

## Ensete Ventricosum:-“Tree Against Hunger”

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### Abstract

*Ensete ventricosum* is a traditional multipurpose crop that feeds about 20 million Ethiopians as a staple or co-staple meal. Despite this, scientific data on the crop is limited. Kocho (fermented product made from scraped pseudostem and grated corm), Bulla (dehydrated juice), and Amicho (boiled corm) are three types of food that can be made from enset. These items are rich in Carbohydrates, minerals, fiber, and phenolics are abundant, while proteins are few. Meat is generally provided with such feasts and cheese as a source of protein. It possesses useful characteristics as a food crop, such as the ability to store foods for a long period and the ability to grow in a wide range of environments. It thrives in a variety of conditions, generates a high yield per unit area, and can withstand drought. It serves an essential use as animal feed. Furthermore, ensete has a significant level of genetic variability throughout a community, resulting in resilience and food security in the face of ever-changing environmental and land conditions. As a result, additional research focus and funds should be directed to amplify and expand the crop's application.

**Keyword:** Hunger, pseudostem, thrives.

### Introduction

*Ensete ventricosum* is a monocotyledonous, perennial, monocarpic, herbaceous crop. It belongs to the Zingiberales order, Musaceae family, and Ensete genus. Musaceae is a paleotropical family that makes up the order Zingiberales' base lineages. *E. ventricosum* originated in Southeast Asia but, the genus Ensete has wild representatives all over Africa and Southern Asia. It can be found all throughout Africa, in the western, central, eastern, and southern regions. Ensete has only ever been domesticated in Ethiopia, despite its extensive distribution. Even within Ethiopia, enset production as a food crop is limited to a small region in the southwest, where Semitic, Cushitic, and Omotic language people live. *E. ventricosum* is a versatile crop that is widely farmed in southern and southwestern Ethiopia



under the name enset. It acts as a staple/co-staple food nourishing approximately more than 20 million people in the country.

As a food crop, enset possesses a number of characteristics related to food security. First, the corm can be harvested at any time during the year and almost at any growth stage over a period of several years.

Second, enset foods can be preserved for an extended period of time. Third, enset has a high food yield per unit area when compared to cereals. Ethiopia's enset growing regions are well renowned for their high population density, which may pose a threat to the environment. Fourth, enset thrives in a variety of conditions between 1200 and 3100 metres above sea level. This enables farmers to grow the plant throughout the country including places that aren't appropriate for growing cereals. Lastly, enset Drought, severe rainfall, flooding, and other extreme weather conditions aren't a problem for this plant.

#### **Cultivation of Ensete-**

Enset grows best in the cold tropics, where temperatures range from 18 to 28 degrees Celsius. It requires 60 to 80 percent relative humidity and 1100 to 1500 mm of yearly rainfall. These circumstances are found in Ethiopia's enset belt, which is located between 1700 and 2450 metres above sea level (masl). Farmers, on the other hand, virtually invariably multiply cultivated enset vegetatively and have enlarged the cultivation area range from 1100 to 3000 masl.

Enset thrives on a variety of soil types with appropriate nutrient and drainage, pH values ranging from 5.6 to 7.3, and 23 percent organic matter. Enset, unlike banana, is more resistant to damp circumstances. It also outcompetes grasses and other weeds to an unprecedented degree in the Musaceae. Enset can also resist short bouts of frost and long periods of drought. It could survive for an extended period of time without rain or water. Cultivated enset is an icon crop that is widely and densely distributed in the southern region, some sections of Oromia, and minor regions of the Amhara Region's southern and eastern parts.

Enset can naturally be multiplied via seed. Farmers, on the other hand, replicate enset solely through vegetative propagation using corms. This is due to the fact that plants are harvested before they set seed. Diverse agro-ecologies and ethnic groups with varied cultures and production practices distinguish enset-growing places. As a result, enset vegetative propagation is affected by these parameters. As a result, traditional propagation methods

include uprooting mother plants, drying the corm, splitting the corm, injuring the apical meristem, filling the corm with soil, manure, or gravel, and planting, protecting, and manuring the replicated corm .

### **Enset as Food for Humans-**

Enset is a strategic food store that is well-suited to alleviate food scarcity, which is a typical occurrence in Ethiopia. Outside of Ethiopia, the inflorescence is consumed as a delicacy in Malawi, while the flower bud is boiled and eaten in various regions of Southeast Asia. When compared to other crops, enset crop loss is uncommon, and yield is high.

Kocho (fermented product from the corm and pseudostem, Bulla (dehydrated product of the juice from the decortication of the pseudostem and grating of the corm), and Amicho (stripped corm of younger enset plants, boiled and consumed) are the three main food products made from enset.

In the various enset-growing areas, the methods employed in enset processing are more or less comparable, notably in the two processes (scraping of pseudostem and fermenting in a pit). To separate the pulp from the fibres, the pseudostem is decorticated and scraped. The corm is scraped into pieces. After that, the outputs are cut and added to the pit. Fermentation is used to extract the starch deposits in these areas. The treated pieces are pressed and the resulting liquid is collected when Bulla is required. This is dehydrated until a powder known as Bulla is formed. Depending on the environment, the fermentation stage might be anywhere from a few weeks to several months or even years. After 90 days from the original processing day, the product is deemed ready for consumption, but it can also be stored for one or more years. Kocho can also be cooked after being taken from the pits. Bulla is also white in colour and produces a less quantity of product than Kocho, but it commands a much higher price. Certain enset clones' corm fragments are sometimes consumed as a boiled form called Amicho, rather than fermented. Carbohydrates and fibres are abundant in Enset meals. The age, kind of clone, and manner of processing all influence the quality of enset products. When Bulla is not extracted, the best quality Kocho is white in colour and less fibrous. Corms with few fibres are prized for their ability to generate high-quality Kocho. Kocho of the lowest grade is darker and more fibrous, and it is a byproduct of Bulla extraction. Despite popular belief, enset fibre is a vital nutritional component.

## Enset as Feed for Animals-

The feed scarcity can be alleviated by feeding enset plant portions (leaf, pseudostem, and corm) to animals as both a base diet and a supplement. Nonconventional feeds, such as enset, have been ranked as the best nutritious feed by farmers, with acceptable levels of consumption, chemical composition, and rate of degradability determined to be comparable or better than traditional animal feeds. Because of its high water content (85–90%), enset is particularly useful as an animal feed during dry seasons when other feeds are scarce. In addition to being high in water, enset is also high in nutrients. The leaf, for example, has a high crude protein content comparable to *Desmodium intortum*, as well as fat, sugar, fibre, cellulose, hemicellulose, and lignin, as well as lower soluble carbs and starch content than *Sesbania sesban*, a common local browse tree. The leaf has a low dry matter degradability, although it is comparable to stover and *Chloris guyana*, and it is better than straw and banana. As a result, fermentable energy sources are required for the efficient use of the enset leaf as a feed. The pseudostem and corm, unlike the enset leaf, have the most soluble carbs and starch. The corm can also be used for ensilage.

## Reference

- ✓ J. S. Borrell, M. K. Biswas, M. Goodwin et al., “Enset in Ethiopia: a poorly characterized but resilient starch staple,” *Annals of Botany*, vol. 123, no. 5, pp. 747–766, 2019.
- ✓ W. J. Kress, L. M. Prince, W. J. Hahn, and E. A. Zimmer, “Unraveling the evolutionary radiation of the families of the *Zingiberales* using morphological and molecular evidence,” *Systematic Biology*, vol. 50, no. 6, pp. 926–944, 2001.