

## TACKLING HIDDEN HUNGER: THE POTENTIAL OF UNDERUTILISED PLANT SPECIES

By Muibat O. Bello

### Introduction

Food security has been understood by many as when all people, at all times, have physical and economic access to sufficient, safe, and nutritious food to meet their dietary needs and food preferences for an active and healthy life (FAO, 1996). This definition implies that the ability of a household to acquire sufficient food does not necessarily guarantee adequate nutrition and dietary needs of the body. Thus, even in the absence of hunger, the population may suffer from the lack of essential micronutrients, often referred to as hidden hunger.

According to UNICEF and the Micronutrient Initiative, as many as a third of the world's population do not meet their physical and intellectual potential because of vitamin and mineral deficiencies. The WHO (2002), also stresses that approximately 1.7 million (2.8%) of death worldwide are attributed to low fruit and vegetable consumption, partly related to unavailability or inaccessibility of commonly consumed fruits and vegetables believed to contain essential micro-nutrients.



*Eucalyptus camadulensis*: Underutilised plant species in Nigeria



*Eucalyptus citriodora*: Underutilised plant species in Nigeria



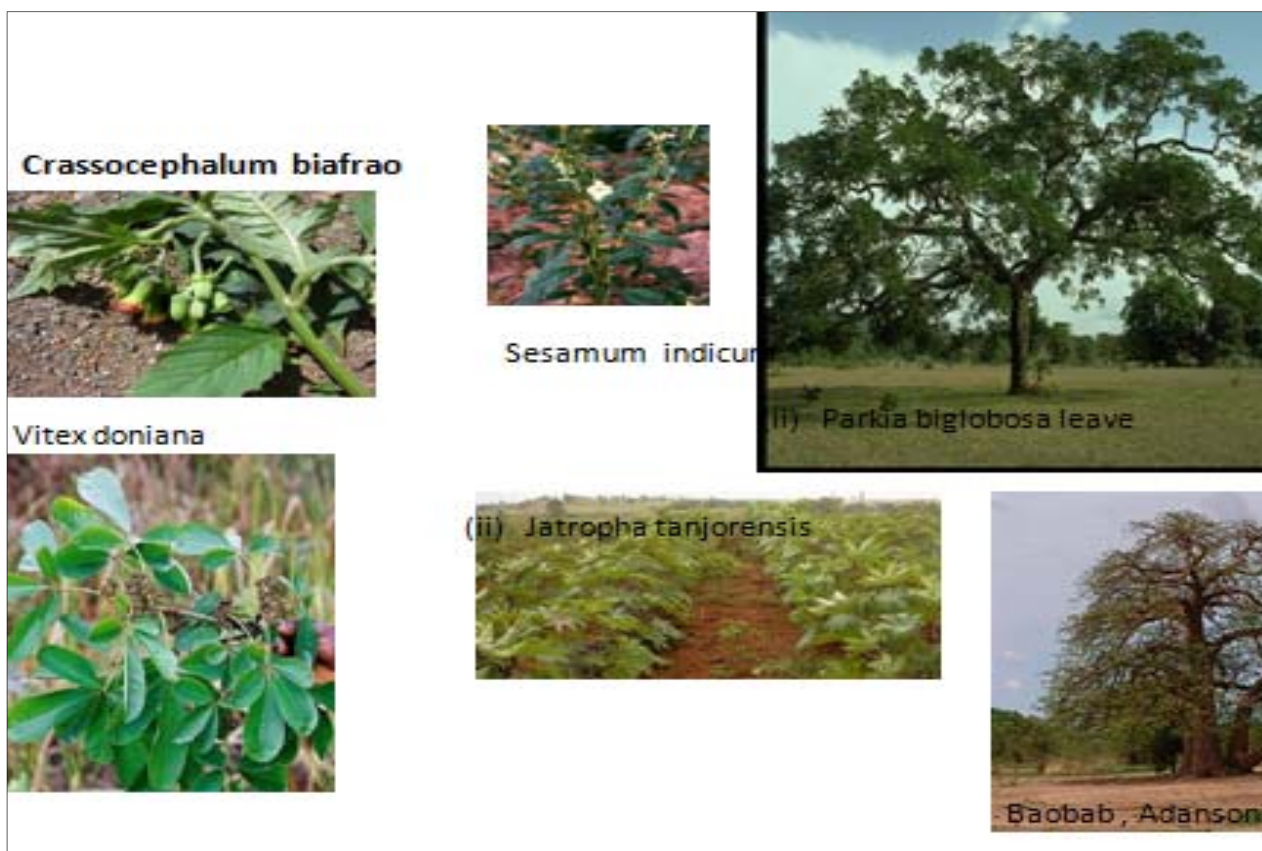
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Unfortunately, global measures to minimise the menacing effects of this phenomenon have been through the introduction of food supplements which are expensive and inaccessible to many poor households. This pre-supposes that efforts to minimise hidden hunger should explore alternatives that offer poor households cheap source of essential micro-nutrients, which are readily available. Plant species that are undervalued, neglected and underutilised and thus abound in our communities therefore serve as potential means for dealing with hidden hunger, particularly among poor populations. They contain comparable content of essential micro-nutrients relative to commonly used plant species.

Besides the nutritional value, these underutilised plant species are adapted to low input agriculture or may even grow abundantly in the wild. They could also offer poor households income through the collection and sale of these underutilised plant species or could save households income that could be used to solve other pressing household needs. The study examined the potential of some common but underutilised plant species for combating hidden hunger, particularly, in poverty-stricken households.

## Approach

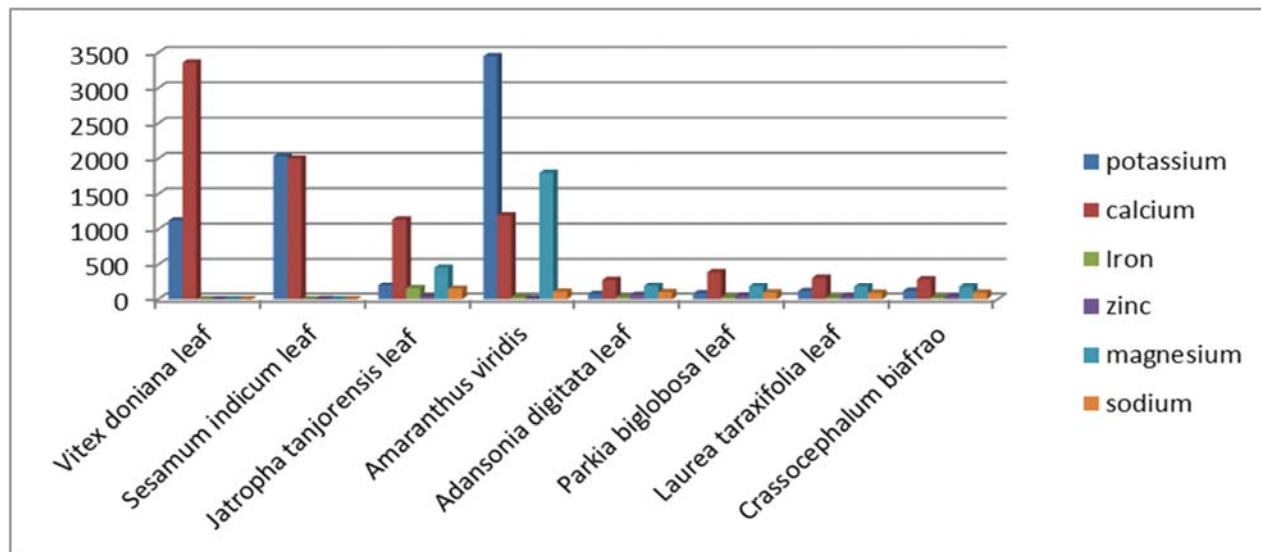
Underutilised green leafy vegetables, leaves of trees, fruits and spices were collected from different locations in Oyo and Osun States of Western Nigeria. Proximate analyses of the samples were done using standard methods of Official Analytical Chemists. Levels of mineral elements were quantified using atomic absorption spectrophotometer (AAS).



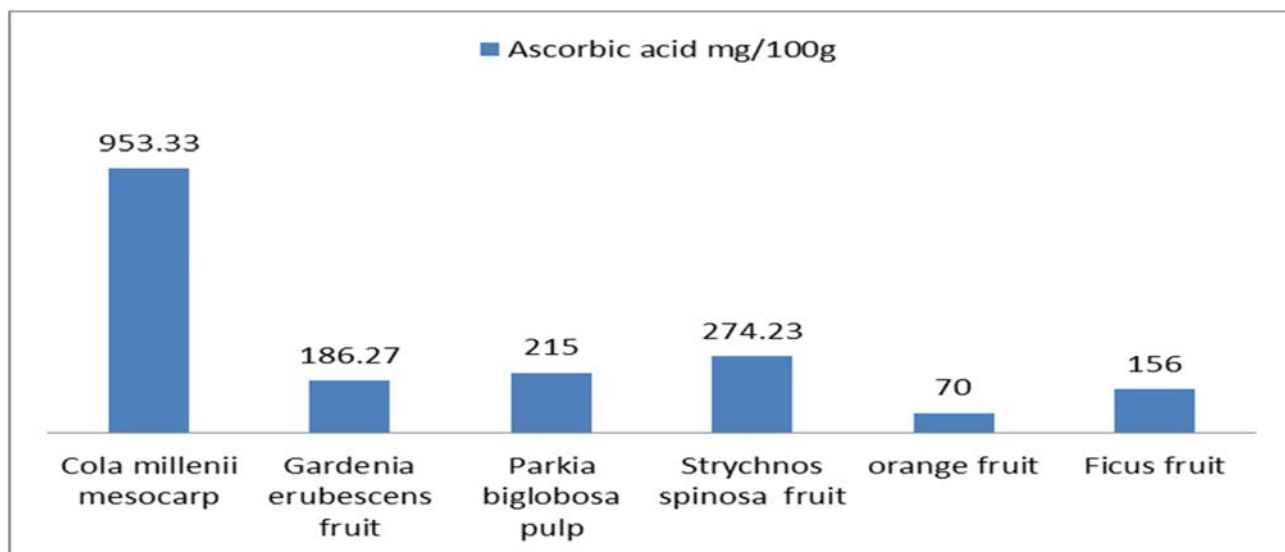
**Underutilised Plants Studied**

## Results

The analytical results revealed that the leaves of trees (*Adansonia digitata*, *Parkia biglobosa* and *Vitex doniana*) contain high levels of fibre, calcium, zinc and magnesium. *Jatropha tanjorensis* leaves as a vegetable contained higher protein, iron and vitamin C, than most of the commonly consumed vegetables such as cabbage, tomatoes and garden eggs. The underutilised fruits such as *Strychnos spinosa*, *Parkia biglobosa* pulp and *Cola millenii* pulp were found to contain five times the iron and vitamin C of conventional fruits such as orange and guava. Oil from *Syzygium aromaticum* (clove) and *Cola millenii* seed contained high levels of omega-3 fatty acids which are commonly found in fish oils.



Level of mineral elements in some of the underutilised vegetables (mg/100g): Source: Field Work



Level of Ascorbic acid (Vitamin C mg/100g) in underutilised fruit species compared to orange fruit  
Source: Field Work

## Conclusion and Recommendations

### Conclusion

Nutritional food insecurity in the form of hidden hunger remains a key issue in many parts of the world today. Even though the different global approaches are in order, efforts should be geared towards exploring various cheap indigenous species that abound in the immediate environment.

The study has shown that underutilised plant species contain more micro-nutrients than the conventional fruits and vegetables.

These, according to the study, are potential food sources for minimising hidden hunger, especially among poor populations.

### Recommendations

Based on the findings of the study, the following recommendations are made:

- NGOs, health institutions and dieticians should increase public awareness on the importance of underutilised species for nutrition, with emphasis on the low cost and easy availability of nutrient-rich but underexploited plants.
- Policies on public health and nutrition should also incorporate locally available but underutilised plant species as an alternative nutritional supplement among poor and food insecure households.

- Government should also provide enabling environment for commercialisation of these underutilised plant species.

- Further research work is also required to determine the cultural acceptability of these underutilised plants

### References

Food and Agriculture Organisation, 1996: FAO Practical Guide: Basic Concepts of Food Security. <http://www.fao.org/docrep/meeting>

World Health Organisation, 2002: World Health Report, Reducing risks, promoting healthy lives. [http://www.who.int/dietphysical\\_activity/fruit/en/index2.html](http://www.who.int/dietphysical_activity/fruit/en/index2.html).

<http://www.fao.org/docrep/meeting>

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