

FIRST KNOWN RECORD OF GUINEA GRASS
CULTIVATION IN SRI LANKA, 1801-1802

by
Dhanesh Wisumperuma

Introduction

Guinea grass is a tall, perennial grass species common in habitats such as open grassy areas, riverbanks, neglected lawns, roadsides, pastures and plantations, from sea level to a height of 1,000m in Sri Lanka¹. It can grow up to a height of three metres under favourable conditions². This grass species is botanically known as *Urochloa maxima*, (previously known as *Panicum maximum*) and belongs to the Family Poaceae. This is an extremely variable species with many varieties already described³. Two of these varieties are common in Sri Lanka and they differ in leaf size, height etc⁴. In Sri Lanka guinea grass is known as *Rata-tana* and *Gini-tana* in Sinhalese and as *semai-pillu* and *guinea-pillu* in Tamil.

Guinea grass is a native to tropical Africa⁵, most probably the western coasts of Africa. It was introduced in tropics and sub tropics throughout the world as a forage grass⁶, for which it is considered as one of the most valuable of all tropical forage grasses⁷. Guinea grass adapted well and naturalised in these areas due to the favourable climate conditions. In some areas, it had an impact on native vegetation and cultivated crops and it was listed in the world's ten worst weeds in 1969⁸. At present, it is considered as an invasive species in some countries⁹.

It is believed that guinea grass was introduced to Sri Lanka to be used as a fodder for horses and cattle, and the plant was extensively cultivated^{10,11} and soon got naturalised. It was mentioned occasionally as a weed¹² in the 19th century and at present considered as an alien invasive species in Sri Lanka^{13,14}.

Dispersal of guinea grass

According to the available records, guinea grass appears to have been first introduced from Africa to the New World, the tropical Americas. The exact date of this introduction is argued. Parsons states that its establishment in the West Indies dates from the 17th century¹⁵. It is believed that this took place along with the slave trade, which flourished during that period¹⁶. However, there is a fascinating story about the discovery of its importance as a fodder that took place in Jamaica in 1740s. According to this, seeds of this grass were first imported to Jamaica as birdseed. After the death of the birds, the seeds were thrown away, but the grass grown from the seeds were favoured by the cattle and horses^{17,18}. In any case, the plant was widely used as a forage grass for horses and cattle, and it became a popular grass by mid 18th century as revealed by records, such as the letters of Henry Laurens in 1770¹⁹. The grass spread throughout the West Indies rapidly, and to parts of the north and south Americas by 19th century²⁰.

Guinea grass was introduced to India by the British in 1793 in some military farms and it is considered as the oldest species amongst the introduced grasses in India²¹. There are further records about the introduction of guinea grass to a farm stud belonging to the British East India Company in Pusa, Bengal dating from 1795 to 1803²².

Introduction to Sri Lanka

The previously known oldest record of guinea grass in Sri Lanka is the inclusion of it in 'Catalogue of the indigenous and exotic plants growing in Ceylon' published in 1824 by Alexander Moon, the Director of Royal Botanic Gardens in Peradeniya. In this, Moon mentioned guinea grass and also provided a Sinhalese vernacular name *Rata-tana*²³. It is possible to assume that the plant was introduced a considerable time period before Moon's publication, which justifies an appearance of a local vernacular name. This Sinhalese name means 'grass from abroad', suggesting its exotic origin.

All other writers, who mention about the introduction of guinea grass except Lewis, based their statements on Moon's record. Trimen mentioned that it was introduced to Sri Lanka before 1824²⁴ and further stated that there were no records of the introduction²⁵. Senaratna mentioned that it was introduced before 1824²⁶ and other sources state more generally that it took place in 1820s²⁷. Mentioning that it was grown in Sri Lanka in 1824, Ferguson stated that he was not able to find any record of when and by whom it was introduced to Sri Lanka, and suggested that there may be one in the Peradeniya Gardens²⁸.

Lewis believed that guinea grass appears to have been introduced into Sri Lanka during later Dutch period (18th century), but he did not provide any conclusive evidence for this belief²⁹.

It is apparent that an exact date for the introduction of guinea grass to Sri Lanka can not be established with out substantial evidence. Most of the authors based their opinion on Moon, concurring that this plant was introduced during the early parts of the 19th century, and more preciously before 1824.

New record of guinea grass in Sri Lanka

Yet there is evidence to believe that guinea grass was cultivated in Sri Lanka prior to June 1802 or two decades earlier than previously suggested. The source for this is a letter written in June 1802 by a person named C. Schwallie to Robert Arbuthnot, the Chief Secretary to the Government of Ceylon. In this letter dated 24/06/1802, at Negombo Schwallie states;

"By favor of Mr. Hamilton, from whom I got some Guinee grass (sic) seeds and plants, I have now as much Guinee grass as I want, and I perceive with great pleasure that it cultivates further from itself."³⁰

According to the letter, Schwallie had cultivated guinea grass in Negombo area before June 1802. The name of the grass is spelt in a mixed form, 'Guinee' taken from the French term of the plant (*Herbe de Guinée*) and 'grass' an English term.

C. Schwallie was granted a land for cultivation some time before December 1801 as Governor Frederic North mentioned the granting of 'a large space of ground near Negombo to Mr. Schwallie, the Surveyor and Superintendent of the Cinnamon Garden' in a letter to Lord Hobart, which was mentioned 'among very important grants'^{31,32}. Offering of such land grants for cultivation with the exemption of duty for a certain period of time to natives was proposed by North^{33,34} and British authorities permitted it to encourage agriculture³⁵.

The letter by Schwallie was written as a report informing the results of his experiments and improvements during the preceding two-year period and certain difficulties he faced. According to Schwallie he has planted coffee, pepper, tobacco, sugarcane, areca, cotton, coconut, jak, etc. and some other species in this land of which he gives a detailed description³⁶. According to North, from Schwallie's knowledge of agriculture, he was able to turn his land grant to very good account³⁷. North stated that Schwallie may sell his land to the government and superintend it as a garden for agricultural experiments³⁸. This statement proves that Schwallie's enterprise was a success.

As mentioned above, C. Schwallie was the Principal Surveyor of the District of Negombo and the Superintendent of Cinnamon Gardens at Kadirana near Negombo under the British administration. According to a Letter from Frederic North to Lord Hobart, Schwallie was a 'native of Ceylon and an Engineer in the Dutch service'³⁹. The term 'native of Ceylon' signifies that he was a Dutch descendent. Schwallie's name is found in Governor's letter books related to cinnamon, surveying etc. His full name was Hendrick Pieter Cornelis Schwallie, according to his death notice published in the Gazette when he died on 14th February 1803⁴⁰.

However, Schwallie's letter provides facts that guinea grass was probably planted in Sri Lanka prior to him. Schwallie has obtained guinea grass seeds and plants from 'Mr. Hamilton'. Availability of plants with another person suggest that there could be a cultivation even before.

Gavin Hamilton is the only Hamilton who is found in records of this period. He was the Agent of Revenue and Commerce for District of Colombo, to which post he was appointed in April 1801⁴¹ and held till his death in early February 1803⁴². He also held the post of Deputy Pay Master to the King's troops⁴³.

Hamilton was a civil servant of the British administration and was a resident of Colombo for some time. He possessed a house, a bungalow and gardens near Colombo, which were auctioned after his death⁴⁴. However, there is no substantial evidence available to confirm that Hamilton cultivated guinea grass. He could have planted the grass to feed horses owned by him as there was a large 'mandoe' used as a stud in his estate above Mutwal Road⁴⁵. However, it is also possible to suggest that he had imported the plants and seeds for people who were interested of cultivating those. Hamilton had the opportunity to do so, as he was heavily engaged in private trade and owned a ship, according to the available records⁴⁶.

The seeds and plants of guinea grass could have arrived from India where the grass was already available. By the end of the 18th century, guinea grass was popular among the British colonies such as the West Indies^{47,48} and also introduced to other parts of the empire such as India^{49,50}. At this time, British territories in Sri Lanka were administrated by the dual control system and British in Sri Lanka had strong official and private contacts with India and Indian officers. There is evidence to prove that these contacts even expanded to botanical exchanges. General Macdowall, the chief of the British forces in Ceylon is a person who was interested in planting and had a garden at Grandpass. According to Cordiner, Macdowall received consignments of plants and trees by nearly every ship. Further, it is mentioned that Macdowall was able make a valuable collection of exotics due to the friendly care and attention of Dr. Roxburgh, Superintendent of the botanical garden at Calcutta⁵¹.

Conclusion

In conclusion, what is presented in this paper sets a new and precise date for guinea grass cultivation in Sri Lanka. Considering about the time of the land grant to Schwallie (circa 1801) and the date of the record (June 1802), this date could be placed between 1801 and June 1802, which is more factual. This record dates back the occurrence of guinea grass in the country by nearly two decades than the previously accepted date. As mentioned above, the availability of the Sinhalese name by the time of Moon's Catalogue in 1824 supports this conclusion. Further, this record corresponds well with the introduction of the grass to India in 1793.

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