

Analysis of the Prophet Saleh in Al Quran through the food Science Approach to the Miracle of She-Camel

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ABSTRACT

The analysis of the story of Prophet Saleh in the Qur'an through a food science approach in relation to the miracles/clear proofs of she-camels, aims to study the nature of she-camels and the physical chemical composition of camel milk and the benefits and advantages of camel milk as a miracle/clear proofs to prove the truth of God's word. Based on scientific analysis, camels are the most superior animals, can be used as a means of transportation, meat can be consumed, skin, fur and milk can be used. The she-camel can meet the drinking needs of the Thamood. The she-camel can meet the drinking needs of the Thamud. It is also a miracle from God. Another proof is that camel milk has advantages over milk from other livestock, its nature is close to breast milk. Camel milk is the same as breast milk does not contain beta lactoglobulin which is an allergen compound, contains immunoglobulin and lactoferrin as antioxidant compounds so that it can reduce degenerative diseases (diabetes, cholesterol, high blood pressure and so on). The form of small fat globules will be easier to breed than other milk. Based on the description above, the superiority of camel milk proves that something that Allah has revealed is the best for human life. And also prove that the she-camel in the time of Prophet Saleh was Allah's chosen animal as a miracle given to the Prophet Saleh, and as proof that Prophet Saleh was the Messenger of Allah.

Keywords: Saleh Prophet, she-camel, food science

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INTRODUCTION

In education method there are teaching method and methods of education. Teaching methods are ways used by educators so that the message of the subject matter understood by students effectively and efficiently. The story method (qashash) can mean teaching and education methods. This method often used in Islamic education, because Quran contains many stories. The story in the Qur'an is stronger because of consistency and without contradiction, it's certainly true because it comes from Allah swt. Allah mentioned the difference in the story of the Qur'an with the Arabian stories, that the Qur'anic story is true and real which is told in a good method. In the Suras of Yusuf/Joseph (12:3): We narrate to you the most accurate history, by revealing to you this Quran. Although, prior to it, you were of the unaware.

The story in the Quran based on Ayyub Dakhilullah (1999), as a means to achieve religious goals. According to the Qur'an Suras Yusuf (Q. S. Yusuf/12: 111), one of benefits of the story in the Qur'an is as a lesson for knowledgeable people. Many of the leaders who sought to express their thoughts in Islamic studies. The method used is diverse, some use analysis of history, language, culture, and some analyze in terms of science or science (science). Story method or qashah has been used by Islam in education, so it can be a method in education to achieve goals.

The purpose of this paper is to study the story of the Prophet Saleh with Camel milk as a miracle from Allah in the Qur'an, and study the chemical composition of Camel milk compared to milk from other livestock, and discuss the benefits and advantages of Camel milk as a miracle to prove the truth of Allah's word.

STORY OF SALEH PROPHET AND THE THAMOOD

History of The Thamood

The story of The Thamood is in 12 suras in Quran Al A'raf verse 39, Hud verse 52, Ibrahim verse 72, Al-Hijr verse 54, Al-Isra' verse 50, Fushilat verse 61, Al-Dzariyat verse 67,

Al-Najm verse 23, Al-Qomar verse 37, Al-Haqqah verse 78, Al-Fajr verse 10, and Al-Syam verse 26. From these letters the story of Thamud is told in an interrupted manner and the story repeats. Some are repeated in detail, there are also told pieces of the story to become lessons. The full story is told in surah Al-A'raf verses 73-79 (Dalimunthe S.S. 2016).

In about 2000 years ago, the Thamood have established a kingdom with other Arabians, namely Nabatea, lies from Petra's capital in Jordan in the north to Madain Saleh in the south. The possibility of the Thamood came from South Arabia, who lives on the slopes of Jabal Athlab. Recent archaeological studies reveal that a large number of inscription and images of the Thamoods are not just in the Jabal Athlab, but also throughout Central Arabia.

Petra Valley in Jordan is a city that became the center of trade as well as capital city of the Nabataean kingdom. The Nabateans controlled spice trade, especially between Eastern and Rome, The Greek and Egyptians kingdom. The Nabateans wealth from their ability to find water sources and how to save water. Abilities that are very helpful for life in the desert. Researchers at that time found over 200 sculptured rock water reservoirs and more than 130 wells.

The Buildings in Madain Saleh showed how sophisticated the knowledge and technology of the Prophet Saleh was at that time. Archaeologists mention the Nabataeans the most talented people in history with their extraordinary achievements from agriculture to technology, from architects to art. Their ability in terms of urban planning architecture also results innovations in irrigation, transportation and storage systems (Marwan. 2012)

Prophethood of Saleh

Thamood in his prosperous life did not lack anything. But the character possessed deviates far from the truth, acts immoral and damages on the face of the earth. They no longer knew Allah as the creator of all creatures because their hearts were covered with abundant wealth. Because

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of the destructive character, Allah sent a prophet to fix it, namely Prophet Saleh. The Prophet Sholeh had a bond of brotherhood with the Thamood. Even so, he never went to devoted statue since he was a child. The sending of the Prophet Sholeh is strengthened by the word of Allah in Surah Al-A'rof verse 73 which means: "And to Thamood, their brother Saleh. He said, "O my people! Worship Allah: you have no god other than Him. Clarification has come to you from your Lord. This she-camel of Allah is a sign for you. So, leave her to graze on Allah's earth, and do her no harm, lest a painful penalty seizes you."

After Allah raised him to be a Prophet and apostle, Prophet Saleh straightforward persuade all of the Thamood to leave worshipping idols, and to prostrate to Allah swt. But the challenge of his people demanded evidence to him in the form of miracles. It aims to eliminate his influence and erode his authority over his people if he failed to meet their challenges. Prophet Saleh countered the challenge by demanding a promise if he succeeded in bringing the miracles, they requested so they would leave the religion and offerings to idols and would follow Prophet Saleh and believe in him. And acknowledge that Allah is Almighty God. Then He begged from Allah with His power to create a she-camel. The she-camel can meet the drinking needs of the entire of the Thamood.

With the success of the Prophet Saleh brought the miracles they demanded, then the leaders of the Thamood failed in their efforts to impose honor and eliminate the influence of Prophet Saleh on the contrary it has increased the confidence of his followers and disappeared many doubts from his people. So, they conspired to kill the Camel. Four days later Allah revealed his punishment to the Thamood. Allah says in the Suras Al-Qamar [54]: 27: *We are sending the she-camel as a test for them; so, watch them and be patient.*

A day before punishment with the permission of Allah, Prophet Saleh along with the believers of his followers went to Ramlah, a place in Palestine, leaving Hijir and its inhabitants, The Thamood perished, struck by a powerful thunderbolt along with a terrible earthquake.

From this story, it can be believed that the camel created by Allah and the milk produced is consumed by humans, certainly has advantages for human life. If at that time all the needs of the people of Thamood were sufficient, everyone, old or toddler candrink it, no side effect. Allah is the best Giver for His servants.

CAMEL AS A MIRACLE

In the Quran it is state in Suras Al-Ghasiyah that Allah wills human pay attention how Allah create Camel.

Do they not look at the camels—how they are created? (Qs.al-Ghasiyah [88]: 17).

It is very interesting how Allah chose camels to be studied more deeply by humans. At the time of the Prophet Saleh the she- camel was the most useful livestock, so that it is fitting for this animal to be a miracle as proof of Allah's

power. The camels as transportation, produce meat, produce skin and fur, and can produce milk.

In Suras Ash-Shu'ara' [26]:155: *He said, "This is a camel; she has her turn of drinking, and you have your turn of drinking—on a specified day.*

From this verse, it can be interpreted that camel needs a lot of drinking waters. Camels can drink 100-160 liters of water at a time in just 10 minutes. The water drunk by camels flows in the blood vessels. Hemoglobin in red blood cells has hydrophilic properties (attracts water), so that drinking water in the body is absorbed immediately, and hemoglobin expands. Camel hemoglobin is also hyperhydration, so camels avoid osmotic problems (Anonymous. 2015).

Camels can produce milk up to 20-40 liters per day. Even at the time of Prophet Saleh, camels were able to provide for Thamood's drinking water. The amount of camel milk production depends on the type of camel. There are 2 type camels, one humped camel (*Camelus dromedaries*) that live in desert regions in West Asia and Africa, and two humped camels (*Camelus bactrianus*) that live naturally in Central and Eastern Asia (Berhe. Et al. 2017).

MILK AS FUNGSIONAL FOOD

In the development of food for decades, consumers have chosen healthy food, including functional food (Viera da Silva, et al, 2016). Milk has a prospect in the development of functional food, because it has a composition needed by humans (Kamal and Karoui, 2016). Functional Food can be improved by lactic acid bacteria fermentation processes and other processes (Soleymanzadeh. Et al. 2016). Cow's milk ranks first for consumption compared to other types of milk. But with the problem on cattle farming, cow's milk becomes expensive and this encourages the use of other milk to be consumed, and it turns out milk other than beef can actually eliminate allergic complications caused by cow's milk in some people (Alhaj et al. 2013).

Alternative milk which is widely used today is goat milk, buffalo milk and camel milk. From the alternative milk, camel milk has better prospects in terms of its functional properties. In recent years camels have begun to be bred and it is estimated that around 18-25 million camels, but until now there has not been much research on camel milk and the development of its use and commercialization (Al-Zoreky & Al-Otaibi. 2015). Camel milk has high nutrition and also has high functional food properties (Bai & Zhao. 2015).

Milk consist fat, protein, lactose and mineral. Of several types of livestock such as camel milk, cows, goats, sheep have almost the same proportion, but for breast milk the fat, protein and mineral content is low, but the lactose content is high. Likewise, functional properties, molecular structures are also different, camel milk has functional properties similar to breast milk and different from other animals (Berhe et al. 2017).

Table.1. Chemical composition of camel milk and other livestock

Species	Total Solids (%)	Fat (%)	Protein (%)	Lactose (%)	Ash (%)
Camel ^{a)}	12.95	4.2	3.27	4.31	0.75
Cow ^{b)}	13.30	4.14	3.48	4.70	0.71
Goat ^{b)}	12.65	4.04	3.32	4.27	0.83
Sheep ^{b)}	17.65	7.5	4.02	5.02	0.80
Human/Mother ^{b)}	1.53	4.17	1.11	7.12	0.21

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Source: ^{a)} Al Haj and Al Kanhal (2010)

^{b)} Fox et al. (2015)

ADVANTAGE OF CAMEL MILK

In the days of Prophet Saleh alaihissalam, the miracle of camel milk can supply drinks to the people of Thamood. And today, camel milk in the form of original and fermented food, can be an important product for supplying nutrients and energy needs of rural population in arid regions of Africa and the Middle East (Shori. 2012; 2015).

The chemical composition of Camel milk from several studies is not much different. According to Faye et al (2008) Camel milk fat is 5.94%, 4.76% protein, 3.12% lactose and 1% mineral. For fat of goat milk 7.9%, protein 3.9%, lactose 3.7% (Raty et al. 2017). Whereas according to Walstra et al. (2006) cow milk contains 2.5-5.5% fat, 2.3-4.4% protein, lactose 3.5-5.5%, mineral 0.57-0.83%. These results indicate that milk characterization is influenced by milk frequency, age of livestock, number of children born, number and type of food given, and amount of water consumed.

Camel milk contains a number of vitamins, especially thiamine (Vit B), riboflavin (B2) and ascorbic acid (vit C).

Availability of Vitamin C of camel milk is quite large (24-52 mg / kg), almost 5 times milk and 1.5 times breast milk. This is very beneficial in dry areas, where forage foods are not easily accessible (Zhao et al., 2015; Ziane et al., 2016). Likewise, the mineral content of camel milk is very similar to breast milk, so it is very possible to provide mineral nutritional needs for humans (Yaqoob & Nawaz. 2007).

Lactose is a sugar that requires the lactase enzyme in digestion. The older human the fewer lactase enzymes. The highest lactose content in breast milk, so breast milk is only suitable for babies. But camels, cows, goats and sheep have almost the same level of lactose. Lactose in milk decomposes very quickly into lactic acid. In general, milk is alkaline, but quickly becomes acidic with increasing lactic acid. Usually after 2 hours lactic acid becomes 3% and after 6 hours becomes 14%. The nature of fat in camels and goats' milk is difficult to separate from the protein, so camel milk emulsion is more resistant than cattle and buffalo milk.

Table 2. Functional properties of proteins in camel, cow and breast milk

	Camel Milk (%)	Cow Milk (%)	Breast Milk (%)
β-lactoglobulin	Td *	1.3 ***	Td ****
α-laktalbumin	5.0 *	1.2***	1.8****
Serum albumin	2.4 **	0.4***	0.5****
lactoferrin	0.22 *	0.14***	1.5****
Immunoglobulin	0.73*	0.7***	1.2****
Globula Size	3.2-5.6*****	4.3-8.4*****	

Source *) El-Agamy. 2008

**) El-Hatmi et al. 2006

***) Maduraira et al. 2007; Inglingstad et al. 2010

****) Malacarme et al.

*****) Meena et al. 2014.

Based on Salam and El-Shibiny (2013) and El-Agamy (2009) from the research, camel milk has anti-allergic, antimicrobial and anti-diabetic properties. Another advantage, camel milk and breast milk (ASI) does not contain beta-lactoglobulin. While cow milk contains beta lactoglobulin 1,3%. Beta lactoglobulin is an allergen compound which is often referred to as a trigger for allergic reactions such as asthma, respiratory tract damages, inflammation of ear inflammation, eczema, redness of the skin, and food indigestion.

Camel milk contains antibodies and immunoglobulins as well as cows and the highest ASI, which can strengthen the body's resistance from various disease attacks and the arrival of foreign particles into the body. Basic function of I, unoglobulin is to protect the body from autoimmune disorder, allergies, and several threats from bacterial, fungal, and viral infections.

Lactoferrine is antioxidant compounds that strengthen the function of the immune system. The content of lactoferrin in camel milk is 0.22%, cow milk is 0.14 and breast milk is 1.5%, breast milk is very high. Lactoferrin in the digestion will immediately decompose (hydrolyzed), in breast milk when there are not many enzymes available in the baby's digestion, milk with high lactoferrin content is the solution (Sinya, H. 2010). The content of lactoferrin in camel milk higher than cow milk.

The older humans diminish lactose hydrolysis enzymes, they are better off drinking animal milk with high lactoferrin, including camels than breast milk.

Milk is liquid in the form of oil emulsion in water, and protein as its emulsifier or as an emulsion stabilizer. Oil or fat is a globule, and the globule is surrounded by proteins to protect it from water, so the emulsion is stable, the smaller the fat globule the stronger the emulsion stability. Milk globule very influential on the decomposition process in digestion. The smaller the globule, the easier it is to digest. Camel milk has smallest globule than cow milk and other livestock milk, such as goat 3,5-7,0; cow 4,3-8,4 and buffalo 5,6-13 (Meena et al. 2014).

CONCLUSION

As an Al-Quran method for conveying Allah's messages, story analysis is an effective medium to convey scientific values in the perspective of the Quran contained in Allah's message in the form of the story. In the scientific perspective in the Qur'an, the statement of the verse which contains the story of the Prophet Saleh has a thought process using perception. Those perception based on science or relationships obtained by deducing data and interpreting messages.

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From the story of the Prophet Saleh, it can be concluded that the miracle revealed by Allah for proof as a Prophet was a she-camel. Based on science analysis, camel are the most superior animals in several aspects. In the desert, the most beneficial animals are camels, can be used as transportation, the meat can be consumed, the skin and fur can be used, the milk can be consumed. Camels produce milk as much as 20-40 liters/day, and she-camels when the Prophet Saleh certainly more, because it can meet the drinking needs of Thamood. It is a miracle from Allah. Another proof is that camel milk has advantage than other livestock, its nature is close to breast milk. Breast milk same as breast milk does not contain beta lactoglobulin which is an allergen compound, contain immunoglobulin and lactoferrin as an antioxidant compound so that it can reduce degenerative diseases (diabetes, cholesterol, high blood pressure and so on). Based on description above, camel milk has advantage over other milk. This proves that something Allah has revealed is the best for human life. And this proves that she-camel in the time of prophet Saleh was Allah's chosen animal as miracle given to the prophet Saleh, and as proof that prophet Saleh was the Messenger of Allah.

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