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Traditional Methods and Techniques of Food Preservation in Ancient Sri Lanka

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Introduction

Since man began to settle down and formulate a civilization of his own he convinced that his main occupation would be agriculture or gathering of food from plants cultivated by him. Under these circumstances man began to understand that the food he produces either by cultivation or agriculture has to preserved in order to keep them without being decayed to use them for a long time. Hence he began to find out various means and devices to preserve his excessive food for the future use. The ultimate result of that was the discovery of various methods and devices to preserve his foodstuffs from decay and ruin. It should be noted here that the methods and devices employed by ancients to conserve his foodstuffs seems to be very simple and uncomplicated. For instance, the staple diet of the people of Sri Lanka appears to be the grains such as paddy, wheat, *kurakkan*, etc. In his attempt to maneuver preservative methods he has understood that the main obstacle in preserving foodstuffs were that they should be protected against the elements of nature such as sun, rain, humidity, warmth etc. As for grains the man understood that they are being destroyed by various types of insects rats and various other animals. Thus the ancients have made attempts to preserve their food items by simple and scientific means.

For instance the *Vee-Bissa* can be taken as one divisive method to preserve paddy for a long period of time. The ancient settlements in Sri Lanka were located in the dry zone areas such as Anuradhapura and Polonnaruva. where the ancients thought that the flat lands without much jungles area could be utilized easily for the purpose of cultivation. As such they began to make their settlements in the dry zone where water is available. But when once they understood that the sufficient water is not available throughout the year they began to devise ways and means of storing water which ultimately led to the construction of irrigational works. This was the first step in the process of method of conservation of water by the ancients of Sri Lanka. When once they acquired the ability to conserve

water they began to cultivate their lands by using the water accumulated in tanks. But the production of grains by means of cultivation did not stop their attempts to find out the ways and means of storing and preserving their foodstuffs for a long time. It is from there the ancients of Sri Lanka begin to employ his wisdom to find out methods of preservation of foodstuffs. Even today not only on the dry zone, but in the wet zone too these methods and systems still prevail. It is to be noted here that the ancients of Sri Lanka in providing such methods in preservation of foodstuffs they have used only the local perishable materials. Therefore the *Vee-Bissa* that had been used by the ancient people are not in existence today but we have preserved the concept, form, character techniques and the methods that were being used in ancient days.

Vee-bissa

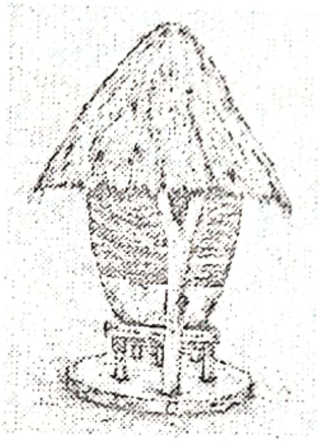


fig.1 : Mati or Elimahan Piduru Bissa

Now let us discuss the method of construction, the use, function and its importance of *vee-Bissa* in preserving paddy. The device called *Vee-Bissa* can be categorized into various types and they are given various names according to their form, character, making method and location.

Hence these names are given as *Elemahan Mati Bissa* (oval shape basket located in the open air) *(fig. 1)*, *Ethulatha Pidudru Bissa* (that is bissa made of straw and located inside the house), *Dëvabissa* (made of wood and covered with straw)*(fig. 2)*.

And there is a special Bissa called *Biththara Vee Bissa* (where the generative seeds of paddy are preserved), *Vee varuva (fig. 3)* and *Goni Bissa Vee varuva* is made of sticks bound by wild creepers keeping them in horizontal and vertical manner and ultimately the clay is applied to fasten the structure. *Goni bissa* is made of gunnies made of jute. This *goni Bissa* has to be kept inside the house, because if it gets wet it will

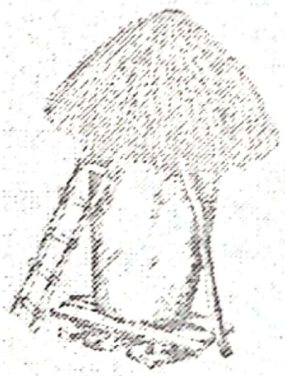
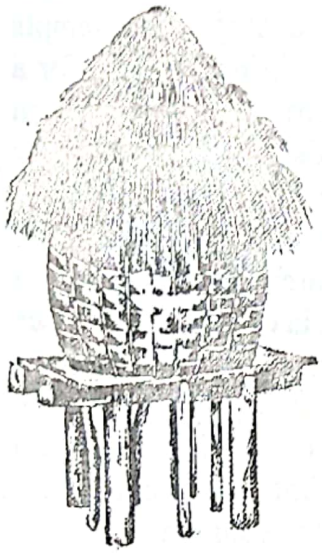


fig. 2: Dëvabissa



decay. Moreover it has to be protected against the insects, such as beetles, weevils and other insects harmful for the destruction of paddy. The scientific meaning of making a *Bissa* by using straw or grass and applying mixed clay is to prevent leaking, humidity, and moisture into it.

Technology

The method of construction appears to be that after completing the structure of *Bissa*, it is kept on wooden pillars and covered with straw. The purpose of keeping on wooden pillars is to prevent it from getting wet and attacking insects.

fig. 3: Vee Varuva

It appears that in a country like Sri Lanka where the humidity is in the higher degree and also rain is in plenty it has to take precautions to safeguard the *Vee Bissa*. Normally the shape of the *Vee Bissa* is made in an oval manner, and as it is kept on a higher level to which a ladder is being used for the purpose of storing and taking away paddy from the *Bissa*.

For the construction of *Máti-Bissa* it is necessary to collect the required raw materials. The straw has to be collected from the threshing floor of paddy *(Kamatha)*. The appropriate clay has to be collected from a suitable place and it has to be fine clay and should not consist sand, rubbish or any other material that will hamper its proper mixture. At first the skeleton of the structure has to be made mostly in the shape of a circle or an oval. This is called *Bihi Koodaya*, which has to be made in accordance with the amount of paddy that has to be preserved in it. The creepers such as *Bamabaragediya wel, Vekanda wel, Kadurugediya wel, Bihi wel, Eraminiya wel, Pitasanda wel, Kiri wel and Weywel* etc are used to bind the horizontal and vertical wise sticks. Some types of bamboo called Una or Bata is also used in making the *bihi koodaya*. All these types of creepers can be kept for a long time without decay and insects such as termites, weevils cannot do any harm to these types of creepers. In making the *Bihi kooda* the farmers are quite careful to make it strong and solid specially the bottom area and connecting areas where the farmers tie them with strong knots because

that will help them to keep the *bissa* in its proper place. The application of clay into a *bissa* is a very delicate exercise. It has a certain methodology which has been obtained through experience. If the clay is not fine this application could not be done properly. Hence it is the practice of the farmers to collect clay from red ant-hills. In making the roof of this *Mati Bissa* normally the farmers make the roof in a Keni Madala shape (ridge-pole). It is made as a separate part because it has to be taken out when-ever the farmers want to remove paddy from the *bissa.* As such there is a special part which, has been kept bellow the roof which is called *Yathuru Phalaya.* This special device is adopted in order not only to remove paddy out of Bissa but also to replace the thatched roof whenever it decays.

The use and function of the *Bissa,* appears to be the preservation of excessive paddy. The main important function apart from the preservation seems to be the storage of paddy for the future use specially during the period when the farmers could not get the harvest. This process prevents the paddy being wasted and allows the farmer to use it from time to time. That is in a way how the ancients conserved paddy in the frugal manner. It should be noted here that the ancients have used this method of technique after an age long experience.

Dummasse Atuwa

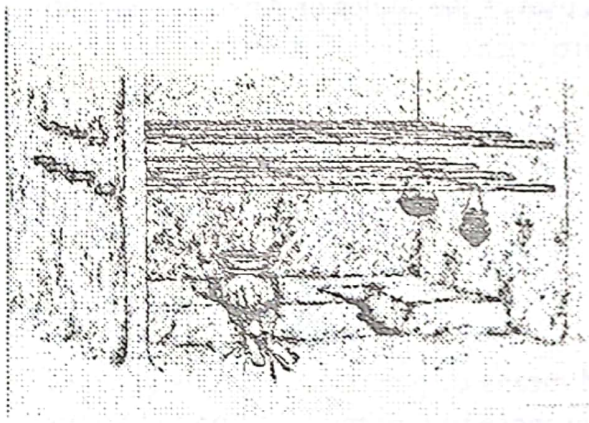


fig. 4: Dummassa Atuwa

As the ancient people of Sri Lanka grew various types of grains such as *mung,(green-gram) meneri* (millet) and *kurakkan , bada- iringu* (maize) they had to preserve the excess grain for the future use. Hence they began to find out ways and means to preserve them for future use. Thus they have made a system called *Atuwa,* where they have stored dried grains.

Normally this *Atuwa (fig. 4)* is placed above the fire place where the food is being cooked inside the kitchen. Above the fire place is constructed a structure called *dummassa,* on which certain types of food is kept in order to preserve in

its normal condition through temperature. But sometimes the *Dummassa* gets, more warmth than it is necessary. Hence the grain will change its conditions in a harmful manner so that it could not be used for consumption purposes. Thus the farmer devised another method by constructing another wooden shelf above the *dummassa*, where the foodstuffs which need mild warmth are kept. Normally this *dummassa* is made with wooden beams fixed on to either walls of the kitchen, and wooden planks are placed on that allowing it to seep the smoke coming from below from the hearth. The main purpose of this seems to be, apart from protecting against the insects, it avoids getting fungus into the grain etc. and on this *Atuwa* the foodstuffs such as *Atukos* (dried jack paps), and *Atudel* (dried breadfruit) are kept.The *dummassa* which is built below the *Atuwa* is used for keeping dried fish, salted fish (*Jadi)* and dried jack seeds etc. because it needs more warmth than the *Atuwa.*

Atuwa and Atuveedi

There is another kind of *Atuwa* which is completely different in shape and function than the *Dummase-Atuwa.* This is normally used for the purpose of storing and preserving grains. A structure made in construction called dig-geya or in spacious room or perhaps it is built as a separate structure outside the house. Such construction can be seen in Raja Maha Viharas and Devala which posses Nindagam, that is the lands given to such religious instiitiutions for their mainatennce. Similarly sometimes the houses of the nobles or Aristrocrats who posses lands from which they can acquire grains *Atuveedi* is found . They are called *Valavvas* or manor houses . Such constructions are found specially in the areas like Kothmale and Dumbara . They have made use of wood for the construction of wood *Atuveedi* . Some times they are made as rooms attached to each other or as single rooms.

Kos-etamulla

So far we have discussed the ways and means of preserving various kinds of grains, such as paddy, millet etc, now I propose to turn my attention to various other types of foodstuffs, that have been used by the ancients of Sri Lanka as subsidiary food. The most important tree that helps the man for his subsistence is the jack tree. Sometimes this tree has been named popularly as the *Bath-gasa* (rice tree). The reason to name this tree in that manner is that the jack fruit

provides us with a very tasty meal. The rural people especially when they have no way of getting rice they always tried to boil jack pap's and the jack seeds for their food.

The excessive jack seeds can be preserved for a long time. Normally the housewives boil jack seeds and put them on a mat and spread in the open air for it to dry. This dried seeds are kept on the *dummasse- Atuwa* to preserve it for a long time. Or else seeds of the jack are kept as raw seeds in a corner of the inner room or store room and a layer of clay is applied on it. If the amount of jack seeds are more in quantity the number of layers are increased to store all the seeds that are available, Normally *kos-eta-mulla* is made by the clay taken from the ant-hill (*humbasmeti*). When the seeds are taken out from the *kos-eta-mulla* they are mixed with fine sand in order to preserve the quality of humadity in it. At this stage the seeds are called *valikosseta*. It is a delicious food when they are fried. They can also be boiled, and prepare as a curry and a *melluma*. Normally this method provides us to preserve these seeds for more than six months. Moreover, these seeds can be stored in a large- sized clay pots and on it a layer of mixed clay is applied and kept for more than six months. This method is also help to keep and preserve the jack seeds for a considerable period of time.

Páspettiya and Wëdam Pettiya

Fig. 5: Páspettiya

Normally this type of container is used for the purpose of preserving food found in a dry zone areas such as Anuradhapura, Polonnaruva, Ampara etc. The raw materials that have been used to construct this *páspettiya* are Wewel(cane), *Batapothu* (splinters of reeds) and *Thalakola* (the leaves of the palm tree). Traditionally it appears that the construction of this type of boxes has been a handycraft of the certain sections of the people called *Rodias*. (a law cast group in a Ceylon)

However the most important aspect of this type of boxes seems to be that they can be carried easily because of their lightness. Moreover the rats, cockroaches and weevils cannot enter the *páspettiya* (fig. 5) and it is made in such a manner that even the wetness could not be entered into the *páspettiya* and these can only

be kept not more than few months. Similarly there is another type of box called *Wëdam pettiya* (fig. 6) in which various types of foodstuffs can be preserved. This is made especially with canes. They are weaved with canes in such a manner so that cockroaches or rats cannot enter.

Fig. 6: Wëdam pettiya

Mutti and Barani

Pots and Jars are also used for the purpose of preserving foodstuffs in ancient days. They are specially made of mixed fine clay. Normally mouth of these pots are made in a wide manner, to make it easy to store grain or any other foodstuffs in it. The thickness of walls of the Barani appears to be little thicker than other cooking potteries, because that thickness is necessary to protect it from entering either moisture, air or humidity which are harmful to the contents of the pot. Most of these pots are buried in the inner room of the house in order to prevent it from breaking.

Direct consumable foodstuffs

In preserving the foodstuffs such as fish and meat, the people have adopted particular ways for such preservations, because it is necessary to keep such foodstuffs without decaying and infecting with worms. In case of fish, the preservation of it is as follows. That is called *Jadi*. First of all, the fish is cleaned from sand and other unwanted materials and contents of stomach of the fish are removed. Then the fish is mixed with salt and dried *goraka (type of the fruit-giving sour taste)* the water is seeped out of the pot in which fish is kept, Then the fish is put in to a well- dried vessel with a small mouth and it should be closed tightly so that the insects and the other flies cannot enter into it. If such insects are entered it is possible to infect it and enter worms into it.

In preserving the foodstuffs, A*tukos* (dried pap's of jack), *Atudel* (dried breadfruit) and types of cereals have certain technological methods, which has to be followed

properly if such foodstuffs are to be preserved. For instance in preparing k*os-eta* and del etc. we must know the degree of temperature, by which they are to be dried and they should be properly timed during the period which such stuffs are to be dried.

Conclusion

In summing up it is necessary to mention that in ancient Sri Lanka the people had a traditional technology from which foodstuffs were preserved. The people are very keen to prevent them from infecting, decaying, or other harmful activities opening and removing a portion of the food from the storage. These methods have been adopted after a long period of experience of the ancient people. It is necessary to note here that they have devoted their attention to the climatic and ecological conditions in adopting such technological methods. Moreover the ancients in adopting such methods always tried to utilize the local materials and the possibility of using them in the way, they wanted. For instance they have made it a point to utilize the available raw materials such as straw, clay, wood, grass reeds splinters, coconut leaves and type of rushes such as *thunhiriya, vetakeiya* or *Borupan* etc. In utilizing these types of rush it is necessary to know the way of preparing them, for use, mostly by boiling and drying them.

Finally it is necessary to know the ancients have paid their attention to the climatic and environmental influences that affect the materials. They have adopted unharmful methods to avoid the risk of decaying for short period of time. Thus it is clear that the ancients in preserving the various types of foodstuffs they seem to have understood the quality and composition of the particular foodstuffs by long term experience. As such the ancient people have understood how such stuffs are produced as well as destroyed. Hence we can understand that the ancients had convinced risks, of future planning for the productions they have made by their difficult experiences. They have never adopted preservative devices which leads to the diminishing of the nourishing quality of the foodstuffs. As such the people in ancient Sri Lanka, in planning their living patterns they followed the methods of frugality and other un harmful, and employed traditional methods in the preservation of food.

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