

Napier Grass – A Super Fodder Crop

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Abstract

Fodder crop is any agricultural crop, or diet given specifically to domestic or dairy animals such as cattle, horses, pigs, rabbits. Fodder is given to animals as they don't forage it for themselves. One of such fodder crops is Napier Grass which is rich in protein, belonging to family *poaceae*.



Introduction

Napier Grass (*Pennisetum purpurum*), also known as Elephant grass or Uganda Grass as it is native to African grasslands. Napier grass is a perennial tropical grass. Earlier its wild species was used primarily for grazing purpose. But now-a-days Napier grass is also used for push-pull agricultural pest management (APM). This technique includes push as-well-as pull crops. Push crops are planted alongside field for repelling pests while pull crops on the perimeter of the field which draws insects from the field or we can say that it pulls insects from the fields. This crop is used for the protection of arid soil from soil erosion and also used for improving soil fertility.

Keyword - APM, arid land, erosion, perennial, perimeter, Push-pull,

Description

Napier grass is a monocot grass belonging family *Poaceae*. It is a c4 monocot grass. This grass grows tall and form clumps like bamboo. Napier grass can be grown on marginal land or arid, tropical soils.

Classification

Scientific Name - *Pennisetum Purpurem*

Family- Poaceae

Kingdom - Plantea

Order - Poales

Sub-Family – Panicoideae

Propagation

It is best grown in tropical and sub-tropical regions. Napier grass can be grown at an altitude of 1500-2000 m above sea level. Temperature required for propagation of Napier grass ranges between 25- 40⁰C. The main method of propagation is by stem cutting. The cuttings or disks or slips with 2 to 5 internodes.

Napier Grass Plantation Scheme

Root stalks/disks are sown on the edges of trench, or on the ridges or furrows.

Land Preperation

Disc harrowing or deep ploughing followed by ploughing with rotavator for fine bed preparation. After that ridge maker is used for making ridges (potato seeder and seeder or plough may also be used if ridge maker is not available).

Spacing

1- Ridge And Furrow Method

- Plant to plant- 50 to 60 cm
- Ridges and furrows – 90 to 100 cm
- Should be planted on ridges or furrows.

2- Trench Method

- Distance between 2 trench line- 120 cm or 4 feet
- Width of trench- 30 cm
- Depth of trench- 30 cm
- Should be planted on the edges of trench.



Irrigation Requirements;

- Should be watered on third day
- Irrigation should be done every week or at a gap of 7-10 days depending on type of soil
- Water from kitchen and waste water from animal shed may also be used.

Nutrient Requirement

Application of NPK in napier grass should be done on the basis of soil nutrient test recommendation as much as possible or if, there is no soil testing done then follow the recommended dose of 150:50:40 of NPK/ha. Ratio of NPK dose/application should be 2:1:1 .

Basal application of full dose of PK and 50% of N at the time or before plating and remaining 50% of N on 30 DAS (days after sowing), also repeat the basal application of 70-80 kg of N/cut for better yield. Application of Azospirillum 2kg, Phospho bacterium 2kg and Azophos 4kg with 70% of N and P for enhancing yield and reducing fertilizer demand by 25%. FYM (farm yard manure) 25-30tonnes/ha.

Nutritional Value of Napier Grass

Napier grass is a high yielding green forage crop, containing rich amount of nutrients and fibre. Nutrient composition is as follows:-

- Protein – 17-18%
- Crude fibre – 25-28%
- Digestible nutrient – 55-60%