



camelicious!

Intensive camel farming, mechanised milking, camel milk chocolate, strawberry flavoured camel milk, frothy camelcinos are the result of an ambitious project deep in the Dubai desert. We uncover innovative projects for old world camelids.

Photos: Alicia Sully



THE DELEGATES AT THE HOUSTON CONFERENCE were promised a piece of camel milk chocolate, shaped like a camel of course, and tasting, well, like chocolate, if they survived Dr Peter Nagy's lectures on embryo transfer in camels and the use of ovarian synchronisation protocols to improve pregnancy rates.

Dr Nagy obtained his veterinary degree at the University of Veterinary Sciences in Budapest in 1990 where he stayed until 1999 as an assistant professor. From 2000 to 2002 he worked in the Sultanate of Oman to develop artificial insemination and embryo transfer programmes in dromedary camels. He has been in Dubai since 2003 to develop and manage the world's first large scale camel milking farm where he has the farm manager position at present. He is a founding member of the European College of Animal Reproduction and his team carried out the first successful embryo transfer in horses in Hungary in 1996.

Emirate's Industry for Camel Milk and Products, trade name Camelicious, runs a

herd of 2,500 camels and has everything from a mechanised milking dairy to camel milk processing, testing and distribution under one roof. It is owned by Sheikh Mohammed bin Rashid Al Maktoum, ruler of Dubai, and produces some 4,500 litres of camel milk a day.

Camel milk has to compete with cow's milk which is extremely popular, with one farm in the United Arab Emirates planning to import 3,000 calves from Holland this winter. Cows produce a calf every year and 40 litres of milk a day whereas camels produce a calf every two and a half years after a thirteen month pregnancy and on average produce between 5 and 10 litres a day whilst a few produce over 20 litres a day or continue to lactate for more than 700 days. Cows have to be kept in air conditioned sheds or sprayed with a cooling mist because of the intense heat in an area short of water whereas camels are adapted to the desert.

The aim of the study by Dr Peter Nagy, Dr Judit Juhasz and Dr Lulu Skidmore was to increase the number of offspring by superovulating high producing dromedaries

during lactation and to transfer embryos into low producing recipient camels.

Ten, eight to fifteen year old, high producing lactating dromedaries were selected as donors at the end of the breeding season and were milked by machine twice a day. Donors were induced to ovulate with Receptal and on Day 4 after ovulation they were treated with a combination of Folligon and Folltropin in declining doses over a period of four days. Donors were mated to a fertile bull twice twenty four hours apart when the follicles reached 10 to 15mm in diameter and embryo recovery was carried out on day seven after ovulation. The embryos were transferred non surgically into recipients that had been induced to ovulate one day after the donors and pregnancy was diagnosed by ultrasonography and serum progesterone determination at 14, 21, 35, 60 days and five months. Superovulation was successful in nine out of ten camels resulting in 56 embryos recovered with a significant variation in the recovery rate of between 12 and 76%. Embryos were transferred into 46 recipients, 36 single



and 10 twin transfers, and the pregnancy rate at 14, 21, 35, 60 days and five months was 47.8% (22/46), 43.5% (20/46), 39.1% (18/46), 34.8% (16/46) and 32.6% (15/46). Pregnancy loss between 21 to 60 days was 20%.

This is the first report in which high producing lactating dromedaries were selected as donors for an embryo transfer programme. The authors concluded that assisted reproduction has great potential and an indispensable role in accelerating genetic improvement in the dairy camel industry.

Fourteen calves have been born and another 50 surrogate camels are currently pregnant. It has not been proven yet whether, like other animals, high milk producing camels' offspring will produce similar amounts of milk. The calves have to grow up first.

For the past 20 years camels have been selectively bred in the United Arab Emirates for racing. It is an extremely popular sport and customised tracks have been built throughout the country for the racing season that runs from October to April. Top speed for a racing camel is 40mph for short distances, they can run at

18mph for one hour or 7mph for up to 18 hours.

Farm manager Dr Peter Nagy says that they have milk producing camels from different regions of the world and their milk production average is the same, therefore camels have never been selectively bred for milk production.

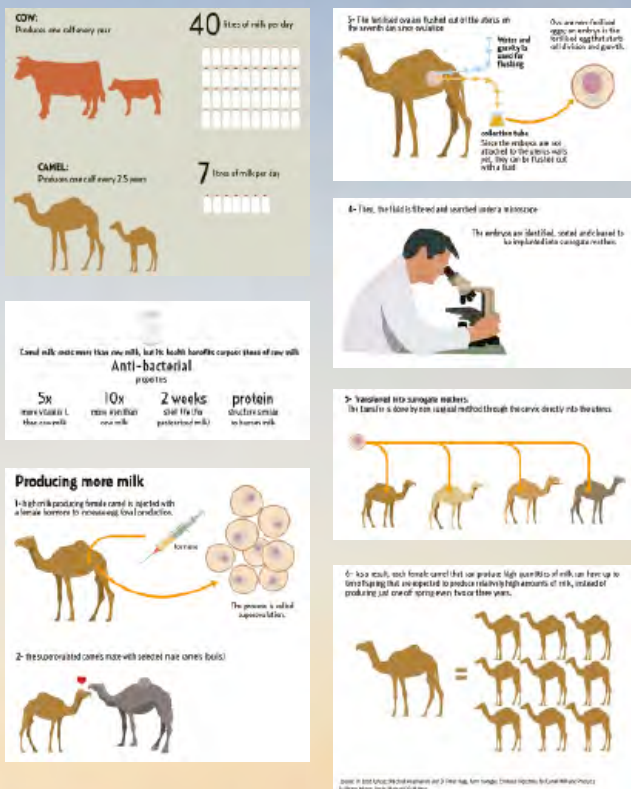
Camel milk does have great advantages. It contains five times more Vitamin C than cow's milk, ten times more iron, a shelf life of two weeks for pasturised milk and its protein structure is similar to human milk. Research at the Central Veterinary Research Laboratory in Dubai indicates that drinking half a litre a day provides the recommended daily amount of Vitamin C and that it is ideal for people with lactose intolerance or allergies, aids cardio-vascular functioning and can lower cholesterol. It has always been a staple of the Bedouins and was used by women for its anti-ageing and natural healing properties.

On farm the camels are trained to twice daily file into specially designed pens and allow themselves to be milked as the goal is to have relaxed and easily handled animals. In the farm compound calves are kept in pens



close to their mothers and there is also a four kilometre walking track as camels are naturally free roaming animals.

Camelicious is also attempting to bring back a camel milk drinking practice, that was almost lost due to urbanisation, by introducing camel milk into schools. The possible expansion of products made from camel milk includes cosmetics, cheese, ice cream and milk powder. ●



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