

Agriculture and the Pastoral Egyptian Heritage between Past and Present in a Comparative Study

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Abstract

Agriculture and the use of animals played an important role in the life of the ancient Egyptians, whether in terms of direct benefit from animal parts or labor or for protection. Thus, Egyptians assigned a large area of the images of walls of tombs to animals and agriculture. It is likely that these were thought to continue in the next world. Scenes of an agricultural or pastoral nature in tombs have drawn attention due to the ingenuity and the extreme accuracy of their depiction in these scenes, resembling a silent documentary film on the walls. This paper uses scenes from ancient Egyptian tombs to survey and describe agricultural practices in the daily life from the Old Kingdom until the beginning of the Greek rule. Qualitative and quantitative methods are employed throughout this study. Ancient and modern pastoral and agricultural methods and techniques are studied with a range many research methods, including descriptive, analytical, and comparative ones, and comparison shows that to a large extent, modern communities have maintained many ancient customs and traditions to construct their identity. This paper shows a continuity in cultural heritage in daily life from ancient times, differing mainly in the increasing use of technology.

Keywords: Agriculture Heritage; Pastoral Scenes; Calf Birth; Harvest.

Introduction

The first signs of agriculture in Egypt appeared in the late sixth century in the Nile delta, with introduced from the Near East, as a complement to the Neolithic way of life of hunting and gathering. The ancient Egyptians quickly learned how to choose crops, manage crops, and take advantage of yearly flooding of the Nile. Cereal cultivation is depicted in wall murals from this period, where workers use hoes and ox-drawn ploughs before planting and tamping down the seeds. Men are shown threshing grain with oxen or donkeys and using flint, copper, or bronze sickles to harvest. Grain was winnowed in

large fans and sifted further, then carried to granaries for measuring and eventual distribution, supervised by mayors and temple staff (**Katary, 2013**).

The Egyptians preserve their connection with agriculture and their reliance on agriculture and domesticated animals (**Table 1**) (**Brewer et al., 1904**), which are a focus of an agricultural society (**Saleh, 1962**). In addition to their use in agricultural work, including harvesting, cattle provide important products that are a sign of wealth and rank,; therefore, animals naturally appear in tomb decorations (**Vandier, 1964**).

Many studies discuss agriculture in ancient Egypt, but they focus on other topics as well, such as the deities associated with agriculture (**Bakier, Nour El-Din, Omran, Ibrahim, 2020**), while others investigate its sustainability (**Hughes, 1922**) or specific crops (**Elsrougy, 2022**), as well as many other studies.

In this article, we compare agriculture and the pastoral between ancient Egypt and the present. We analyze types of scenes on the walls of Egyptian antiquities and compare them to contemporary operations in the Egyptian countryside. The extent of the progress that the ancient Egyptians achieved in some the medical methods used in the birth of the calf have been proven correct by modern science. Egyptians seek continuities in agriculture and pastoral and in Egyptian identity.

Methodology

Pragmatism is the most confined approach to manage such studies because it is considered a descriptive Qualitative and quantitative methods are used in this study, including descriptive and analytical approaches. Photography and interviews with the local community and site crew represent the qualitative part of the present study. We will also use Focus groups. Then, quantitative methods will be performed.

For the ancient portion, a group of tombs of varying age were selected, from the Old Kingdom, Middle Kingdom, New Kingdom, and the Greek era. Some tombs are found in the Saqqara region, and others are in Mier, Deir El-Bahari, Tuna El-Gebel, and Sheikh Abdo Al-Qarna.

This study used the latest research results from many scientific sources, comparing all available information.

Direct observation was also performed in repeated visits to the sites.

The researcher interviewed families in the local community whose parents and grandparents considered themselves closely linked to nearby archaeological sites and considered them part of their identity. Interviews with site crews and inspectors supplemented the qualitative part of the study.

Finally, the researcher these data were analyzed and adapted for presentation.

Objectives of the Study

- Identifying preserved aspects of ancient Egyptian identity in terms of agricultural methods.
- Conducting a comparative study between agriculture and pastoral in ancient Egypt and the present.
- Describing, analyzing, and comparing scenes depicted on the walls of Egyptian antiquities with current agricultural and pastoral operations in the Egyptian countryside.
- Clarifying continuity of use in old agricultural techniques. What changes have occurred? For what reason?
- Showing the extent of the ancient Egyptian medical techniques proven correct by modern science.

Role of Agriculture in the Life of Ancient Egyptians

The Nile was at the root of the first stable agricultural system in Egypt (**Saleh, 2014**).

The Egyptians first practiced agriculture in small groups, but those groups joined before the dynastic period. During the Neolithic, the arable surface decreased, and drought prevailed (**Noureldine, 2009**).

Ancient Egypt's economy was built on agriculture, which was essential to its survival (**Joshua, 2022**).

Inscriptions and scenes concerning agriculture were depicted on tombs from the Old Kingdom to the New Kingdom, including the tombs of Menna, Nakht, and of Deir el-Medina. These are among the best-known types of tomb art. They depict the importance

of agriculture, and crops produced by the fields are the primary source of life and the mainstay of the Egyptian economy as an agricultural country (Klebs, 1915; 1922; 1934).

	Scene Name	Tomb Name	Tomb Location
1	Harvesting	Menna	Necropolis of Sheikh Abd el-Qurna, Luxor, Egypt
2	Collecting Wheat	Petosiris	Tuna El-Gebel, Minya Governorate, Egypt.
3	Threshing	Menna	Necropolis of Sheikh Abd el-Qurna, Luxor, Egypt
4	Calf Birth of a Calf	Axt Htp, Axmrwt nsiwt, Petosiris.	Meir, Giza, Tuna El-Gebel, Egypt.
5	Milking a Cow	Kawit	EL-Deir El-bahary, Egypt.
6	Feeding a Calf	ptH Htp and Axt Htp, Axt Htp.	Saqqara, Meir, Egypt.

Table 1: Agriculture Heritage Scenes in the Ancient Egyptian Tombs.

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A. Agriculture Scenes

Ancient Egyptian society relied on agriculture for its sustenance. Therefore, agriculture scenes are found among scenes of ordinary life in Egyptian tombs.

Wall murals depict the agricultural processes. Workers in the fields till the ground with hoes and ox-drawn plows before planting. Farmers thresh grain with oxen or donkeys and use sickles to harvest crops. The grain is moved to granaries, where it is measured and kept for distribution under the supervision of officials and temple staff.

The stages of agriculture in ancient Egypt and modern Egyptian society are as follows.

Harvesting

Figure 1 shows the first step of the wheat harvest, cutting the wheat stalks with a sickle, where the supervisor of the agricultural work is represented at the left side of the scene, watching the workers holding their sickles with the right hand and catching the sheaves of wheat with the left hand to cut it.

Figure 1 indicates great skill on the part of the artist, where the harvester's body is represented as reddish-brown, indicating continuous exposure to the sun due to his work—wheat is harvested during hot weather. The laborer has raised his garment and tied it around his waist to facilitate free movement, as is currently done in the Egyptian countryside (**Saad, 1999**).

Therefore, if we look closely, we will find that the color of the harvester's face tended to be bronze to indicate his exposure to the sun.

Likewise, the artist representing the wheat well, showing both the stems of the plant and its upper part of it, which shows his proficiency.

In **Figure 2**, we a harvest scene in present-day Egypt that is almost identical to that in **Figure 1** is seen.

The harvester bends, holding his sickle in his right hand while catching the sheaves of wheat in his left hand to cut it.

Likewise, the skin of the harvester takes on a reddish-brown color due to his continuous exposure to the sun during the heat of the harvest season. We find that the Egyptian artist always represented men's skin in a reddish-brown color to indicate the nature of their work, which is always outside the home and resulted in exposure to the sun. Furthermore, he raises the lower part of his garment up to facilitate his movement and wears a hat to protect him from the burning sun.

The scenes are nearly identical to each other in key points, and indicating a preserved cultural heritage in agriculture.

Collecting the Wheat

Figure 4 represents a man leaning on his knee and the toes of his right foot, and the artist represents him collecting the stems of the wheat in piles to prepare for the threshing (**Figure 6**).

The peasant is represented in a traditional Greek-style costume and holds a sheaf of wheat in his left hand to place it on the haystack in front of him.

The wheat is represented as placed in an orderly way for easy portability to the threshing place.

Figure 5 represents the collection of the wheat stalks in piles after systematic tying for transportation for threshing. The scene is not different from that in **Figure 4**, indicating an identity between one age and another.

Threshing

Here, we discuss threshing (**Figure 9**).

Figure 7 represents men separating the wheat from the hay. The usual depiction of threshing in Egyptian tombs involves a group of men holding a large fork and raising the wheat high to separate it from the chaff.

Figure 8 depicts a contemporary threshing scene in the Egyptian countryside that matches the traditional practices in ancient Egypt before the introduction of new methods in the Ptolemaic period. The presence of this traditional method in the Egyptian countryside despite the appearance of other means later in history represents an inherited cultural identity that has not been affected by the novelties that have emerged in Egypt.

In **Figure 8**, a farmer holds a large fork for threshing to separate the wheat from the chaff, which corresponds to the traditional methods shown in **Figure 7**.

B. Pastoral scenes

Everyday people in scenes of everyday life are displayed with excellent clarity (**Schulz and Seidel, 1997**).

A small calf sucks his mother's udder, a man milks a cow, and cattle cross a ford below an observant guard, form part of compelling scenes that are often found. Great care was necessary in husbandry (**Vandier, 1969; Helck, 1968; Janssen and Janssen, 1989**).

At first glance, scenes of animal care in ancient Egypt may seem to be of a similar nature. However, careful study reveals some differences and details regarding the birth of a calf, its feeding, and milking a cow in ancient tombs (**Strouhal, 1992; Shaw and Nicholson, 1995; Brewer, 2001**).

Birth of a Calf

Scenes show a cow giving birth to a calf, showing details of the scene, along with the anatomical status of the cow and of the shepherd attentively observing the cow.

We must determine the features that the artist recorded and compare them to present-day scenes (**Syed, 2002**).

These scenes also contain many details that can show the continuity of cultural heritage over thousands of years.

Ancient Egyptians depicted the birth of animals in general and the cow in particular due to the religious importance of birth, where birth marks the beginning of a life saved from death and was also a hope for another life (**Montet, 1926; Pfrommer, 1999**).

Scenes of calf births began to appear in the fifth dynasty of the Old Kingdom (**Lichtheim, 1980; Leclant, 1981**). In the traditional presentation of a calf's birth begins with the mother cow suffering while the head of the calf appears and the shepherd helps the cow by taking the calf's feet, not the head, to pull it out (**Houlihan, 1996; Sternberg, 1988-91**).

Figures 10–12) represent the process of calf birth, depicting a purely Egyptian subject, although Greek clothing appears in the last one.

The scenes depict shepherds helping a cow giving birth. One of the shepherds wearing the Greek costume was the only change in this pure Egyptian subject. In the depictions, a supervisor leans on his stick and he supervises the birth.

Next to the supervisor is the shepherd who pulled the small calf between the thighs of a large cow that shows signs of pain from birth.

In these scenes and **Figures 13**, we see that the ancient Egyptian artist in the ancient Egyptian scenes depicted the scene accurately in its details. A boy stands behind the small cow and pulls the little calf from between the cow's thighs by the frontal feet that appear

with the head. The calf is not pulled by the neck or head for its safety. This does not represent a difficult birth, although some such births are shown (**Figure 14, Figure 15**). **Figure 13**, shows farmers in Egypt in the modern era performing the same steps in the birth of the cow. The shepherd pulls out the small calf, which comes out with both frontal feet forward with the head (**Lefebvre, 1921**).

Ancient Egyptian artists also show in **Figures 10–12** an ability to correctly represent the cow's anatomy during a birth (**Figure 16**) (**Lefebvre, 1923; Von Bissing, 1923**).

We find that the artist succeeded in representing the pain of the cow during the process of birth, which results from the exit of the small calf from between her thighs. These signs begin when the cervix is closed (**Figure 17**) and at a later stage during the emergence of the calf out from the cervix (**Figure 18**), where the pain increases (**Figures 19, 20**) (**Otto, 1954; Cavaignac, 1929**). The depictions show the back of the cow curved due to pushing out the calf, the tail is raised, the tongue is out, and the head is up, while the muscles of the abdomen contract in pain. All of these details are given with a high degree of precision (**Conférence Publique de Mlle, 2000; Menu, 1998**) (**Figure 21**).

Figure 13 shows a cow with the same signs as (**Figures 10–12**), indicating continuous cultural heritage from ancient times.

Milking the Cow

After the birth of the calf in the tomb of Petosiris, one of famous pastoral scene in ancient Egypt is that of milking the cow, wherein the cow was depicted with the young boy is milking it.

Figures 22 and **23** represent the process of milking the cow in ancient Egypt, specifically in the tomb of princess Kawit (**Figure 24**).

These images represent a small calf tied to the left front leg of the cow during milking to keep it from moving, and indicating the artist's ability to represent maternal instincts through small details in the scene.

In **Figure 22** represents a shepherd squatting beside a cow, holding a vessel in his right hand while milking the cow with his left one, while the legs of the cow are depicted as moving as if trying to walk.

Likewise, **Figure 23** depicts the same thing, with a shepherd squatting position by a cow and holding a milk vessel and performing milking, as in the ancient scene. The cow also

has its back legs tied so that it cannot not move during milking process, while one of its front legs is tied to a small cart.

Feeding the Calf

Scenes of feeding a calf were also a traditional theme in ancient art.

Figures 25, 26 depict a calf feeding from his mother's breast (**Osirisnet, 2019**). In such scenes, a calf is depicted suckling at his mother's udder. Here, the calf is shown standing under his mother and raising his head to feed, and the cow has turned her head toward the calf as if to caress it.

In this scene, the artist succeeded in representing all the details with high precision. He succeeded in showing compassion and affection between the small calf and his mother. A vivid picture is presented, and the cow's anatomy and the changes due to her rotation to caress her calf are accurate.

Figure 27 also represents a calf feeding from his mother in modern times in Egypt. While times have changed, the cultural heritage in the animals themselves is kept, in a scene of a calf feeding at his mother's udder as she turns her head to him with apparent tenderness. We found that the artist wanted to show what inspired the scene by representing the little calf while breastfeeding and the cow turns its back to flirt with him, thereby indicating the artist's success in representing the instinct of motherhood in the love for the small calf.

Discussion and Conclusion

This study confirms the significant similarity between both pastoral and agricultural scenes depicted on the walls of ancient Egyptian tombs, dating back to ancient Egyptian history, along with the same scenes in modern Egypt.

The present has inherited and the same methods are used and practiced in agricultural life in ancient Egypt. Similar scenes of the birth of a calf, a calf feeding at its mother's udder, milking a cow, harvesting, collecting wheat stalks, and threshing feature significant overlap, although there are methods that no longer exist at present.

The birth of a calf at present is similar to how it was in the past, in its different stages and signs.

Similar steps and techniques are used in the process of milking the cow between the past and present, except one method wherein the calf in front of the cow during milking may

no longer be practiced. Instead, a front foot is tied and food is placed in front of the cow to prevent her from moving, possibly to save time.

The animals still perform the same instinctive movements, such as the cow's tenderness toward the calf during feeding.

The stages and methods used during the harvest were quite similar, as was the collection and tying of the wheat.

In the last stage of the agricultural process, the threshing was done differently only in the Greek period, but the ancient Egyptian practice is similar to the present.

If we follow the pastoral scenes in the periods preceding Greek rule in Egypt, we find that short-horned cows are represented, as in the modern era.

The most important reasons for the continuity of this cultural heritage are the nature of Egyptian society, where agriculture is the main craft. This was an agricultural society from the earliest ages and has continued thus to the present. Therefore, we find agricultural crafts inherited across generations in all its precise details, as well as other accompanying processes, such as raising cattle.

The study notes the progress of ancient Egyptians in the science of veterinary medicine by presenting the only position for the calf's, confirmed by modern science; other birth positions indicate complications.

The study shows that all elements of the environment of human beings, plants, and animals maintain their customs and traditions, which express their identity.

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Figures



Figure 1: Harvesting, Tomb of Menna, necropolis of Sheikh Abd el-Qurna, Luxor, Egypt. © Mohamed Khater



Figure 2. Harvesting in Modern Egypt. © Mohamed Khater

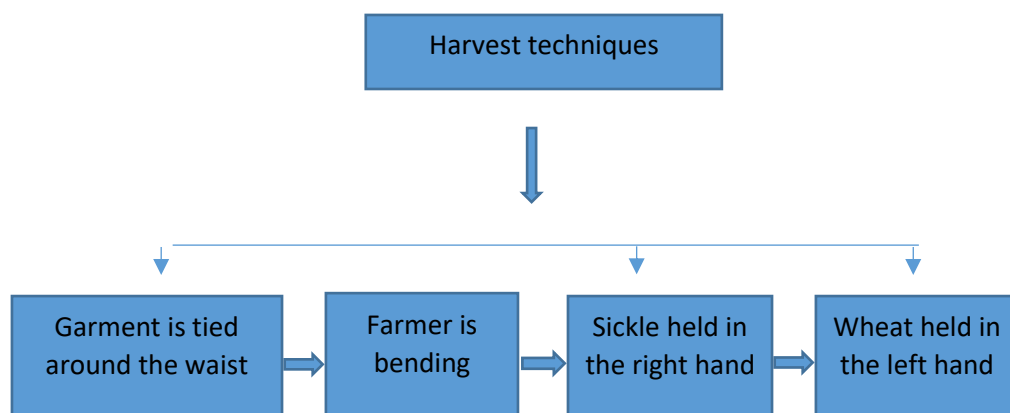


Figure 3. Harvest Techniques. © Mohamed Khater



Figure 4: Collecting wheat, Tomb of Petosiris, Tuna El-Gebel, Minya, Egypt. ©
Mohamed Khater



Figure 5. Collecting wheat in Modern Egypt. © Mohamed Khater

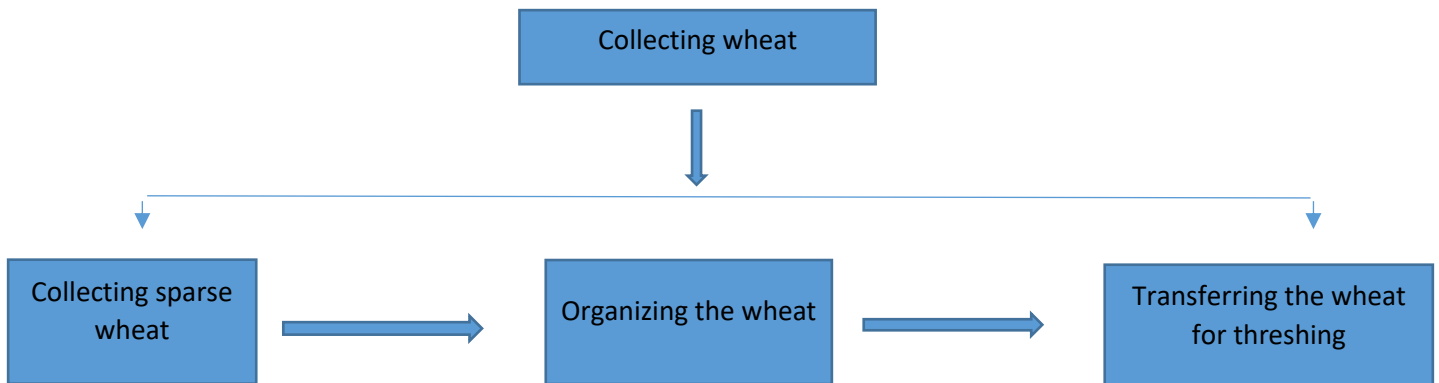


Figure 6. Collecting wheat. © Mohamed Khater

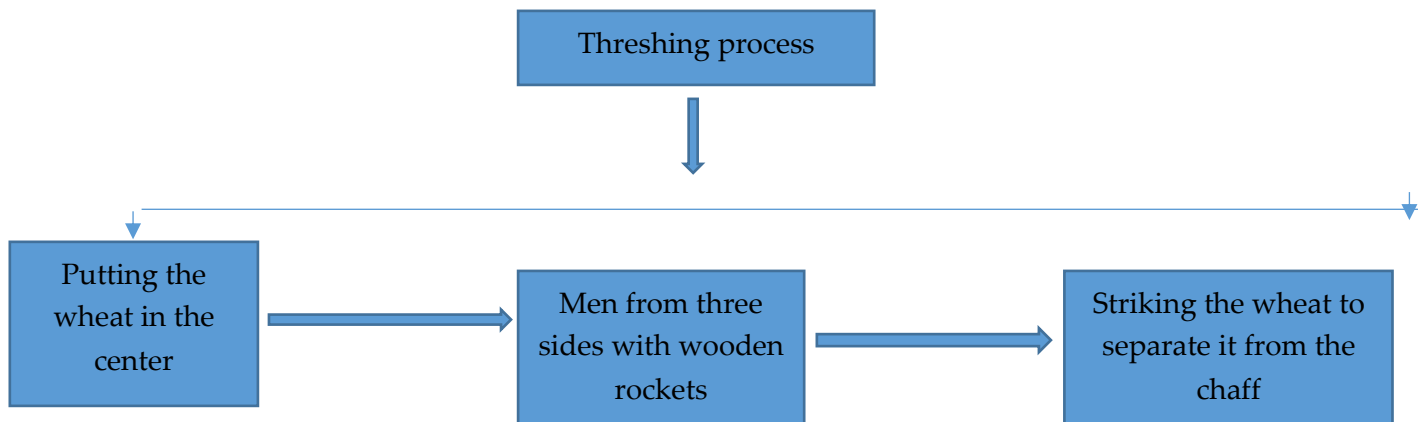


Figure 7: Traditional threshing, Tomb Menna, necropolis of Sheikh Abd el-Qurna, Luxor, Egypt.

https://www.osirisnet.net/tombes/nobles/menna69/e_menna_01.htm



Figure 8: Threshing in Modern Egypt. © Mohamed Khater



Figure

9.



Threshing process. © Mohamed Khater

Figure 10. Calf birth, Tomb of Axt Htp, Meir, Egypt.¹



Figure 11. Calf birth, Mastaba of Ax mrwt nsiwt, Giza, Egypt.²

¹ A.M. BLACKMAN, The Rock Tombs of Meir. II. The tomb-chapel of Ukh-Hotp son of Ukh-Hotp and Mersi (B, No. 4), London, 1915, pl. iv

² W. St. SMITH, A History of Egyptian sculpture and Painting in the Old Kingdom, London , 1949, fig. 226c

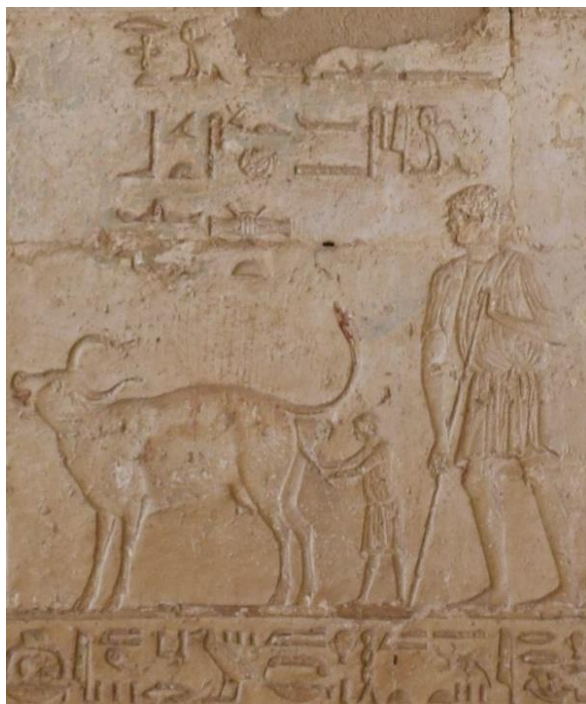


Figure 12. Calf birth, Tomb of Petosiris, Tuna El-Gebel, Minya, Egypt. ©

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Figure 13. Calf birth in Modern Egypt (photograph courtesy of S. Qatifa).

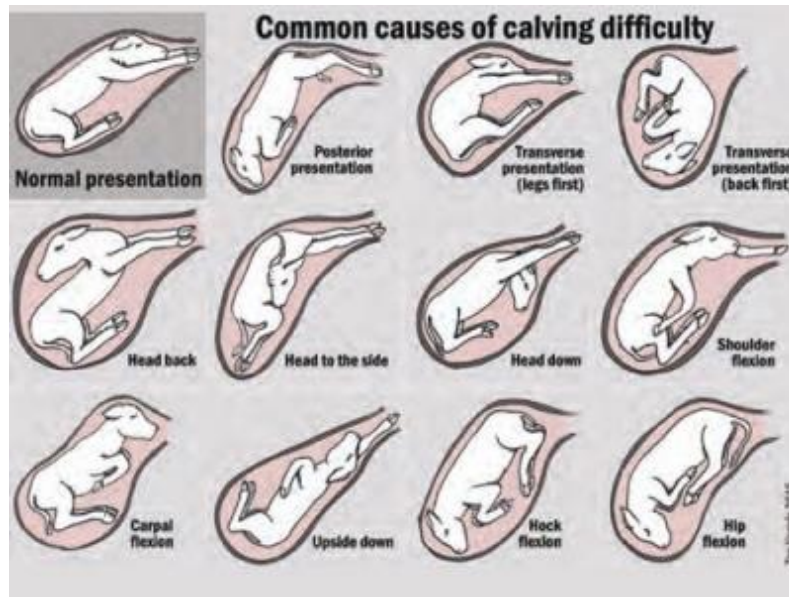


Figure 14: Common causes of calving difficulty, (Rural News Group, April 2015)

<https://www.ruralnewsgroup.co.nz>

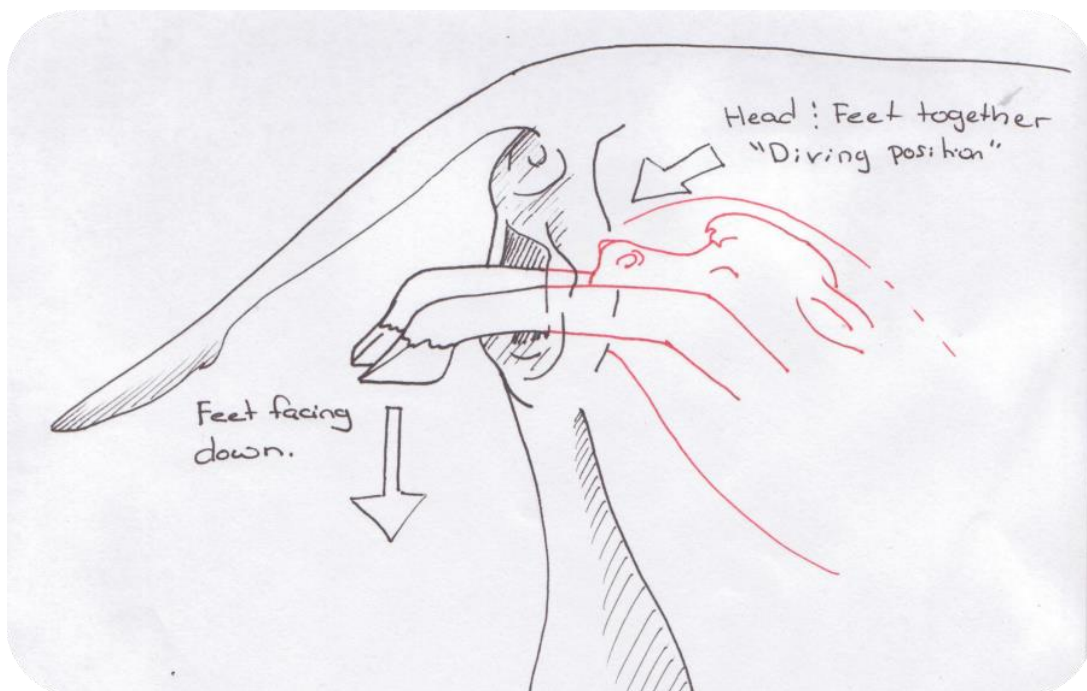


Figure 15: Only natural birth situation (Pinterest.html)

<https://www.pinterest.com/pin/314055773989231941>

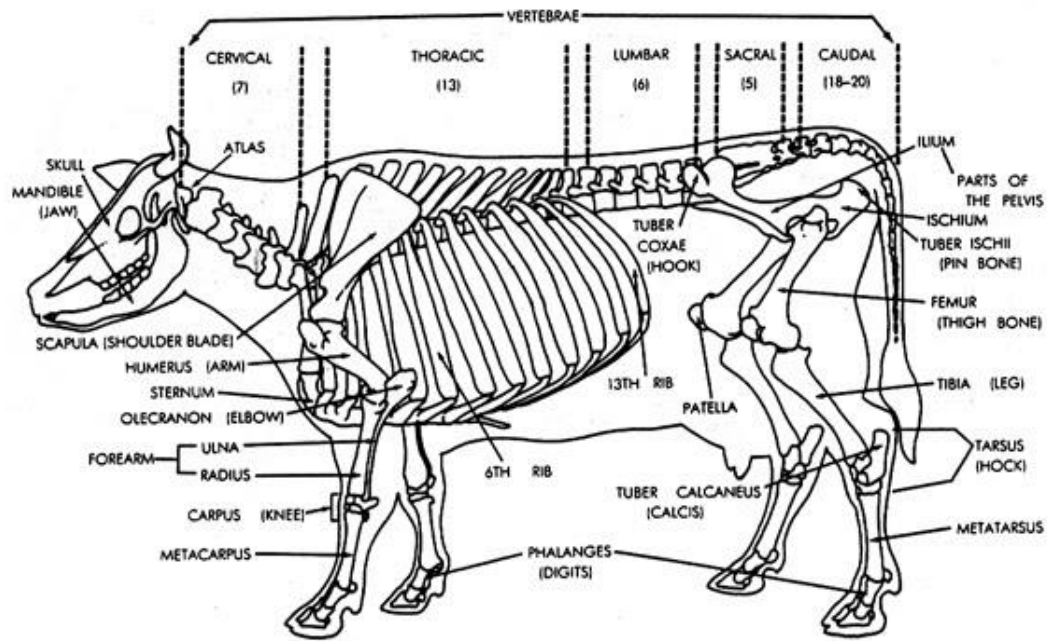


Figure 16: Bovine skeletal structure (Smith 2015, 1 Fig. 1)

<https://humananatomylibrary.co/photos/1001819/the-skeletal-system-of-a-cow-by-tony-smith.asp>

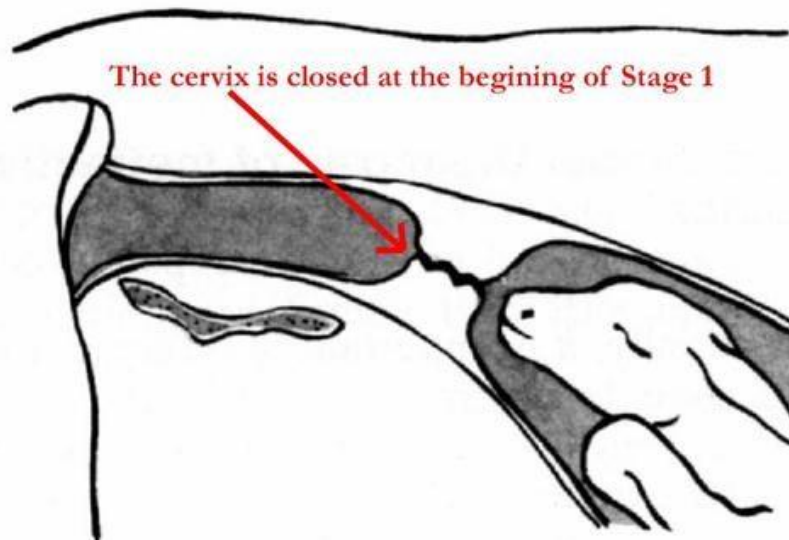


Figure 17: The cervix is closed at the beginning of stage one (Horan 2016, 2 Fig.1)
(HORAN, 2016)

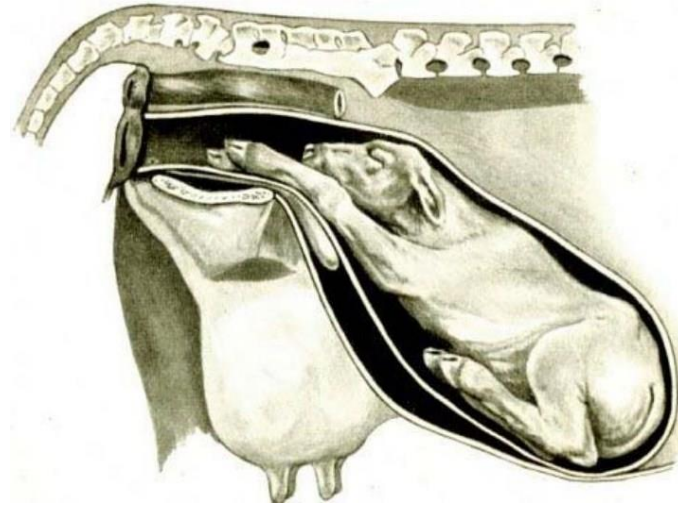


Figure 18: The calf opens the cervix in stage one (Horan 2016, 3 Fig. 2).

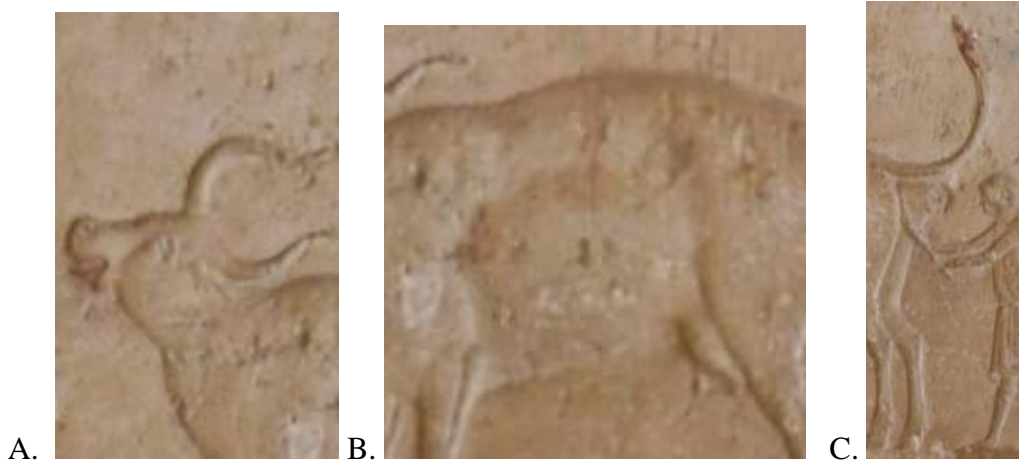


Figure 19: Pain indications in a cow: A) the tongue exiting and the head raised up; B) the back is curved; and C) the tail is raised. © Mohamed Khater



A. B. C.

Figure 20: Signs of pain of the cow: A) the tongue exiting and the head raised up; B) the back is curved; and C) the tail is raised. © Mohamed Khater

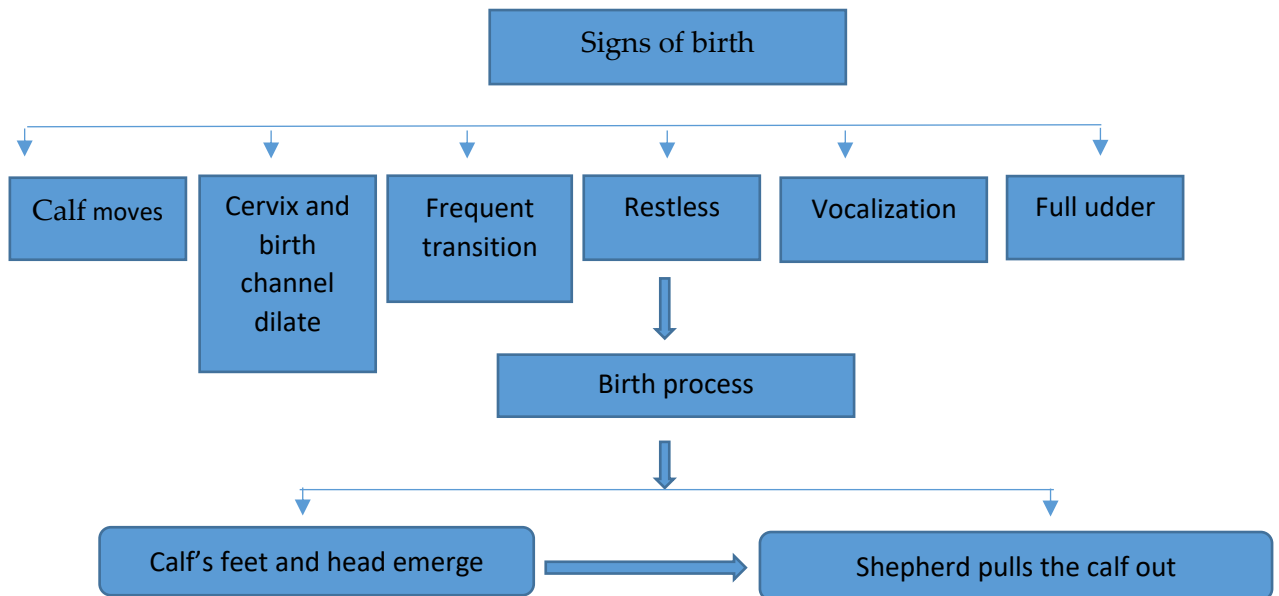


Figure 21: Calf birth signs and birth process. © Mohamed Khater

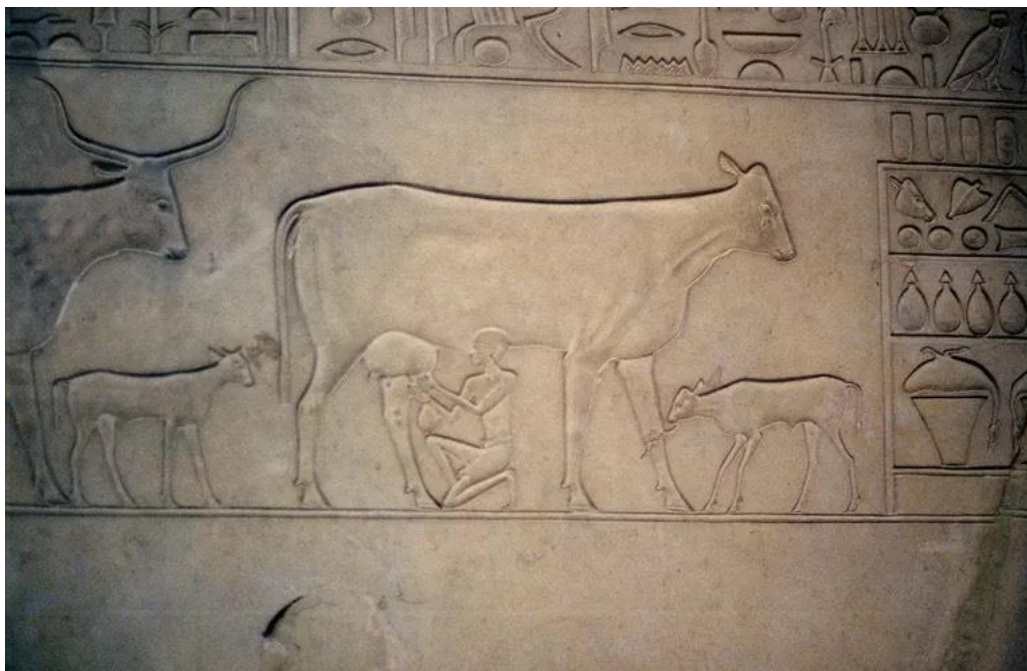


Figure 22: Milking the cow, Tomb of Kawit, EL-Deir El-bahary, Egypt.³



³ Gill, N.S. "Ancient Egypt's Middle Kingdom Period." ThoughtCo, Aug. 25, 2020, [thoughtco.com/ancient-egypt-middle-kingdom-period-118155](https://www.thoughtco.com/ancient-egypt-middle-kingdom-period-118155).

Figure 23: Milking the cow in Modern Egypt. © Mohamed Khater

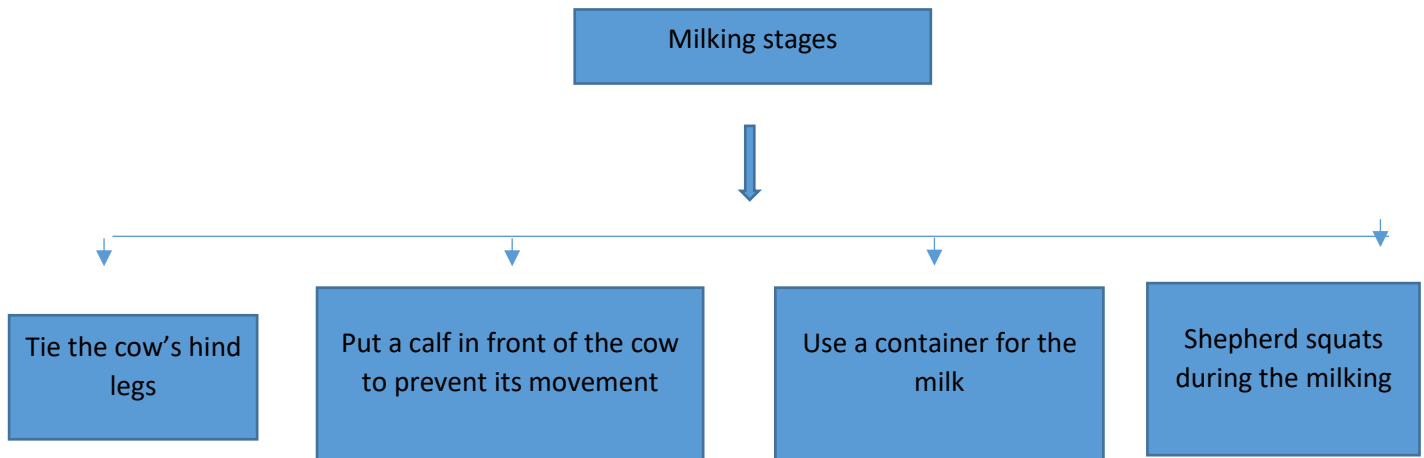


Figure 24:
process ©
Khater



Milking
Mohamed

Figure 25: Feeding the calf, Tomb of *pṯḥ ḥtp* and *ḏḥt ḥtp*, Saqqara, Egypt.⁴

⁴ N.de G. DAVIES, The Mastaba of Ptahhetep and Akhethetep at Saqqareh II. The Mastaba: the Sculptures of Akhethetep, London , 1901, pl. xvii

Figure 26: Feeding the calf, Tomb of *3ht htp*, Meir, Egypt.⁵

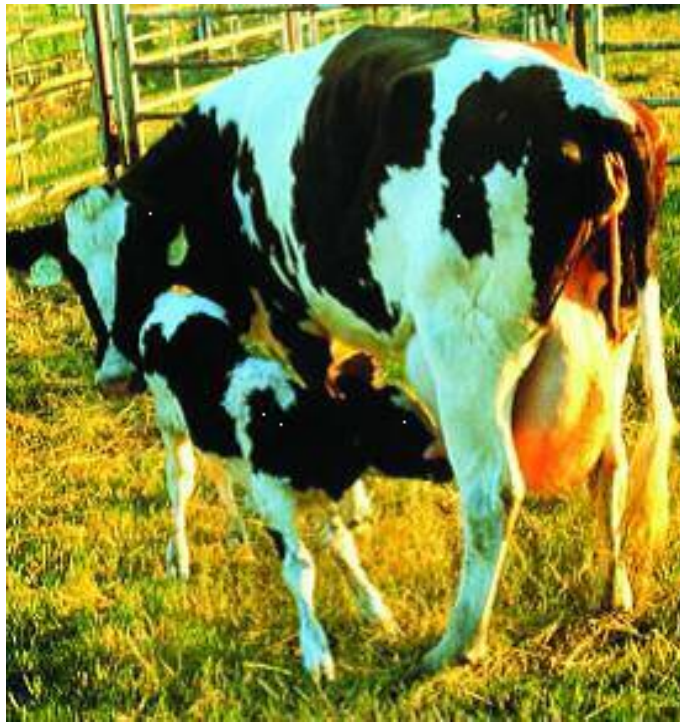


Figure 27: Feeding the calf in Modern Egypt. © Mohamed Khater

⁵ A.M. BLACKMAN, the rock tombs of Meir II . the tomb chapel of senbi's son Ukh- hotp, London, 1914, pl. vii