



agriculture & rural development

Department:
agriculture
& rural development
PROVINCE OF KWAZULU-NATAL

ESTABLISHMENT OF KIKUYU

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Introduction

Kikuyu is a highly nutritious summer growing creeping perennial grass that is adapted to a wide range of soil and climatic conditions. Best production is obtained when grown in areas receiving more than 700 mm of rainfall. Although suited to most soils it is not advisable to grow kikuyu on soils subjected to waterlogging, on heavy bottomland soils nor on sandy or very shallow soils (there are other species better suited to these situations).

There are many advantages to planting kikuyu for animal feed. These include *inter alia*, easy to establish, can be planted on steep and / or rocky slopes, can be established without the need for machinery or special equipment, can withstand severe defoliation, is frost resistant, provides for good animal performance, provides for reasonable foggage (standing hay), can be used for silage and hay, can be oversown with temperate grasses (*e.g. annual ryegrass*) and fodder radish for winter feed, is reasonably drought tolerant, can withstand being burnt, planting material is usually close at hand, an excellent soil erosion control species and promotes water harvest.

Although the best production and animal performance will be obtained from rotational grazing, kikuyu can be continuously grazed.

Establishment

Kikuyu can be established using either vegetative material (runners: stolons and 1 or rhizomes) or seed. Establishing a kikuyu pasture from seed is slower than establishing with vegetative material.

Seeded cultivars are not generally recommended. Use of seeded cultivars can result in kikuyu being spread into arable lands by animals. When seed is used conventional pasture establishment techniques are recommended. Special care must be taken to control weeds as the kikuyu seedlings are sensitive to competition from weeds. Also, in areas which experience frost, seeding should take place at least eight to ten weeks before the first expected frost.

Vegetative establishment

There are several methods that can be used to establish kikuyu vegetatively. The actual method used will depend on the resources available (implements, labour, funds), the terrain (steep, stony, arable) and on the availability of planting material.

Vegetative establishment can commence once the spring rains have started. Planting should always be into moist soil. With the exception of spot planting (where no seedbed preparation is required), planting should be into a previously prepared area (fertilised, ploughed and disced).

Spot planting

Kikuyu can be spot planted in areas that are too steep or stony for machinery to be used. Spot planting can also be used on arable areas where machinery is not available. The following procedure has proved successful:

Clear the over-burden (excess grass, old crops etc) by burning, heavy grazing or spraying with a herbicide, followed by burning.

a series of indentations, roughly 20cm square and 4 to 6cm deep, are made with a hoe at 1 m intervals in the veld or land. Spacings closer than 1 m will result in a quicker cover by the kikuyu.

Two (2) teaspoons of a phosphorous fertiliser are spread on the bottom of the indentation and, preferably, covered with a thin layer of soil by 'kicking' soil into the indentation.



Spot planting kikuyu. The 20 x 20 cm indentation

- A 20cm square divot (sod) of kikuyu is then placed in the indentation.
- The divot is covered (by foot) with soil removed when making the indentation.
- The covered divot of kikuyu is then compacted by foot.

Planting material: It is important that the divot that is placed in the indentation is a compact sod and does not consist of loose runners (stolons and rhizomes)

Disc

An off-set disc can be used to remove the kikuyu planting material as well as to incorporate the material into the soil.

The disc should be set to 'cut' to a depth of 10 to 15 cm. After discing sods 'out' the sods are picked up and spread evenly over the land to be planted. This area is then lightly disced (10 to 15cm deep), preferably twice, before rolling.

Plough

A single, 2 furrow or 3 furrow mouldboard plough can be used to draw furrows to accommodate the planting material (roots and runners). A row width of 90cm is recommended. If a 3 furrow mouldboard plough is used then the middle mouldboard is removed. The furrow should be about 10 to 15cm deep. Planting material (roots and runners) is then placed in the row with about 5cm of leaf above the ground level. Roll, preferably with the tractor wheel, as soon as possible after planting.



The divot to be planted must be compact and not loose runners

Rotovator (rotary plough)

Kikuyu can be lifted and incorporated with a rotovator. The proven method is to lift the rear flap of the rotovator when 'lifting' the planting material, and to close the rear flap when 'incorporating' the runners (i.e. after the lifted runners have been spread over the land to be planted). Tractor speed is important for lifting and incorporating runners. The tractor speed should be at walking pace (PTO speed 450rpm). For both lifting and incorporating runners the rotovator should be set to a depth of 6 to 10 cm: this depth is crucial to success.



The planted divot before covering with soil and compacting by foot

Excess leaf should be removed (by grazing or mowing) before lifting the runners. Rolling, following incorporation of the runners, is of cardinal importance. Roll at least twice with a cambridge roller.

Planting material

Seventy five 50kg fertiliser bags of roots per hectare are required for the disc, plough and rotovator methods of establishment. One hectare of kikuyu will plant about five hectares of new pasture. It is advisable to graze or mow the kikuyu before lifting the planting material.

Irrigation

If irrigation is available this should be applied immediately after planting and rolling to facilitate establishment.

Utilisation following planting

Irrespective of whether the spot planting, disc, mouldboard plough or rotovator method of establishment is used it is important to graze the new pasture as soon as the roots cannot be pulled out by the grazing animal. Grazing encourages lateral spreading of kikuyu. The application of fertilisers, particularly nitrogen, should commence once growth becomes evident in the newly planted grass. When kikuyu is spot planted into the veld it is advisable to apply additional phosphorous containing fertiliser around the spreading divot to encourage stolon and root growth away from the parent plant.