

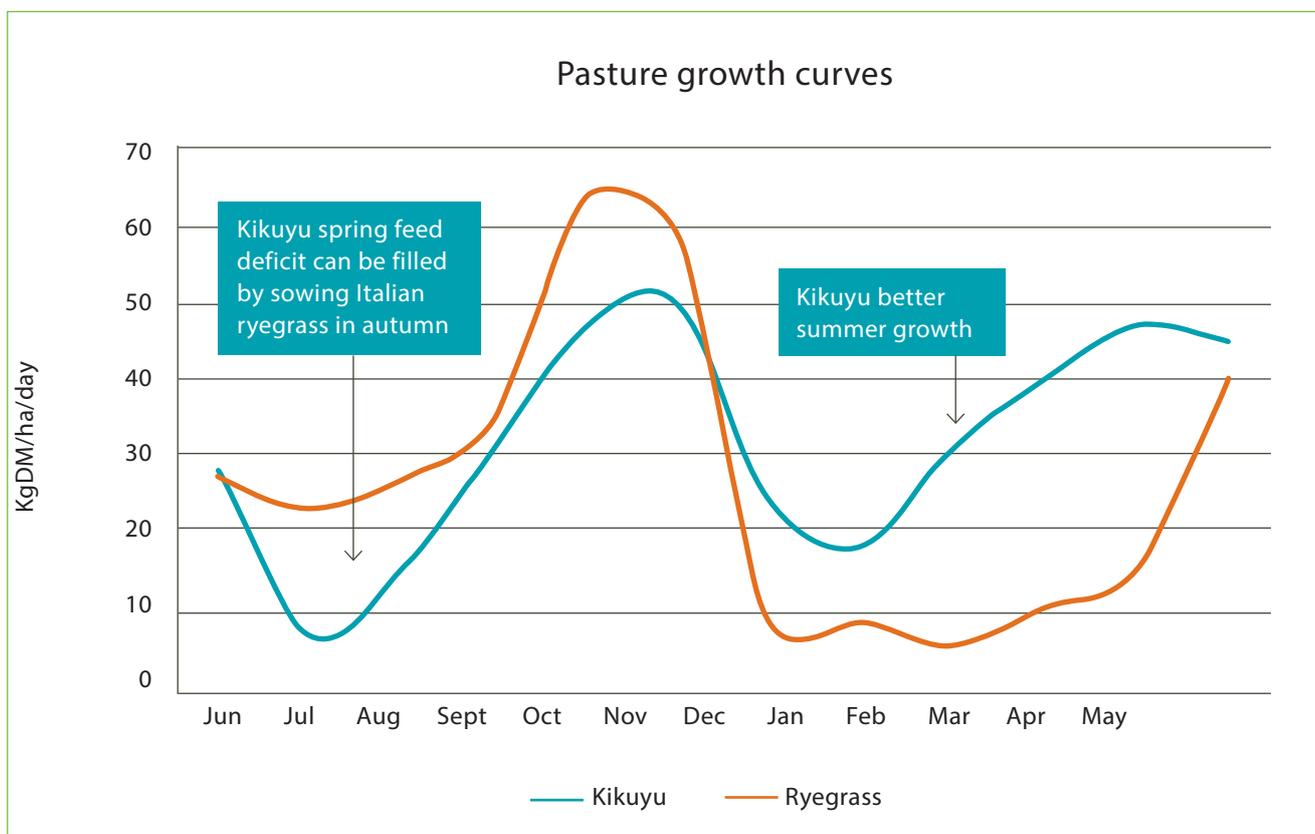
Kikuyu Management Guide

Kikuyu is a subtropical grass which is well established in northern New Zealand and requires very different management to ryegrass-clover based pastures.

Kikuyu has many advantages over ryegrass in the summer – it is more drought tolerant, resistant to pests such as slugs and crickets, and has low facial eczema and grass staggers risk. It also has some disadvantages over ryegrass. It can lose feed quality quickly in autumn and winter, unless well controlled, and it is highly susceptible to frost damage contributing to low pasture cover at calving.

A recent farm systems trial in Northland has shown that farms with well-managed kikuyu based pasture can match the profitability of well-managed ryegrass based farms. (Northland Dairy Development Trust: www.nddt.nz)

The key to this success hinges on changing the kikuyu-dominant pastures to ryegrass-dominant pastures in the autumn and winter through a programme of mulching and drilling Italian ryegrass into the kikuyu. This allows the farm to achieve the higher growth rates of ryegrass in the winter and spring, followed by the advantage of kikuyu growth over the summer. The following graph illustrates this:



Strategies for successful kikuyu management

There are three farm policies that are important in aiding successful kikuyu management.

- Maintain a moderate to high stock pressure of between 2.5 and 3.2 cows/ha, depending on soil type and contour. Manage rotation length and use cost effective supplement to fill feed deficits and maintain pasture quality.
- Maintain 20-40% of the pasture area in permanent pastures (such as perennial ryegrass or tall fescue) through re-grassing after a summer cropping programme. Crops can provide additional quality feed in summer and effectively increases stocking pressure on kikuyu paddocks in autumn.
- Mulch kikuyu to ground level and sow Italian ryegrass in autumn.

MONTHLY MANAGEMENT GUIDE

November – January

- Graze or mow areas with long kikuyu to 2.5cm residual height. This reduces trash going into the autumn mulching programme and allows ryegrasses to establish better

January – March

- Prioritise grazing on kikuyu paddocks to maintain good residuals and keep stocking rate high, or use mechanical control
- Leave ryegrass paddocks out of rotation if not required – it's easier to regain feed quality in ryegrass paddocks; this also reduces facial eczema risk slightly

Mid March – mid May

Mulching programme

- Aim for pasture cover on 1st June of 1800-2000kgDM/ha and do a feed budget through to spring to allow for this
- Aim to mulch all kikuyu dominant paddocks over an 8-week period (mid-March to mid-May)
- Use vertical blades if possible and mulch to 0.5cm to cut stolons; otherwise mow to ground level
- Stagger the mulching evenly over the 2 months to avoid feed shortages in late autumn

Procedure:

- Identify all kikuyu dominant paddocks
- Divide these paddocks evenly over an 8-week period
 - Eg, 40 pdks = 5 per week
 - 30 pdks = 4 per week
 - 80 pdks = 10 per week

Stay on a 30-day rotation and mulch the target number of paddocks per week following grazing. This rotation length aims to keep the autumn/winter pasture cover on dairy farms at target levels in an average year. In some years a shorter rotation will be required to allow for good establishment of ryegrass seedlings.

Seeding

Prioritise the mulching of paddocks being undersown. Undersow in April – this is the most reliable month for establishing ryegrass into kikuyu.



Mulching



Late spring kikuyu based pasture resulting from mulching kikuyu and drilling Italian ryegrass in the previous autumn.

Undersowing programme

- Consider using novel endophyte Italian or short-rotation ryegrass seed
 - This grows further into early summer before kikuyu gets going and minimises a December feed shortage
 - Up to 50% of the Italian ryegrass plants can be present in the second summer so the undersowing may be carried out on a 2-year rotation to minimise cost (half of the kikuyu paddocks undersown each year)
 - Use short rotation annuals when paddocks are to be resprayed in spring as part of a crop rotation
- Remove trash if any (areas of kikuyu build-up should have been mown in January to avoid this)
- Use a disc drill and undersow (more reliable than broadcasting seed)
- Use 15-20 kg/ha ryegrass seed
- Consider using endophyte and seed treatment (endophyte is recommended for multi-year survival)
- Consider using slug bait prior to sowing and/or cricket bait (crickets love living under kikuyu pasture)
- Graze only when the new seedlings survive the “pull test”
- Apply N on these paddocks after the first grazing @ 25-30kgN/ha
- It's important to achieve good residuals in these paddocks through late autumn or early winter – don't undo the good work with mulching and sowing.

Rotation length on kikuyu farms (This is a guide only as autumn conditions vary)

- 18-30d in March
- 30-40d in April
- 50d in May
- 60d+ in June
- These rotation lengths aim to keep the autumn/winter pasture cover on dairy farms above minimums during the kikuyu mulching and ryegrass seedling establishment phase.
- The optimum rotation lengths for managing the quality and growth rates of kikuyu for milk production by grazing alone are likely to be shorter than this.

Regrassing

Sow a summer crop on 8-10% of the farm each spring with the aim of establishing perennial ryegrass and clover pastures via a double or triple spray programme (recommended) as follows:

Double Spray Option

1. Spray glyphosate in spring before sowing crops,
2. Spray glyphosate in autumn before sowing in permanent ryegrass and clover

Triple Spray Option (recommended)

1. Spray glyphosate in autumn before sowing annuals
2. Spray glyphosate in spring before sowing crops,
3. Spray glyphosate in autumn before sowing in permanent ryegrass and clover

Kikuyu will re-establish in re-grassed pastures. Ryegrass pastures compete best in flat paddocks or south facing paddocks. Kikuyu re-establishes quickly (2-3 years) in north facing, rolling or steep paddocks. Evaluate the cost-effectiveness and outcome of the approach for your situation. Spot spraying kikuyu can help slow re-establishment.

Good management can turn this ...



.... into this



This resource was joint funded by the Northland Dairy Development Trust (NDDT). Thank you to the farmers and AgFirst consultants of Northland, specifically Kim Robinson, who contributed their knowledge and photos to this resource.