

How Ancient Egyptians Fed their Animals

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Abstract

The first efforts to discover the secret of nourishing the body were in ancient times, and the search has continued since this time. In the first century B.C. Egyptians believed that excessive eating was the cause of many diseases. This concept was valid for both animals and man, as well.

The ancient Egyptians guided their herds to the open fields to graze. They planted wheat, barley, linen and many other types of seeds for their own use and the not used parts were given as food to their animals (seeds were found in the tombs of Meer from the 4th dynasty, Tut Ankh Amon from the 18th dynasty, Der Al-Madina from the 18 - 20th dynasty). Bean was found in Sahura pyramids (15th dynasty). Clay and oats were also cultivated to feed the animals (seeds were found in Isis Temple from the Greek-Roman times).

Forced feeding was also known to Ancient Egyptians for some animals as pigs and hyenas and for some birds as cranes and geese. Diseased animals received health care and treatment and were also supplied food by hand.

No doubt that the healthy and well-nourished animals are of great number. They are depicted by the ancient Egyptians on their temples which reflects a very good system of feeding, watering, managing and curing of their animals, although the feeding stuffs with its modern and scientific definition were not be defined yet.

Many articles and 11 photos dealing with animals feeding topic were compiled and cited in this work.

Keywords: *Ancient Egyptians; Feeding; Animals*

Introduction

Feeding or nutrition is the science of nourishing the body. Feeding substances for this purpose are supplied by food. Food is the substance which after taken by humans or animals is capable of being digested, absorbed and utilized.

The secret of nourishing the body was discovered in ancient times, and the search has continued since this time. In the first century B.C. Egyptians believed that excessive eating was the cause of many diseases. This concept was valid for both animals and man, as well.

The food of domestic animals consists of plants and plant products. However, animals were sometimes fed on foods of animal origin such as fish meal and milk. Animals depend upon plants for their life and consequently studying of animal nutrition should begin with these plants.

Now it is well known that both plants and animals contain the same types of chemical substances which can be defined as water and dry matter. The dry matter is either organic (carbohydrates, lipids, proteins, nucleic acids, organic acids, and vitamins) or inorganic (minerals). Of course, the Egyptian farmer did not know this scientific classification, but he fed his animals with balanced rations depending on the inherited experience from his forerunners (as mentioned by Herodotus). The results of this balanced rations are reflected on the healthy condition of the animals depicted and recorded in the temples (Figure 2 and 9).

Feeding animals in ancient Egypt

Ancient Egypt's economy depended on agriculture, and most of the farmers depended on the Nile. In addition, the river's waters and marshes were a source of fish and birds, important parts of the ancient Egyptians' food. The fertile soil left by the Nile's flood every year provided the means for growing many types of grains, vegetables and fruits. Emmer (a type of wheat) and barley were two important crops used to make bread and beer, the main source of food. After harvesting the crops, the same fields used as grazing areas for herds of cattle, sheep, and other animals, which in turn served as sources of meat and dairy products for humans.

During the Pharaonic times, grasslands were usually situated in areas where enough water found to support a nutrient-rich flora, such as the uncultivated areas of the Nile Delta and along the borders of the agricultural lands which are not irrigated. Owing to the unstable rainy seasons of ancient Egypt climate, the productivity of grazing land may be varied, from year to year which may reflect a sort of shortage in the usable crops. Consequently, a grazing policy developed early which is mixing a system of penned animal breeding (recently called Animal Feeding Operations "AFO" or factory farming) and range herding.

Actually, this system probably developed out of the drying climate of Egypt. Before the prehistorical times, Egypt was a somewhat humid climate, and considerable range land for cattle may be existed. Some of the most recent investigations suggest that during prehistory, the Egyptians spent part of the year in the Nile Valley, and part of it in the savannahs that are replaced by desert, range feeding their cattle. By drying up of the deserts, there would have been more need to develop stable agricultural practices. Hence, while cattle were an important part of the historical period, they were perhaps more so in earlier periods.

As cattle were well known in ancient Egyptian history, the herdsmen were obviously educated in their care and maintenance. Certain oxen were kept for breeding purposes which show their awareness of basic breeding practices, and we also know that they understood how to assist the cows to feed its calves. Moreover, the Kahun Papyrus also deals with cattle diseases, which provides evidence that some physicians also were aware with veterinary skills. Many of the priests associated with the cult of the goddess Sekhmet were medical physicians, but we are told that they also "knew cattle".

The herdsmen were responsible for the care of cattle, and it was their job to supply the animals with plentiful and properly balanced food and also the water offered is enough and clean. Cattle were allowed to graze in open fields whenever possible. Of course, in the open range, cattle could become mixed with those of another owner, and therefore it became necessary to find some form of identification. From the excavation of a 26th Dynasty animal cemetery, some authors believe that one means of identifying ownership was to etch or mark the horns of cattle. However, branding scenes are known from several Theban tombs (Neb-amun and Nefer-hotep), as well as from the Varzy Papyrus, and branding was probably a more effective means of identification practiced by large estates and temples (Figure 1). The Varzy Papyrus tells of a man who apparently was involved in cattle rustling, who placed his own brand over that of the true owner.

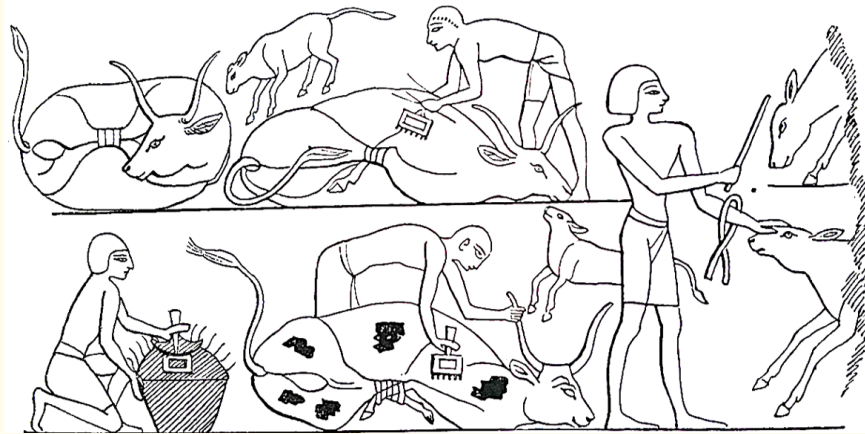


Figure 1: Branding cattle with brass stamps. Tomb of Neb-Amon, the 18th dynasty [5].

Herdsmen tended to the cattle, and grazed them in the Nile valley during the winter months, but they generally moved the cattle to the Delta during the hotter, summer months. Sometimes the herds have to cross marshes or rivers (Figure 2). The cattle seemed too often are called names relating to the goddess Hathor - "Golden One", "Shining One" and "Beautiful" are some examples.



Figure 2: Pheasants crossing a shallow canal, (Tomb of "Ti" from the 5th dynasty).

The Song of the Herdsmen [1]

You have goaded the oxen on all the roads.

You have walked over the sand.

Now you are trampling on the grass.

You are eating the rich plants.

Now you are sated.

May it become your bodies well.

However, as time progressed, the Nile Valley became more and more cultivated, decreasing the open range where cattle could feed. Hence, keeping cattle by means of ropes fixed to pierced stones, trees or stumps became more necessary. This also necessitated providing the cattle with supplemental rations such as protein and amino acids. Tomb depictions, denoted hand feeding of the cattle fresh green plants and bread dough, which became important supplements in the dry season or anytime when green grasses became unavailable. This supplemental ration provided necessary minerals and proteins that dried grasses did not. However, it must be noticed that such feeding, though a good supplement for range fed cattle, was not practiced for all cattle. Evidence suggests that at least some cattle herds were driven to better pastures in the marshlands of the northern Delta.

Cattle, were used for both food, and for sacrifice. Depicting some fatty bulls with pendulous bellies, may reflect fattening process for a specific purpose, such as ritual sacrificial offerings. It is worthy to mention that the Ancient Egyptians are the first in practicing bull's castration in special places, may for the sack of fattening them and for enhancing the process of fattening, a fact which is proved recently.

Feeding stuff

The rations given to the animals consisted of one or more than of the following plants and plant products:

- Wheat (*Triticum vulgare* L.) (at first emmer and since Ptolemy II, 3rd century BCE, a more modern, naked sort is introduced, {samples are kept in the Agricultural Museum in Cairo} (Figure 3a and 3b). The corn was pounded by men to make a fine grain. The bran was separated and used as animal feed. It's rich in mucilage, starch, tannins, Tricine [11].



Figure 3a: An early botanical collection. Strange plants and seeds brought back from Syria by Thothmes II, as they were carved on the walls of the temple of Karnak, Egypt, ca. 1450 BC.



Figure 3b: Botanical Garden-Relief of Thutmose III. Festival Hall of Thutmose III, in the Precinct of Amun-Re, Karnak, Egypt. Ca. 1450 BCE.
Photo by Solbaken, Wikimedia Commons.

- Durah (*Sorghum vulgare* L.), a kind of millet, were also used for feeding. It contains carbohydrates, protein and oil [11].
- Pellets from pressed olives (*Olea europaea* L.) used for cattle feeding were also used in feeding other animals. Samples were found in Kom-Oshiem (From the Roman times, about 30 B.C.). These pellets are kept now in the Agriculture Museum in Cairo. Olives contain oil with glycoside [11].
- Barley (*Hordeum species* L.) (Shair in Arabic) four sorts were identified and the seeds were found in Mermeda, Beni-Salama, Fayum, Badari (from the Stone Age). Seeds were found also in the tombs of Meer from the 4th dynasty, Tut Ankh Amon from the 18th dynasty, Der Al-Madina from the 18 - 20th dynasty. Barley contains protein, Hordenen, egg white, starch, fat, enzymes, Lecithin, Phytine [11].
- Bean (*Vicia faba* L.) was found in Sahura pyramids, from the 5th dynasty (Grivitti, *et al.*) and in the tombs of Hawara and Lahun in Fayum. Bean contains protein and oil [11].
- Clay and oats were also cultivated for the sake of animals, fresh called Bersem and dried as hay (Alfa or *Medica sativa* L.) seeds were found in Isis Temple from the Greek-Roman times, (332-640 B.C.). It contains seed sprouts are 93% water, 2% carbohydrates, 4% protein, and contain negligible fat. The seeds sprouts are a moderate source of vitamin C, some B vitamins, phosphorus, and zinc [14].
- *Lathyrus sativus* L. (or grass pea, Gilban in Arabic) remnants were found in Dahshur (Grivitti, *et al.*) and were used for animal feeding. The seeds contain protein and a neurotoxin that causes lathyrism, a neuro-degenerative disease, if eaten as a primary protein source for a prolonged period [14].
- *Carthamus tinctorius* L. (Quortum in Arabic) was pressed and the rest was used for animal feeding. Quortum seeds were found in Kom Oshiem (from the Roman times), While its blossoms found were related to the late times (712-332 B.C.). It contains carthanine, dyes, silica, egg white. Ferric acid and manganese [11].

Recently, many of the nutrients in the aforementioned feeding stuffs have been isolated and identified and are now available as pure chemical compounds added to the animal rations in different forms.

Forced feeding

It is generally accepted that geese were one of the first species of bird domesticated in history [2]. The first proof of geese being force-fed found painted in a tomb (2500 BC) in Saqqarah in Egypt. The details of these paintings show meal preparation and the force-feeding procedure. The responsible persons are seated, catching ducks and geese with their left hands and introducing food through the beak with the right hand. Cranes are also represented while being force-fed but, because they are taller birds, the feeding person keep standing (Figure 4). These depictions may proof that Egyptians were the first to perform force-feeding in history, a practice that lasted in this part of the world for more than 2000 years.

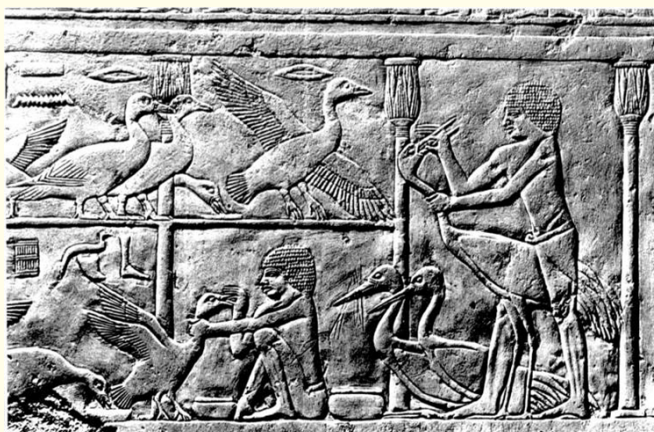


Figure 4: Force feeding a crane and a duck in a poultry yard. The operator is kept standing during Force feeding the crane. Force feeding was practised for both domesticated and captive species. They were then used for consumption or sacrifice.

Forced feeding were also practiced for animals as hyenas, pigs and Oryx (Figure 6 and 7) and for birds as cranes and geese (Figure 4 and 5). Sick animals received health care and were also fed by hand. Moreover, mouth feeding was also adapted to some pets (puppy or pig?) as depicted in the Tomb of Kagemni, Sakara (6th Dynasty) (Figure 8).



Figure 5: In the left bottom register of the stela above there is a man force feeding a goose to fatten it up (Chris Wells, 2017) [1].



Figure 6: Force feeding of a striped hyena (may giving medicine as pellet for a sick hyena!). Tomb of Mereruka, Sakara (6th Dynasty).



Figure 7: Force feeding of Oryx and geese. Tomb of Khnom-Hotep, Beni Hasan, Menia (12th Dynasty, about 1800 B.C.).



Figure 8: Mouth feeding of a small pig (may dog). Tomb of Kagemni, Sakara (6th Dynasty).

There are many depictions and paintings of animals being force-fed, among them cranes, hyenas and geese. Cattle and Oryx antelopes were fattened specially for the sake of sacrifice. The Harris Papyrus mentioned fattening-houses containing fat geese, and one wonders whether the ancient Egyptians knew how to prepare pâté de foie gras [2,3].

No doubt that the healthy and fat animals on one hand and the great number of them on the other hand (Figure 9), depicted, painted or figured by the ancient Egyptians on/in their temples reflect a very good system of feeding, watering, managing and curing of their animals (Figure 10). Although the feedings stuff with its modern and scientific analysis and definition were not be known yet.



Figure 9: Painted wooden model portraying counting and recording of a great herd of cattle belonging to the chancellor Meketre. Tomb of Meketre, (12th dynasty).



Figure 10: Model of a stable where cattle were kept (two views).

Source: *'La vie quotidienne en Egypte'* by Pierre Montet.

Conclusion

- For animal feeding, the ancient Egyptians practiced both the range herding and penned animal systems.
- They supplied green plants as well as the plant products and seeds as feeding stuffs for their animals.
- The Egyptian farmers practiced fattening the animals by castrating the bulls and by hand feeding and force feeding for both birds and mammals, and for both domesticated and captive species.
- They were aware with animal husbandry, watering, caring, managing and even keeping the psychological status (by washing, cleaning and singing) of their animals for the sake of higher productivity.

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