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**Influence of Propagation Date to Sprout Development of Enset
(*Ensete ventricosum* (Welw.) Cheesm.) at Different Climates**

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Abstract

Enset (*Ensete ventricosum*, family *Musaceae*) is widely distributed in eastern and southern Africa but cultivated only in southern and southwestern Ethiopia as staple food for about 15 million people in mixed subsistence farming systems. The main product is starch extracted from the underneath corm and the leaf sheaths. Moreover, all parts of the plant are used in household, agriculture and traditional medicine. Propagation is done vegetatively during the warmest and most moist season of the year.

Cultivation areas extend from 1700 to 3300 meters altitude with annual average temperatures between 8°C and 22°C and annual precipitation between 900 and 1500 mm. Dry periods last from 3 to 8 months. Therefore, different climates in the growing regions enforced the development of different propagation methods.

Different propagation methods were described for different climatic regions. These descriptions were compared with data from field trials at two sites (Debre Zeit, 1850 m and Addis Ababa, 2350 m) with different average temperature (18 and 16°C) and rainfall patterns (2805 mm at 97 days and 2576 mm at 170 days). Propagation was conducted in January, April and August under different climatic conditions. Sprouts were examined for their vegetative growth as well as their mineral and carbohydrate contents after 2, 6 and 10 months.

Propagation times last according to the environment from December to May. Main propagation time is from February to March with high temperatures and rainfall. However, in few regions below 1900 m propagation is done in May to provide enough moisture during the long rainy season from June to September. At altitudes above 2400 m propagation is done already in December to provide enough heat. In this case special treatment is necessary to provide sufficient moisture. In one region propagation was practised always in February and March regardless of altitude but farmers at low altitudes complained about the quality of sprouts and often bought them from highland farmers.

These observations were proved by the vegetative measurements of the field trial while analysis of contents did not show any significant difference. For optimum production of enset sprouts propagation has to be adopted to the different climates.

Keywords: Climate, enset, *Ensete ventricosum*, Ethiopia, propagation, sprout development