



Panicum Maximum Cv Massai

1. Ecology

Agro-ecological zones

Mainly lowlands, zones IV & V.

Soil requirement / types

Requires low to medium fertile soils with good drainage, low tolerance to water logging, pH 4.5-8

Moisture

Minimum of 800 mm per annum

Temperature

Ideal growth temperature is 30 – 35 degrees the minimum being 15 degrees

2. Agronomy

Land preparation

Plough with disc and hurrow to fine tilth. For minimum tillage use a chisel/subsoiler

Sowing

Sowing is carried out through broadcasting (6-8 kg/ha) and drilling in furrows at 4 Kg/ha.

Seed place on the surface or no deeper than 2 cm followed by light covering with tree branches or bloom to ensure contact with the soil.

Spacing of 50cm between rows.

Fertilizer

Use 20-40kg/ha P at planting, Top dressing 100Kg N/Ha preferably after cutting

Weeding

Manually or use of selective herbicides against broadleaved plants.

Pest challenge

Resistant to small levels for leafhopper populations.

Disease challenge

None of economic value.

Harvesting & storage

Ready for harvest 75-100 days after planting Harvesting can be done by hand or with a mechanical harvester.

Cutting height of 5cm above ground recommended.

Conserved through drying and bailing.

3. Nutritive value

Nutritive composition

Crude protein: 9.6%

Neutral detergent fibre (NDF): 65.8%

Acid detergent fibre (ADF): 34.7%

Organic matter digestibility: 63.1%

Palatability

High

Formulation with other forages

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

4. Yield

Dry matter

10-15 t/ha/annum

5. Advantages

- Drought tolerant
- Rapid growth
- Can be intercropped with all legumes
- It is a perennial crop
- High tolerance to cold

6. Disadvantages

- Tolerance to water logging – low to medium
- Not suitable for silage

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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