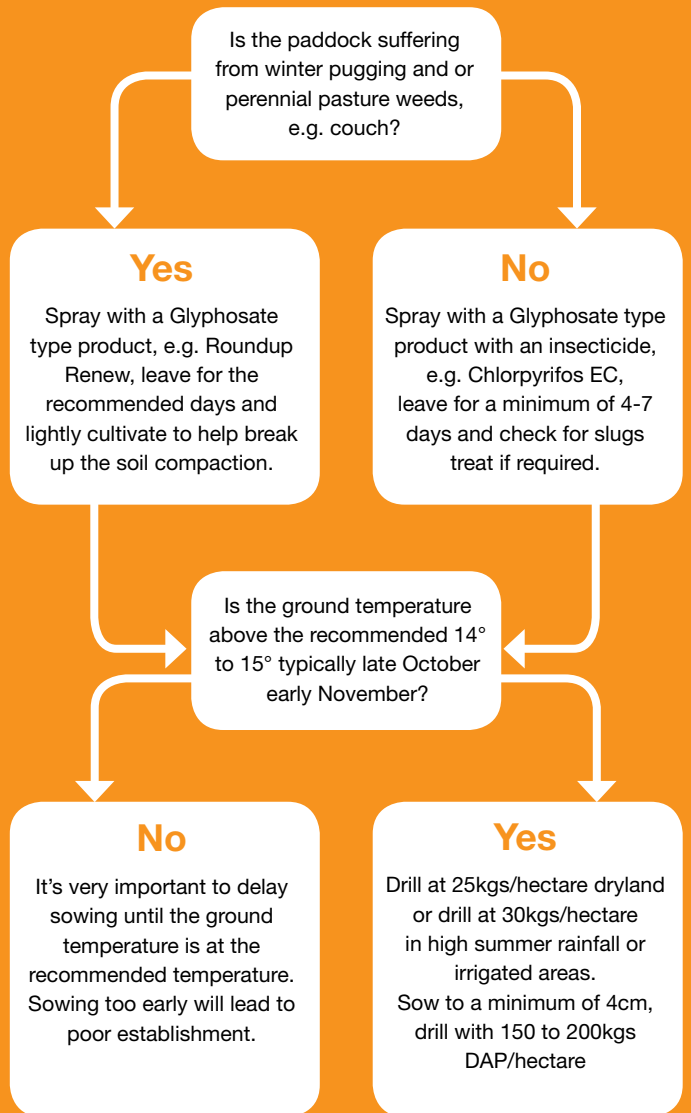
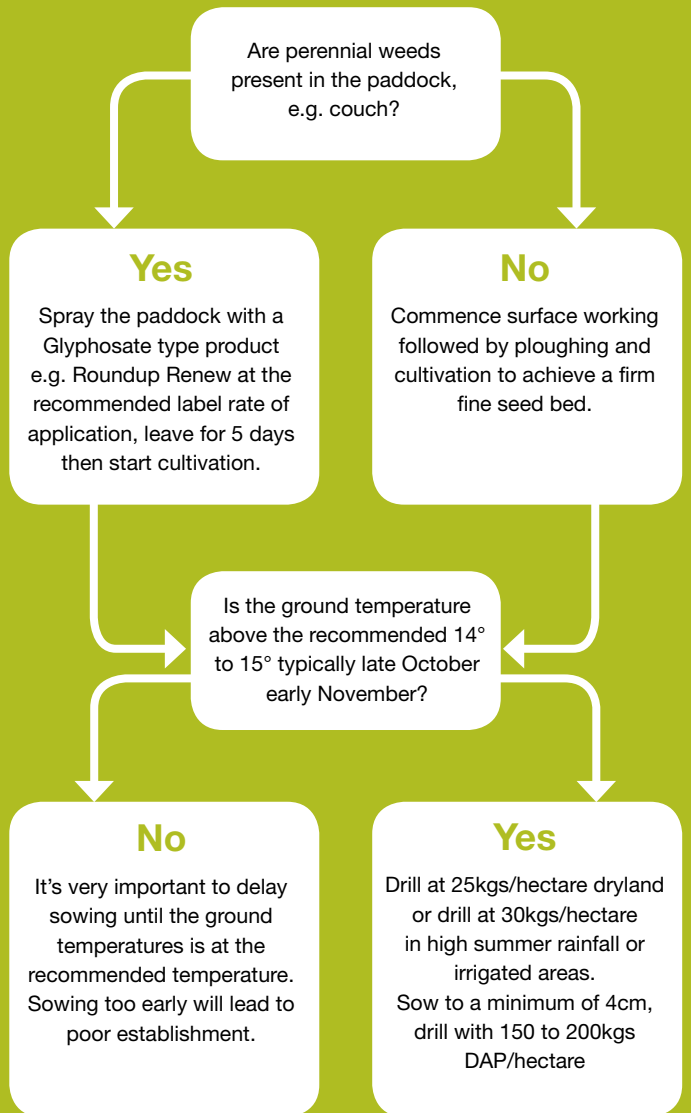


Establishing forage hybrids using the direct drilling method



It is important to always read the label on any chemical used, to follow the instructions and take note of and comply with the information on the label.

Establishing forage hybrids using traditional cultivation methods



It is important to always read the label on any chemical used, to follow the instructions and take note of and comply with the information on the label.

To order or for more information and advice please call

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Sorghum brochure.



www.specseed.co.nz

Sorghum or forage hybrid?

Sorghum is a term incorrectly used to cover summer forage crops more correctly called forage hybrids. Within the two cultivars marketed in New Zealand there are major differences. For example, Sprint commonly known as sorghum is in fact a Sudan x Sudan grass forage hybrid, while SF BMR Revolution is a Sudan grass x sorghum hybrid cross. Other hybrid crosses available include sorghum x sweet sorghum hybrids and sweet sorghum x sweet sorghum hybrids.

Before you start

Normally paddocks used for summer forage crops are selected as part of a pasture renewal programme. Typically coming out of existing older pasture paddocks that need replacing for reasons that may include winter pugging, insect damage, increased content of perennial weeds and general poor dry matter production.

For the best results from your summer forage crops you will need to identify and then address the core problem within the target paddock, before introducing which ever summer forage crop you decide to use. For example, if you are replacing the paddock because of winter pugging, you may have to consider a full traditional cultivation method of establishment, to fix the soil compaction issues this paddock will have. Another example of fixing an existing problem would be the chemical control of perennial weeds, e.g. couch, before drilling the paddock.

Where would you use a forage hybrid?

Forage hybrids are typically drilled in the late spring and harvested over summer until early autumn, the same way we grow traditional crops like summer turnips, summer rapes and summer brassica hybrids e.g. Pasja.

New Zealand farmers have been using summer forage hybrids for several years mainly in the mid to upper North Island. Cooler summer soil temperatures in other regions has restricted the use of forage hybrids until the recent release of new cultivars e.g. Sprint. Sprint has been widely used throughout New Zealand with successful crops grown from Southland to Northland.

Forage hybrids vs. summer forage brassicas

While recognising the important role summer forage brassicas play, some of their problems include; poor dry matter yields during dry summers, only being able to be harvested by stock, weed and pest control issues.

Forage hybrids yield well during dry seasons. Overseas trials show little dry matter yield difference between irrigated and un-irrigated crops. This provides a significant advantage over summer forage brassicas that are

high maintenance during dry seasons, requiring a high level of weed and pest control. As they are a rapidly growing crop, forage hybrids rarely need weed control and don't require pest control thus making the cost of production lower. Should they require weed control then there is a wide range of cost-effective chemicals available for use.

Forage hybrids are more flexible than summer forage brassicas as they can be harvested either by eating or made into balage/silage. Summer forage brassicas, even in years of plenty, need to be eaten by stock.

What will a forage hybrid do for me?

When used for grazing

Forage hybrids can be harvested either by grazing or used for silage/balage. When used for grazing, forage hybrids should only be used as part of a balanced diet. If used alone they probably will not achieve maximum production. Sprint forage hybrid is suitable for grazing dairy, beef and sheep stock.

If given the correct favourable growing conditions your forage hybrid can produce a large amount of dry matter in a short time. For example, within 50 days from planting, under good growing conditions and good soil temperatures, you can get up to 4 tonnes of dry matter per hectare. However its reputation for feed quality is not as impressive.

If your forage hybrid is not harvested at the ideal stage its rapid growth will soon result in the production of a large amount of poor quality feed. We recommend that you use your forage hybrid as a multi-graze option. Crops in the South Island of New Zealand have typically been grazed 3 times while North Island growers have reported 5 grazings from their crops.

We recommend harvesting by grazing when the crop is 80cm high, the adjacent table illustrates what can be achieved from a well managed forage hybrid crop.

When used for balage/silage

Forage hybrids are best harvested for balage or silage in a multi harvesting situation. It is not unreasonable to expect the second and subsequent cuts to be higher in dry matter yield than the first. This is simply because cutting encourages the plants to tiller more.

Applying 60 units of N after the first cut will also encourage fast regrowth.

Table 1. Australian guide to protein and energy from an average grazed forage hybrid crop

Live weight (kg)	Dry matter intake (kg)	Crude protein (%)	Crude protein (g)	ME (MJ/kg)	Total ME (MJ)	Potential liveweight gain (kg/day)
250	5.8	18	1040	9.4	54	0.7
	5.1	16	816	8.6	44	0.5
350	8.1	18	1458	9.4	76	1.0
	7.2	16	1152	8.6	62	0.7
450	10.4	18	1972	9.4	98	1.1
	9.3	16	1488	8.6	80	0.8

*Crops grown under poor conditions may have a lower feed quality, which will lead to lower liveweight gains.

Protein and energy from forage hybrids

Table 1. is a guide to protein and energy from an average forage hybrid crop (Jumbo) grazed by late maturing bulls. The figures in black are when the crop was grazed at the recommended 0.8m high (based on NDF of 52%) the figures in red are when it was grazed at the less than ideal height of 1.5m high (based on NDF of 58%). It should also be noted that forage hybrid should be used as part of a balanced diet.

Forage hybrids are best harvested at 0.8m, or less than 1m in height. Under favourable growing conditions forage hybrid crops can be harvested up to 3 times in the South Island and potentially more in the North Island. To help in quick regrowth and to encourage tillering we recommend you leave a residual of 6cm. The fine stems of Sprint make it ideal for balage/silage as it allows a quicker dry down period.

The best time for cutting is in the late morning as this is normally when sugar levels are close to their highest and it allows sufficient time to wilt before nightfall.

If harvesting for silage we recommend fine chopping it. If harvesting for balage a mower/conditioner will give best results. The use of a suitable inoculant should be considered.

Table 2. Forage hybrid yields

Forage hybrid	Cut 1 (t/DM/ha)	Cut 2 (t/DM/ha)	Cut 3 (t/DM/ha)	Total DM yield (t/ha)
Sprint	3.7	6.5	5.1	15.4

Table 2. shows a typical yield achieved when used for pit silage, harvested between 0.8m and 1m. The table clearly demonstrates the tillering ability of Sprint forage hybrid as we see the dry matter yield increase after the 1st cut.

Forage hybrids that we sell

Currently there are two cultivars of forage hybrids on the market in New Zealand; Sprint and SF BMR Revolution.

Sprint

Sprint is a Sudan x Sudan hybrid and can produce excellent quality feed during hot summers and has been selected for regions where shorter, hot summers exist.

Sprint is the first of a range of forage hybrids being developed by Pacific Seeds Ltd to specifically meet the demands of New Zealand's climatic conditions.

SF BMR Revolution

SF BMR Revolution is a Sudan x Sorghum hybrid and is a versatile option for farms requiring high value/high production summer forage.

SF BMR Revolution suits early planting, is extremely vigorous, palatable, fine stemmed and very leafy.

During the next year or two there will be more cultivars coming onto the New Zealand market. Keep an eye on our website for the latest on product information (www.specseed.co.nz).

We understand that no two farming operations are the same

That's why we specialise in offering expert advice about the right product for your farm. Talk to us about our extensive range of seeds and find the right match of seed to soil, for ultimate results on your farm.

