Rhodes Grass (Chloris gayana)

An important tropical grass widespread in Kenya and other tropical countries. It is a useful forage for pasture and hay, drought-resistant and very productive, of high quality when young. In Kenya, it is mainly used for hay production. Rhodes grass is a high energy and fiber fodder.

Land Preparation and Planting

- Rhodes grass will grow on most well drained soils, providing fertility is adequate
- Rhodes grass can be planted from seeds or propagated vegetatively.
- For vegetative propagation, larger clumps are cut into pieces and planted at 1 m distance from each other.
- You need 1-2 kg of seeds per hectare.
- If you are using seeds, because Rhodes grass seeds are fluffy, they may need to be coated or mixed with a carrier to improve the flow through the seeder.
- Seeds can also be broadcasted or shallow-drilled (5 -10 mm depth).
- The seeds can germinate under dry conditions provided that the soil has residual moisture.
- The seeds establish readily on a well-prepared seedbed.
- Mulching might help establishment after sowing. As soon as favorable conditions occur the grass resumes active growth and it provides full groundcover within 3 months of Planting.

Management

- It is advisable to use an establishment application of say 200 - 300 kg/ha of superphosphate on less fertile soils.
- A post-emergence application of 100 kg/ha of urea (= 46 kg/ha N) in pure stands will stimulate more rapid stand development.
- After every harvest of Rhodes grass, add nitrogenous fertilizer or manure.
- When grass is well established, cattle can be allowed to graze into the Rhodes grass fields.
- Only allow light grazing over short periods to maintain Rhodes grass in a leafy and highly nutritive condition.
- Improve stand longevity through seedlings by allowing newly established stands to flower and set seeds before being grazed.
- Stands require good management and added fertilizer (N) if long production (over 3 years) is intended.

Harvesting

- Rhodes grass is very tolerant to either cutting and grazing
- The stand begins to produce valuable forage within 6 months, though the highest yield is obtained during the second year of cultivation.
- The stand should be maintained in a leafy condition by fairly regular cutting or grazing, since feeding value declines rapidly with onset of flowering
- Too frequent cutting or grazing (say every 14 days) leads to production losses and stand decline
- The grass makes good hay if cut at or just before very early flowering, giving up to 6, 25- to 50-day harvests.
- Rhodes grass is a persistent, drought resistant and highly productive species. The highest recorded yield is about 30-40 t DM/ha while the average yield is in the 10-16 t DM/ha rang.

Seed production

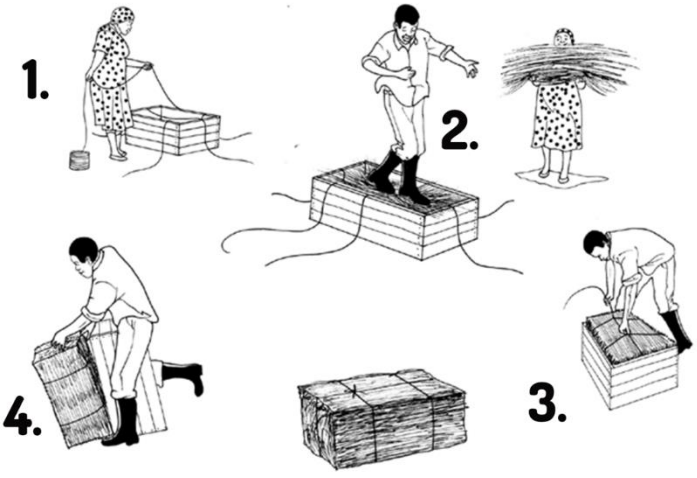
- Up to three crops/year can be produced in most cultivars, but only one or two in 'Callide'. Crops are fertilized with 50 kg/ha N on fertile soils, or 100 - 150 kg/ha N on infertile soils.
- Header harvested yields of 100-200 kg/ha can be achieved from properly managed crops.

Conservation and Feeding

- Crude protein levels vary with age of regrowth and level of available soil nitrogen, from about 17% (on a DM basis) in very young leaf, to 3% in old leaves. Similarly, digestibility may vary from 80% in very young growth to 40% in older growth.
- Young growth is very palatable, particularly in 'Callide'. Palatability declines with age, more rapidly with the onset of seeding
- It can carry about 1 - 4 cattle/ha depending on pasture productivity and size of animal. Annual live weight gains of up to 170 kg/head are achievable. Production levels decline without a vigorous legume or the use of fertilizer nitrogen.
- Hay can be mixed with other protein rich forages and concentrates as part of Total mixed ration.

Making hay

- Rhodes grass is mainly conserved as hay but can also be used in silage making
- Hay should be made when its dry to ensure the moisture content is low to avoid rotting
- The crop should be dried for at least one day before baling.
- Hay can be made at home or using tractors and balers
- Hay should then be kept in store with proper wind circulation, and raised beds for proper wind circulation
- The store should also protect the hay from insects and rain
- Steps in making hay are illustrated in the figure below.



Acknowledgements

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