

Pangola Grass

(Digitaria eriantha)

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DESCRIPTION

Pangola (*Digitaria eriantha*) is a low-growing, creeping perennial grass. It produces stolons (runners), which root at the nodes. These stolons can grow to up to 2 or 3 m during a wet season. The leaves are produced in dense tufts. Pangola resembles couch grass but has thicker stems and longer, broader leaves.

Flowering stems reach a height of 1 m, but do not produce viable seed because pangola is a sterile natural hybrid.



CLIMATE AND SOILS

Pangola is a native of subtropical Africa. It is suitable for areas receiving 1100 mm, or more, of average annual rainfall. Pangola will persist with 900 mm of annual rainfall, but its productivity will be reduced.

It is adapted to a wide range of soil types, from sands to heavy clays. It will withstand several months of waterlogging, but will not persist under prolonged flooding.

Pangola is sensitive to cold weather and its growth ceases when the daily minimum temperature drops below 20 °C. More productive grasses are available for cultivation using irrigation during the colder spells in the dry season.

It is drought tolerant and produces a good amount of green feed soon after the first wet season storms.

PLANTING

As pangola does not produce viable seed, it must be established using cuttings. Cuttings containing at least three nodes should be planted in a well-prepared seedbed and lightly disced to ensure good contact with the soil. Rolling with a rubber-tyred or steel roller is recommended if there is a short dry spell after planting. The planting density should be approximately one cutting per square metre.

Pangola should be planted in January/February during a period when there will be consistent follow-up rain for at least a week after planting. Periods of monsoonal activity are the best planting times. Hot dry days will dehydrate and kill the cuttings.

MANAGEMENT

Source of cuttings: Any established pangola pasture can be used as a source of planting material. Once the pasture is growing strongly in December/January, it puts out vigorous runners, which can be removed by mowing or pulling a tined implement, such as a stick rake or chisel plough through the pasture. It is best to plant the cuttings on the same day; however, they will remain alive for up to five days if covered with wet bags and kept moist.

Normally, enough runners are not available until early January.

If producers do not have access to an established pangola pasture, they can contact the Farm Manager at Berrimah Farm for cuttings to establish a nursery.

Fertiliser Requirements: Pangola strongly responds to nitrogen (N) fertiliser.

For establishing a stand, apply 25 to 100 kg/ha urea (46% N) three to four weeks after planting, followed by a similar application in early-mid March. Apply superphosphate at the rate of 100 to 200 kg/ha close to the time of planting.

N fertiliser is not necessary on grazed pasture, unless a high rate of production is required. Apply 50 to 100 kg/ha superphosphate annually for maintenance. A small application of urea (25 to 10 kg/ha) early in the wet season will stimulate the formation of runners; if applied towards the end of the wet season (early-mid March), it will provide a larger quantity of better quality feed for the dry season.

When pangola is grown for hay production, larger amounts of nutrients are removed in the cut hay, requiring larger amounts of fertiliser to compensate for the losses. To produce over 10 tonnes of hay per hectare, you will need up to 150 kg/ha of urea applied two to three times a year, up to 200 kg/ha of superphosphate and up to 200 kg/ha of muriate of potash.

Yield: Dry matter yields of 4 to 6 t/ha can be achieved without using N fertiliser. By applying 50 kg/ha N fertiliser, yields can be increased to 6 to 8 t/ha; by applying 100 kg/ha N fertiliser, yields can be increased to 8 to 10 t/ha; and by applying 200 kg/ha N fertiliser, yields can be increased to 12 to 15 t/ha. Yields of 20 t/ha can be achieved by applying 400 kg/ha N fertiliser, but at such high levels of application, the probability of N losses increases dramatically.

Grazing: The pasture should be only lightly grazed during the first dry season.

In the wet season of establishment, it is preferable not to graze pangola pasture until May, unless there is an invasion by other grasses. If there is a severe invasion, slash the pasture or allow animals to graze it at a high stocking rate for a short period.

Established pangola grass tolerates overstocking and mismanagement because of its vigorous stoloniferous growth. An annual stocking rate of over two animals per hectare is possible, given adequate fertiliser is used; however, it is recommended to graze 1 to 1.5 animals per hectare.

In trials at Beatrice Hill Farm, the grazing of pangola grass has resulted in better animal live weight gain per hectare compared with the use of most other introduced pasture grasses.

Mixtures: Legumes which could be grown in mixtures with pangola include Amiga, Verano, Wynn, Glenn, calopo and leucaena. Because of its highly competitive nature, pangola tends to choke out most legumes. The legume component can sometimes be maintained if the pasture is regularly grazed in the early-mid wet season.

Quality: Pangola is a palatable and very digestible tropical grass; however, both its digestibility and crude protein content fall dramatically as it matures in the dry season. The standing feed value of pangola grass is higher than that of native and most other introduced tropical grasses during the dry season.

Hay: It is an excellent grass for hay production.

Fire: Pangola is moderately resistant to fire.

PESTS AND DISEASE

Rust (*Puccinia oahuensis*) has been recorded on pangola in the Northern Territory. It is noticed towards the end of the wet season when the growth rate of the grass slows. However, it does not appear to affect production

Crab grass leaf beetle (*Lema rufotincta*) adults and larvae can severely damage young pangola leaf tissue during the early part of the wet season. This problem is generally short-lived since this small beetle is often quickly controlled by natural predators. If the beetle persists, it can be controlled by spraying.

WARNING

Pasture plants have the potential to become weeds in certain situations. To prevent that, ensure that pasture seeds and/or vegetative material is not inadvertently transferred to adjacent properties or road sides.

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