



# Bush Rye (*Enteropogon macrostachyus*)

## 1. Ecology

### Agro-ecological zones

Mainly lowlands, zones IV, V, VI.

### Soil requirement / types

Adapted to loose sandy loam and loam soil but can also grow on alluvial silts and rocky soils with pH 6 to 7.

### Moisture

Requires rainfall of 575mm per annum.

### Temperature

Tolerant to drought.

Optimum temperature of 25-35 degrees.

## 2. Agronomy

### Land preparation

Plough with disc and hurrow to fine tilt for minimum tillage use a chisel/subsoiler.

### Sowing

Sowing is carried out through broadcasting or drilling in furrows at 10 Kg/ha.

Light covering is necessary to ensure contact with the soil.

Spacing of 50cm between rows.

### Fertilizer

Applied at the rate of 50Kg/acre of DAP especially under drilling.

### Weeding

Manually or use of selective herbicides against broadleaved plants.

### Pest challenge

None of economic value.

### Disease Challenge

None of economic value.

### Harvesting & storage

Cutting stage at 40-50% flowering. Dried, baled and stored as hay in a sheltered, well aerated feed store.

## 3. Nutritive value

### Nutritive composition

Crude protein: 6-12%

Crude fibre: 30%

Neutral detergent fibre (NDF): 74.9%

Acid detergent fibre (ADF): 38.8%

Organic matter digestibility: 27.8%

Metabolizable energy (ME) – 8.0 MJ/kg DM

### Palatability

High

### Formulation with other forages

Combine at a ratio of 1 legume:3 grass parts.

## 4. Yield

### Dry matter

2-5 t/ha per annum

## 5. Advantages

- Drought tolerant.
- Fully covers the ground within few seasons thus low weed infestation in subsequent seasons.
- It is tolerant to fire.

## 6. Disadvantages

- Susceptible to leaf rusts.
- Not tolerant to close mowing.

## About the implementing project

*The Integrated & Climate Smart Innovations for Agro-Pastoralist Economies and Landscapes in Kenya's Arid and Semi-arid Lands (ICSIAPL) is a three-year (2021 – 2023) project funded by the European Union (EU) and the Ministry of Foreign Affairs of the Kingdom of the Netherlands (DGIS).*

*The project is implemented by SNV Netherlands Development Organisation, SNV, (lead partner) and the Kenya Agricultural and Livestock Research Organization, KALRO (research partner).*

*The objective of the project is to enhance the livelihoods of agro-pastoralist communities through improved forage production and sustainable landscape management. It will also upscale commercialisation of climate smart innovations while creating an enabling policy environment for the livestock sector.*

*SNV is a not-for-profit international development organisation that makes a lasting difference in the lives of people living in poverty by helping them raise incomes and access basic services.*

*KALRO is the National agricultural and livestock research organization in Kenya mandated to coordinate agricultural research in technology.*

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