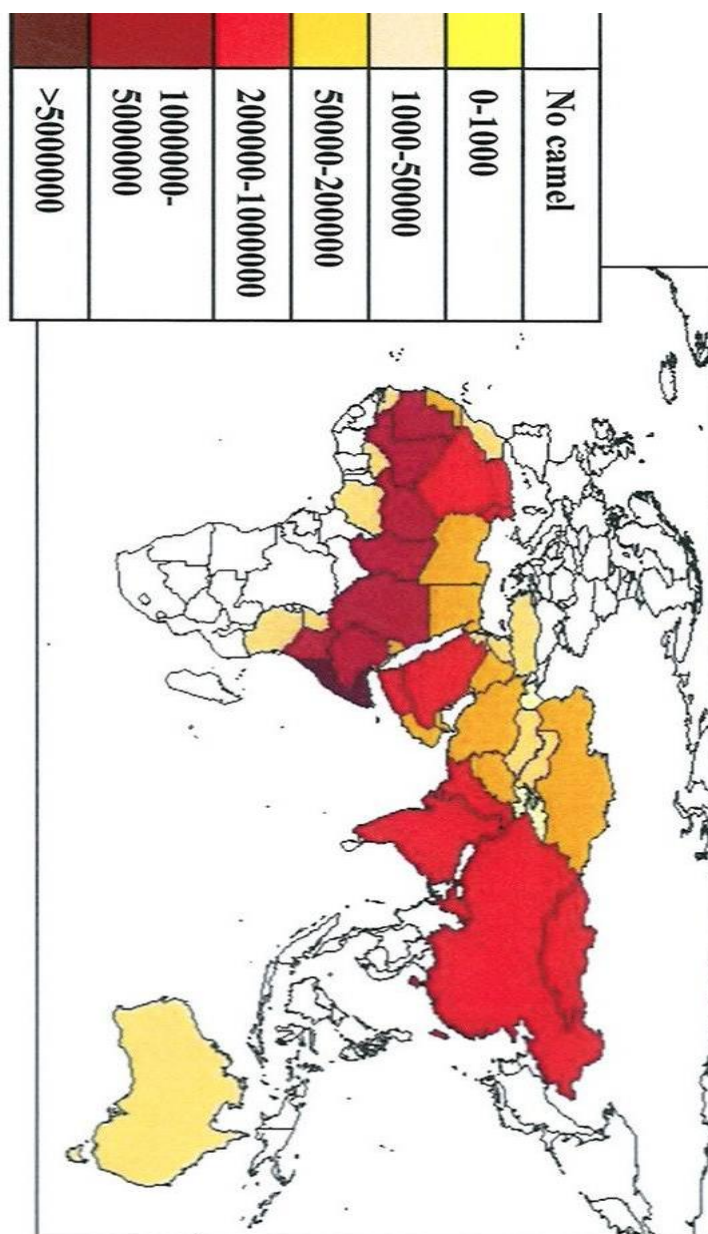
The trials and challenge to achieve maximum performance of the racing camels from natural sources never stop in an attempt to eliminate the use of doping medications which are completely forbidden according to the legislations of racing camels high committee. **(Al-Mansoury 2004 ) .**

**Dates** and **honey** are examples of these natural sources traditionally used in the race camel feeding regimen in attempt to increase the general health state of the camel and its performance in the race .They are included in detail in this study.

Blood parameters which can be affected by the nutrition and activity have been found useful in evaluating a camel's fitness to compete, as well as the health status and also for diagnostic purposes. **Barakat (2006).**

**Table (1):** Camel world population according to **FAO** Bulletin of statistics 2013.

Country	Number (1000 )	Country	Number (1000 )
<b>Africa</b>		<b>Asia</b>	
Somalia	7100	Pakistan	1008
Sudan	4787	India	380
Kenya	3100	UAE	366
Chad	1500	Saudi Arabia	265
Mauritania	1500	Afghanistan	170
Mali	978.98	Oman	135
Ethiopia	925	Qatar	66
Algeria	344	Iraq	65
Egypt	142	Syria	53.383
Djubouti	71	Jordan	13.5
Libya	57.5	kuwait	12
Africa total	23002.748	Asia total	3978.937
<b>World total</b>		<b>27,010,350</b>	



**Plate (1):** Camel world population according to FAO Bulletin of statistics 2013.

## **Aim of the Work**

Aim of this study was to evaluate the effect of using some natural feed stuffs (dates and honey) on:

- Hematological and Biochemical profile of racing camel.
- Some behavioural patterns of race camel (feeding and eliminative behaviour).
- Performance of racing camel in the form of speed.

## **Review of literature**

The available literature will be presented under the following headings:

- 1- The Camel Racing Industry in UAE.**
  - 2- Feeding and Nutrient Requirements of Race Camels.**
  - 3- Behavioural Patterns of Race Camel.**
  - 4- Physiological and Biochemical Parameters of Race Camels.**
- 

### **1- The Camel Racing Industry in (UAE)□**

#### **1.1. Camel Racing Organization :**

The camel racing association (CRA) of the UAE was registered on 25 October 1992 with the ministry of Youth and Sport. The Association (CRA) become confirmed its legal status since this age as a big organization for camel racing in the world. Rules and regulations have been set for trainers, jockeys and racing camels. In addition, racing arenas have been defined, prepared and organized. This has provided the context for generating developed and organized training with up-to-date technologies.

**Al-Mansoury (2004)** mentioned that, according to the camel racing association (CRA), the first three winning camels in a race must undergo tests to prove they had not been given any stimulant doping substances. And in case of the test being positive, the owner is not allowed to take part again in the season's race. The trials and challenge to achieve maximum performance of the racing camels from natural

sources never stop in an attempt to eliminate the use of doping medications which are completely forbidden according to the legislations of racing camels' high committee. (CRA) holds regular meetings with camel owners, trainers and veterinarians on drug abuse in camel races. It publishes a regularly updated list of prohibited drugs and the penalties involved in case of drug abuse.

### **1.2.Racing Season**

In the last 10 years, however, a more formal structure to racing has been established within gulf communities, the racing season starts in October and extends to mid April. Races are held over distances up to 10 km. speeds in the order of 11m/sec. may be attained in the first 1 to 2 km. most camels gallop initially, and then generally change to a pace. In Saudi Arabia, races are held over distances of up to 20km. (Higgins *et al.*,1992).

### **1.3.The Race Prizes**

The race prizes are clearly one of the most attractive aspects of camel racing and camel ownership. Prizes are given at the end of every heat. They are collected in sealed envelopes from a specially designated cash counters. Prizes up to 2500 dirhams are given in cash. Later awards are transferred in the form of cheques. There are 3332 races in racing season (October – March). Prizes are awarded to the first ten winners of every race held. Thus 33320 prizes are distributed by the CRA. Their values varies from 500 Dh to 15000000 Dh in cash . this dose not include golden swards and golden daggers and cars , which are given in addition to cash prizes. (Al-Mansoury ,2004).