

Winter is just around the corner and ryegrass planting is near



Ross Warren, Department of Agriculture and Fisheries, Queensland



Although temperatures are high and summer is in full swing, autumn is just around the corner and ryegrass planting is eminent for those fortunate to have irrigation water. Successfully establishing ryegrass into summer pastures can be challenging, however, prior preparation sets up for increased dry matter yields and milk production throughout the winter and spring and ultimately reduces feed costs.

Preparation and timing

Managing tropical pasture in the lead up to planting is time consuming and often expensive, however, it will ensure a more productive ryegrass season. At least one month before planting, tropical pastures should be mown or aggressively grazed with non-milking stock. This starts controlling residual tropical grass residues that could inhibit ryegrass establishment in the autumn. Removing tropical pasture as hay is another option. This hay will however, be of low quality and requires

nutritional analysis to determine its feeding strategies. However, in a year of low forage availability, it is invaluable.

When to commence planting ryegrass is always a challenge. Every farm has to make a start some time and being aware of the temperature, moisture and insect challenges is critical to establishment and keeping young plants thriving.

Timing planting to coincide with a drop in overnight temperatures is essential to achieve high seedling survival rates. When minimum air temperatures fall

below 15°C, tropical pasture growth slows down, allowing seedlings to compete for sunlight. If the seedlings don't get sunlight within the first few days after germination, they will die. If tropical pastures are competing vigorously it is worth lightly grazing the paddocks to remove the competition from the tropics and ensure sunlight reaches the young ryegrass. A small percentage of ryegrass seedlings may be sacrificed, however, it is much better than losing the majority of young pasture.

When to commence planting ryegrass is always a challenge. Every farm has to make a start some time and being aware of the temperature, moisture and insect challenges is critical to establishment and keeping young plants thriving.

Planting

There are many methods used to plant ryegrass which depend on the region, tropical pasture strength, machinery available and time. Mulch planting is very common in coastal regions and on the Atherton Tablelands and historically has been very successful. There are however, a few considerations. The seeding rate is generally high with this method (e.g. 60 kg/ha). It is recommended that ryegrass seed be broadcast prior to mulching as this increases the chance of soil-seed contact and facilitates moisture access. Making sure the mulch layer is reduced to about 10mm enables ryegrass seedlings to germinate and reach sunlight quickly. Sowing on top of the mulch layer is risky as seedlings that cannot get moisture will rapidly die. Keeping mulch planted ryegrass moist in the establishment phase ensures the highest rate of success with this method.

In addition to mulching there are a number of cultivation options that are used to establish ryegrass. Cultivation physically damages tropical pastures exposing soil. This increases the number of seeds contacting the soil after planting, resulting in increased seedling survival. Full cultivation, light discing, power harrowing and direct drilling are some of the effective methods used to establish ryegrass. In cultivated areas using a roller or press wheels after planting further increases soil-seed contact and promotes a successful establishment.

Another method to increase the success

of ryegrass establishment is through the use of chemical suppression. Glyphosate (e.g. Roundup®) and Paraquat (e.g. Gramoxone®) are considered the most useful in suppressing tropical pasture growth prior to planting ryegrass. It is very important to make sure spray rigs are calibrated prior to spraying pastures to ensure the correct application rates are achieved. Trials at Gatton Research Station showed that applying glyphosate (360 g/L) at 0.7 L/ha two days prior to planting increased the yield of ryegrass and the pasture quality. It is very important to ensure correct application rates are observed with glyphosate, as continual use of higher rates will weaken the tropical pasture sward. This may affect summer pasture yields and allow weeds to compete. Paraquat is essentially a knockdown chemical and is often referred to as "frosting". As an example, an application of Gramoxone 250® at 1.6L/ha one day prior to planting will suppress tropical pastures and increase ryegrass seedling survival. It is very important to observe the safety advice when handling chemicals, Paraquat is particularly dangerous.

Varieties and planting rates

There are so many ryegrass varieties on the market. Making a decision about which to plant can be overwhelming. It is important to remember that regardless of variety, management of ryegrass is the most important factor to achieve the best results. Essentially there are tetraploid and diploid ryegrasses. Tetraploids have a larger seed thus have more energy in the

seed and are often able to establish faster in tropical pasture situations. Diploids usually require a better preparation and undertaking cultivation practices is advisable. These varieties usually form a dense sward and generally yield more dry matter later into the season. Planting rates may be varied depending on the establishment practice, variety and time of year. Seed companies will have broad recommendations for each of their varieties. Research at Gatton and on-farm found that increasing the seeding rate to 70-95 kg/ha increased initial ryegrass plant populations, yield and improved pasture quality. Whilst there are higher costs associated with increasing seeding rate, additional milk production is likely to offset these costs. This practice also compensates for unfavourable planting conditions and non-viable ryegrass seed. This approach increases pasture yield particularly in the first two grazing's and can be used as an autumn feed gap strategy particularly for early planted pastures on some farms.

In a difficult season with limited water for many farmers, decisions regarding ryegrass planting will be important. In an environment of elevated commodity prices, it is even more critical to manage ryegrass pastures to achieve optimal dry matter utilisation and reduce feed costs. With irrigated ryegrass costing around \$120-\$150/ per tonne dry matter, it makes economic sense to make the most of this feed, improve margin over feed cost and extend stored or purchased commodities a little further. ■■

