



### Introduction

*Love it or hate it, Kikuyu is consistently a key feature of the Northland pastoral scene. Formed in 1999, the Northland Kikuyu Action Group Inc (KAG) comprises farmers, advisers and researchers who have conducted trials and commissioned research on practical options for the management of kikuyu-dominant pasture. For more information on the group, or anything contained in this newsletter, please contact Helen Moodie, NZ Landcare Trust, PO Box 3026, Onerahi 0142; 09 430 0954; helen.moodie@landcare.org.nz*

### AVAILABLE NOW!

Three new chapters have been added to the Northland Kikuyu Action Group's series of booklets, which cover information on kikuyu and management of kikuyu dominant pastures.

New topics cover the benefits of controlling kikuyu with breeding cows, late autumn nitrogen responses, and a comparison of pasture growth and nutritive value of kikuyu-dominant and Ryegrass pasture. Previous booklets looked at seven topics including history and agronomy, fertilizer requirements, animal health issues, and management (including the role of mowing and mulching, renovation and strategies for elimination of kikuyu pasture). They are all available in hard copy or CD from Helen Moodie.

### Kikuyu management on the national stage.

Northland pastoral farmers have a rare opportunity this year to rub shoulders and exchange ideas with New Zealand's grassland scientists, researchers and advisers.

The 2009 New Zealand Grassland Association Conference will be held in the Bay of Islands from 3-5 November. The conference programme and attendance fees have been structured to encourage participation from Northland farmers, particularly on November 3.



Two papers that morning will focus on managing pasture in a subtropical environment, with an overseas perspective from Queensland researcher Kevin Lowe, followed by Whangarei Heads dairy farmer Murray Jagger.

Known to many farmers for his work on management of kikuyu-dominant pasture with the Northland Kikuyu Action Group, Murray Jagger is now looking at nutritive deficiencies in kikuyu pasture production and the role of supplements and pasture management required to maximise production from kikuyu-dominant pasture.

### Where to – for Kikuyu?

More than 50 farmers attended the KAG field day at Lindsay and Erica Whyte's property in April and contributed to a lively discussion on future direction for kikuyu research and trial work.

Those present felt there were plenty of challenges around management of kikuyu without the use of a mower/mulcher. However new areas of interest revolved around understanding and improving the feed value of kikuyu, with special interest in the role of autumn-made kikuyu silage and a desire to investigate whether new cultivars of kikuyu could enhance production on farms that rely on kikuyu for summer feed.

An Information Needs Assessment underway in Northland by the Northland Agricultural Forum is also expected to highlight further areas of interest. The Kikuyu Action Group committee will consider further opportunities for management trials over the coming months.

### Three trial projects wrapped up:

Three projects funded by the Sustainable Farming Fund, Northland Beef Council and Meat and Wool New Zealand have now been completed. Full summaries are available.

#### KAG Breeding Cow Project

*Does cleaning up kikuyu in the autumn with breeding cows give better winter and spring pasture growth rates than using normal grazing or mulching?*

A trial on Lindsay and Erica Whytes' Taupo Bay farm found that while neither mulching or hard grazing with breeding cows increased winter or spring pasture growth rates, both were likely to increase animal performance. This was mostly by increasing the amount of ryegrass in the pasture in the spring and subsequent improvement in pasture quality.

Mulching is more effective than hard grazing for improving pasture quality. However, where mulching is not an option, autumn hard grazing of kikuyu-dominant pasture with breeding cows is an effective tool to increase animal production. In comparing the use of breeding cows and mulching to control kikuyu during autumn, they each have pros and cons. Breeding cows don't need diesel or a driver but they can only control a limited area of the farm and you cannot park them in the shed when pasture control time is over. This study reinforces the key point that there are significant benefits in autumn kikuyu control; how that is best achieved will depend on the farm system.



### KAG Nitrogen to Change Pasture Species Project

*Does a late autumn/early winter application of nitrogen encourage earlier growth of temperate grasses, and does this mean better late winter/early spring pasture growth rates?*

A trial carried out on Geff Cookson's Kawakawa farm demonstrated that nitrogen in late autumn may have caused a slight change in pasture species, but this did not result in a carryover benefit to spring pasture production. This study was based on the hypothesis that nitrogen would speed up the emergence of ryegrass, which would lead to a higher proportion of ryegrass and hence pasture production during spring. While there was an indication that there was a higher ryegrass presence during spring this was not statistically significant.

However the trial demonstrated that nitrogen application to kikuyu-dominant pasture in late autumn/early winter is capable of generating an economic response (20 kgDM/kg N) and can be a cost-effective tool for avoiding a severe winter deficit

### KAG Nutritional Comparison Project

*How does the pasture growth, species and nutrition aspects of kikuyu pasture compare with ryegrass pasture – and what is their impact on production and profit?*

Thanks to work carried out by Murray Jagger, we were able to analyse the comparative performance of ryegrass and kikuyu pastures through the year. This information was used to highlight the impact of kikuyu on Northland's production system and predict the impact of changes in sheep and beef farm management on production and profitability.

As expected, there was a trend for ryegrass pasture to have higher growth rates in the winter and for kikuyu to have better summer and autumn growth. However, there was a consistent difference in pasture quality through the monitoring period, with ryegrass consistently 0.5 – 1 ME unit higher than kikuyu pasture.

Protein was low during the second summer (2006/07) and would have come close to limiting production. Soluble sugars followed a marked trend in both kikuyu and ryegrass (with few differences between them), dropping to low levels in the pasture during the autumn.



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Te Manatū Ahuwhenua, Ngāherehere

### What were the 'take home' messages from the sampling and modelling?

Kikuyu pastures are very different from ryegrass pastures:

- Less winter and early spring production
- More summer and autumn production
- Lower energy levels through the year
- Less sensitive to summer dry
- Big fluctuations between kikuyu dominance and ryegrass dominance

### We need to change our animal production systems to suit kikuyu pasture:

#### On Breeding Farms:

- Later calving to better match supply and demand
- Greater feed demand in the autumn to manage feed quality
- Reliance on supplementary feed to manage stock through the winter

#### On Trading Farms:

- Expect lower winter and spring growth rates
- Maintaining stock numbers through the summer and autumn to manage feed quality
- Being proactive about pasture quality in the late spring

### Overall:

**Be cautious about applying policies that are developed based on ryegrass pastures, to kikuyu-dominant pastures.**

*For more information on any of these trials, please refer to the full summary available from the Northland Kikuyu Action Group.*

### Acknowledgements:

Thanks to Murray Jagger, MAF Sustainable Farming Fund, Northland Beef Council, Meat & Wool New Zealand, Ballance Agri-Nutrients, Northland Seed and Supplies, Lindsay & Erica Whyte, Geff Cookson, Dennis & Rachelle O'Callaghan, NZ Landcare Trust, AgFirst Northland and other farmers and rural professionals involved with the project.

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