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Rhodes grass

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Rhodes grass (*Chloris gayana*) is a summer-growing, stoloniferous perennial, whose runners provide good soil cover for erosion control. Rhodes grass is adapted to a wide range of soils, from infertile sands to fertile brigalow clays. It is difficult to establish and have it persist on heavy cracking clay soils. Rhodes grass does not tolerate drought or flooding well and is best adapted to areas where annual rainfall exceeds 600 mm. It

is only moderately tolerant of frost, but tolerant of salinity and cool burning. Low oxalate concentrations make Rhodes grass a valuable pasture grass for horses.

Varieties

Pioneer, also known as commercial Rhodes grass, is an early-flowering, erect plant with moderate leafiness. Because it will run to flower quickly throughout the growing season, its feed quality drops quickly. Pioneer has been superseded by Katambora.

Katambora is later flowering than Pioneer, so remains more leafy and productive into autumn. It is also finer leaved and more stoloniferous.

Callide is later flowering than Katambora, is less cold tolerant and needs a higher rainfall than Pioneer or Katambora, but is more palatable and can be more productive than Pioneer or Katambora under conditions of higher fertility.

Finecut is a variety that has been selected for its improved grazing qualities. It has fine leaves and stems, is early flowering, of uniform maturity and high yielding. Finecut was derived from Katambora.

Topcut developed from Pioneer has been selected for improved haymaking qualities. It has fine leaves and stems, is early flowering, of uniform maturity and is high yielding.



Sowing

When to sow

Sow between October to late February. Farmers are encouraged to use meteorological indicators to assist in determining when the best probability for rain is likely to occur. Sowing in early spring, when evaporation is lower, or mid-summer (January to February) when there is more probability of receiving consecutive rain-days, have the best chance of success.

Seedbed

A prepared seedbed may range from a roughly disturbed soil after a tractor operation to clear weeds, to a fully prepared seedbed that has been fallowed for moisture and nitrogen accumulation and for weed control. The odds of establishing a pasture improve if subsoil moisture is good at sowing. Depending on soil depth, ideally aim for a minimum of 40 cm of wet soil under the seedbed. On light clay soils, the surface 50 mm should be fine and firm.

Seed

Sow 1–2 kg/ha of good quality seed. Increase the seed rate to 3–5 kg/ha for irrigated pasture.



Legumes for Rhodes grass pasture

Most pasture will be sown into old cultivations and on forest or woodland of lower fertility. Sowing an adapted legume with the grass will add nitrogen to the pasture system and will help improve both the quality of grazing and the fertility of the soil. Suitable legumes include [serradella](#) (5 kg/ha podded seed) on the acid sandy soils (solodic sands) and [lucerne](#) (1–1½ kg/ha) and/or [medics](#) (2–4 kg/ha) on neutral to alkaline clay soils.



Sowing method and sowing depth

Seed may be broadcast onto the dry seedbed surface, or shallowly drilled into the dry seedbed with precision planters fitted with presswheels to consolidate the rows. The small seed should not be covered by more than 5 mm of soil.

Seed—soil contact may be improved on non-crusting soils by rollers or presswheels that will firm the seedbed-soil around the seed. Be careful if harrowing after sowing that the small pasture seed is not being buried by more than 5 mm of soil or the shoot might not have the energy to emerge and establish. On sandy loams, good pastures have resulted from broadcasting seed into standing stubble (e.g. oats or wheat) followed by grazing. The animals trample the seed into the soil surface.

The fluffy seed of Rhodes grass can 'bridge' in conventional sowing equipment, but seed boxes able to handling fluffy seeds are now available.

Rhodes grass seed may be pelleted or mixed with a carrier. Mixing the seed with superphosphate (start at 10 kg of super/1 kg of grass seed and increase super if 'bridging' still occurs), will allow it to be sown through the fertiliser box on a combine. Mix only enough seed and fertiliser for one day's use, as longer periods of contact may kill the seed. Clean (sieved) dry sawdust (two times the volume of sawdust to one of seed) may also be used as a carrier.



Establishment

Sowing dry ensures that pasture seed is in the right position to take advantage of the next rainfall to start germination. The seed must maintain close contact with wet soil for about three days to establish a seedling. Sub-soil moisture will sustain the seedling until follow-up rainfall occurs. This rain will also promote the development of secondary roots. This allows the crown of the establishing grass to develop.

Pasture seed in the bottom of shallow tine furrows or small depressions (microsites or surface pitting) in more roughly prepared seedbeds are more likely to establish seedlings because they accumulate water and stay wetter for longer after rain.



Fertiliser

A good fallow before planting will release enough nitrogen to allow the grass to establish, but MAP-S or Phosol (100 kg/ha) can be applied on poor soils or where rainfall is more reliable.

A vigorous legume component will be the best source of nitrogen for the grass in an established dryland pasture as it is usually uneconomic to apply nitrogen fertiliser. Renovation of mature pasture that is showing signs of decline will release nitrogen to rejuvenate the stand for a short time.

With Rhodes grass/serradella pasture on infertile solodic sands in southern Queensland, apply (150 kg/ha) superphosphate at sowing, and a maintenance dressing of (125 kg/ha) superphosphate every two to three years, preferably in wet seasons, to promote legume growth.



Weeds

Weed can compete seriously with both the establishing and developing pasture seedlings. Good cultural practices in the season before sowing (pre-cropping or fallow) will help reduce the weed seed population in the pasture seedbed. Provided they do not interfere with the pasture setting seed, slashing or light grazing may reduce the competition from weeds.

After establishment most broadleaved weeds should be suppressed by a dense vigorous growth of pasture. Although it is generally impractical to use herbicides for broadleaved weed control a number are registered for this purpose. Care should be taken in their selection to avoid killing useful pasture legumes. For further information on herbicide selection consult your company agronomist.



Grazing management

The success of a pasture will depend on its grazing management in the first year. Do not graze until follow-up rainfall allows seedlings to develop a strong root system and set some seed, then graze lightly. Short periods of grazing are preferable to continuous stocking.

In subsequent years, best animal production comes from short to medium growth; but spelling the pasture in late summer will allow Rhodes to set seed and will increase the life of the pasture.

Annual winter legumes will be favoured if the pasture is grazed heavily in the late summer, but this will shorten the life of the pasture if repeated regularly.



Seed production

Seed crops of Rhodes grass can be either direct-headed or swathed. Harvesting should begin when seed starts to drop out of the tips of the seed heads.

Further information

- DPI&F Call Centre open from 8.00 a.m. to 6.00 p.m. Monday to Friday telephone 13 25 23 for the cost of a local call within Queensland, interstate caller 07 3404 6999 or email callweb@dpi.qld.gov.au
- Use PrimeNotes CD for updates from NSW, SA, Vic., and WA Departments of Primary Industries. DPI&F PrimeNotes CD is available from [DPI&F Shop-online](#) and DPI&F Books, GPO Box 46 Brisbane Qld 4001.

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