

### Weed control

- Weed infestation is likely at early stages of the crop cultivation. Weeds should be removed manually, but board-leaf weeds can be controlled with herbicide.

### Pests and diseases

- Red spider mites and shoot borers are the common pests that attack Brachiaria grass.
- Some of the diseases observed in Kenya include rust, ergot, smut and leaf spots.

### Harvesting

- Brachiaria grass is suitable for both cut-and-carry and grazing systems, and can be conserved as hay and silage.
- The first crop is harvested four–five months after planting by cutting at a height of 5 cm above the ground.
- Subsequent harvest can be made at very 8-12 weeks depending on soil moisture and nutrients.

### About AVCD

This material was produced on behalf of the Feed the Future Kenya Accelerated Value Chain Development (AVCD) program. This program seeks to widely apply technologies and innovations for four value chains—dairy, livestock, staple drought tolerant crops and staple root crops—in order to competitively and sustainably increase productivity, contributing to inclusive agricultural growth, nutrition and food security in the country. The main goal of AVCD is to sustainably reduce poverty and hunger in the Feed the Future zones of influence in Kenya.

Focusing on the livestock, dairy, staple crops root crops and staple drought tolerant crops value chains in Kenya, AVCD aims to lift 317,000 households out of poverty, making them food secure and enabling their transition from subsistence to market-orientated farming.

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# Brachiaria grass: New forage option for sub-Saharan Africa



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## 1. Introduction

Brachiaria, a native African grass, is important constituent of natural vegetation across sub-Saharan Africa. Brachiaria grass consists of over 100 species but only four species are widely evaluated as cultivated pastures in tropical Africa. It is the most extensively cultivated forage in South America, Australia and East Asia. However, the use of Brachiaria as cultivated forages in Africa is extremely limited.

## 2. Benefits of brachiaria

Brachiaria grass produces a lot of nutritious biomass (as much as 15 tonnes of dry matter per acre/year), which in turn, when fed to livestock, increases **milk and meat production**. Brachiaria is drought tolerant and adapted to low fertility soils of sub-Saharan Africa; it can play a significant role in soil fertility improvement, soil conservation, increasing bio-diversity and minimizing greenhouse gas emissions.

## 3. Production environments

- Brachiaria grows well in different agro-ecological zones of tropical Africa. It performs best in sub-humid and humid environments where rainfalls surpass 700 mm and mean temperature exceeds 19°C.
- Lower temperatures slow down the growth rates, hence the Brachiaria grass performs poorly 1800 m above the sea level.
- It grows on a wide range of soil types including those of low fertility.
- Locations that experience longer dry seasons of over five months are not suitable for Brachiaria, unless there is provision for irrigation.

## 4. Brachiaria production

### Land preparation

- Plough, harrow and thoroughly mix soil with well cured manures at the rate of 2–4 tonnes/acre.
- In cases where the soils are low in phosphorus, it is advisable to apply 100 kg triple super phosphate fertilizer per acre.

### Establishment

- Brachiaria can be established from seeds or rooted tillers (plant shoots) and stem cuttings with rooting nodes.

Photo 1: Brachiaria root splits



### Seeds

- Create shallow furrows (1–2 cm deep) spaced at 50 cm from the onset of rains.
- To plant, continuously drill seeds along the furrows and cover with soil.
- An acre of land requires 2–3 kg of good quality seeds.
- Alternatively, seeds can be first sown in nursery bed and seedlings transplanted to the main plots at the age of six–eight weeks.
- In the nursery bed, seeds are sown in furrows spaced at 5 cm and mulched with dry grass.

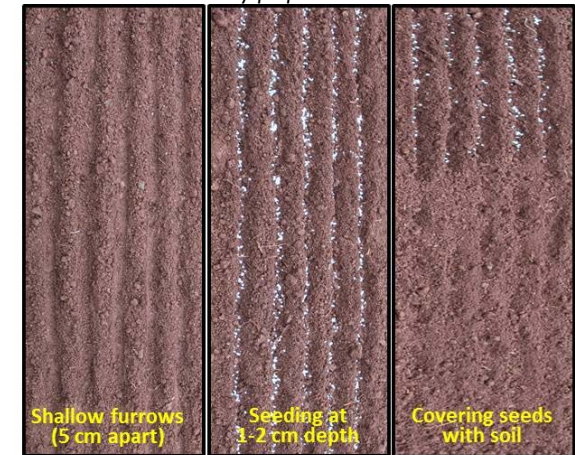
Photo 2: Brachiaria root split planting



### Rooted tillers

- The Brachiaria tillers with roots can be used as planting materials. Two–three tillers are planted on each hill **at a spacing of 50 cm between rows and 25 cm within the rows**.
- Planting of rooted tillers should be performed at onset of rainy season **or transplant should be irrigated for proper establishment**.
- A total of 64,000–96,000 tillers are required per acre.

Photo 3: Brachiaria nursery preparation



### Varieties

- *Brachiaria decumbens* cv. Basilisk, *B. brizantha* cv. MG4, *B. brizantha* cv. Platã, and *B. brizantha* cv. Xaraés are the best bet varieties for semi-arid, sub-humid and humid areas of Kenya and Rwanda.
- Brachiaria hybrid cv. Mulato II is suitable for coastal low lands.

### Manure and fertilizer

- The pasture in the 'cut-and-carry system' removes substantial amount of soil nutrients.
- To maintain soil fertility, it is necessary to apply 2–4 tonnes of well-cured manure per acre.
- Brachiaria is highly responsive to nitrogen; application of 80 kg calcium ammonium nitrate fertilizer per acre/season is advised.