

SIGNAL GRASS

(*Brachiaria decumbens*)

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Signal Grass is an aggressive and highly productive grass that will grow well on acid, infertile soil but will also respond well to better soils, or to the application of farm yard or chemical fertilizers. It is easy to establish, either from seed or from vegetative material and because it forms a heavy mat over the soil, it

strongly resists invasion by weeds, even when heavily grazed. It will spread to cover the area available to it, either by seed or by forming roots at points where the trailing stems touch the ground. It is well accepted by both cattle and small ruminants, and all in all is an excellent pasture grass for acid soils.

Where to Plant Signal Grass

Signal grass will survive in the areas which receive only about 800 mm (31 in) of rain per year, but it does best in areas with more than 1200 mm (47 in) of annual rainfall. It is very drought-tolerant, but is most productive where the dry season is short. It does not tolerate waterlogging for more than a few days at a time, so it should only be grown on well-drained soils. It can be used on soils ranging from very acid to neutral, but is not very productive on alkaline, calcareous soils. It is persistent and well suited for long-term pastures. It is a hardy and aggressive pasture plant but it can become a troublesome weed in cropping areas.

How to Plant Signal Grass

Land preparation should produce a good, fine, weed-free seed bed. As with other crops, this can be done by a combination of ploughing and rotavating, followed by harrowing. Herbicide application can be useful in some cases.

If seed is to be used, it can be sown mechanically or by hand in shallow furrows and lightly covered with not more than 1 cm (0.5 in) of soil. The rows should be no more than 60 cm (2 ft) apart, to ensure a rapid cover. The normal seeding rate is 3–4 kg per ha (3–4 lb per ac). The seed can be broadcast onto the prepared land, using a rate of 4–6 kg per ha (4–7 lb per ac) but establishment will be better if the seed can be covered afterwards by raking or using a spike harrow, since this will prevent ants and birds from collecting the seed.

With vegetative planting, the grass to be used as the parent material should be cut at about 15 cm (6 in) before the clumps are dug up. The clumps should then be broken up into small pieces for planting out. The distance between setts should be about 60 cm (2 ft) both between and within rows. The soil should be well compacted around the newly planted setts to ensure good contact between the plant and the soil. Planting in this way should be carried out when the soil is moist and the rains are expected to continue for at least 6 weeks.

Association with Legumes

It is not easy to grow Signal Grass in association with legumes because it is extremely aggressive. With careful management, mixtures can be maintained over a period of several years with Tropical Kudzu (*Pueraria phaseoloides*) or *Desmodium ovalifolium*, but in most cases, it is best to sow the grass alone. It can be grazed in conjunction with a neighboring protein bank (a pure legume stand, used only in the dry season) to give high levels of animal production all year round.

Management

When the grass is about 40 cm (16 in) tall (usually about 8 to 10 weeks after sowing), it should be heavily grazed for a short period to encourage it to spread out and fill the gaps between rows. Up to 25 cows per ha (10 cows per ac) for about half a day can be used for this purpose. After a further rest period of 4–6 weeks, it should be ready for normal rotational grazing. A rest period of about 4 weeks between grazing is ideal, but even if used under a continuous grazing system, it should never be grazed below a height of about 10 cm (4 in).

Although the grass will persist for several years without additional fertilizer in most soils, regular applications of NKP fertilizers or farmyard manure will make it more productive. If compound fertilizers are used, the chosen formula should contain high levels of nitrogen and phosphorus.

In a well established stand of Signal Grass, weeds will not be a problem. The few bushes and shrubs that survive the competition of the grass can be controlled by the occasional use of the brush-cutter or the cutlass.

PRECAUTION

Although Spittle-bug is not yet a problem in the Caribbean, it is known to seriously attack Signal Grass in South America. For this reason, Signal Grass should not be sown as the only improved pasture, but should rather be seen as one valuable component of the grazing resources on the farm.