

NZ GRASSLAND ASSOCIATION

Fuelled by Science, Tempered by Experience

GRASSLAND NEWS

www.grassland.org.nz

June 2023

ISSN 1179-4216

Laurie Copland

In the last newsletter I said I was attending the IGC in Kentucky with about 15 other Kiwis. I'd underestimated, there were 30 names from NZ in the programme - the third largest delegation after the US and China. Although I'm not sure how many from China actually got visa's.

The Conference went well, with a format familiar to a NZGA conference attendee. There were a number of small things that could have been done better. We've had the experience of having an annual conference to iron such wrinkles out. Missing my afternoon cup of tea wasn't ameliorated by cold sweetened black tea! It was good meeting up with attendees from other countries and I caught up with the 3 that the NZGA and NZGT sponsored to attend. See Lulu Jordans report (and our first poem) later in this newsletter.

There were a number of field trips to choose from and most buses left around 6am and got back around 5pm. I chose the Indiana trip that visited a small farm Batesville IN,



that used NZ fencing and grazing systems; the next was a larger farm at Greensburg IN that was an Angus stud and had crops and the 3rd stop was South-east Purdue Agriculture Center. There the main topic was cover crops and that their soils sit on a pan. They used drones to sow seeds, spray and fertilise the crops.



The farms graze fescue pastures (a large no. have wild endophyte) with very high covers, and leave high residuals. I'm not sure why. They apparently have two peaks to grass growth, so it may be that it's to cover the hole in the middle of summer. They also "stack" their pastures for winter i.e. deferred grazing; they keep it as standing hay for the winter. I was told the fescue loses much of its wild endophyte by time its eaten.

On the Sunday before, there was a workshop on the Greenacres farm, a farm set up by a wealthy business man and wife decades ago. It was the basis of the comedy of the same name those of us of a certain age will remember. This farm doesn't use fertiliser, they raise chickens on pasture and winter cattle outside fed on hay. They see themselves as an experimental farm that can try out things that farmers cannot risk attempting. They were building up the fertility of the farm. I was somewhat sceptical how this could be until I spoke to them afterwards. They were importing the feed for the chickens and the hay wasn't grown on the property, they were importing their nutrients.

***The next IGC will be in June 13-18, 2027,
in Leipzig, Germany.***



NZGA for over 80 years

SPONSORED BY AGRESEARCH

JNZG Vol 84 2022

The print copy of this Journal has been posted out to members along with the R&P 8: Pasture and Forage Plants of NZ (5th ed) for those who hadn't received it yet.

If you don't receive a copy in the next week or so, or missed out on R&P 8 please let us know. It has been a rush to meet

the end of June deadline before postal charges increased significantly! These publications are much more valuable to our members than stored in my garage.

Feel free to contact [me](#) if you wish to do a bulk purchase of R&P 8 for team members, farm staff or family as I can offer a discount.

JOURNAL OF NZ GRASSLANDS

Marie Casey

Publishing an annual Journal of the latest grassland science is a key task for NZGA. We see it as being critically important that our science is published in NZ and freely available to the wider agricultural community - researchers, students, agribusiness' and farmers.

However this is not a simple undertaking and it is one that is increasingly complex and costly.

It is more than 12 years since the NZGA removed restrictions to access to our resource of papers. This was for many reasons—key being that open access was going to benefit both our authors and our audience.

Our next major step was moving the Journal from pdf on our website to a dedicated digital Journal accessible [here](#) or via the [NZGA Website](#) on the Journal tab.

For her help and support through this process much of the thanks and acknowledgement has to go to Ruth Falshaw. She took the Journal to the next step for us.


As part of this overall improvement JNZG was able to get a Scopus CiteScore - for many authors this is an important consideration for where they submit their research. The Journal has only been listed for 2 years and the CiteScore has lifted rapidly from 0.6 to 1.3 In a year. For relativity the NZ Journal of Agricultural Research has a CiteScore of 4.8. A quick note re CiteScore versus Impact Factor; the first is for Journals listed in Scopus and the second is for those in Web of Science. However they are similar metrics.

As part of this process all submitted papers are plagiarism checked before peer review. In addition they all now have a **doi** (digital object identifier) which is a unique identifier for a reference.

More recently we have added the capability for authors to add their **ORCID number** - a persistent digital identifier that

distinguishes an author from others with the same or similar names. Authors who wish to, need to do the verification through the [Journal website](#) by logging in and then Edit their profile there.

To Edit Profile:

- Go to  and select edit profile; then select Public tab to verify ORCID number.

This year the Executive is looking at the next step and updating the Editorial process for the Journal and is working towards developing a team of Associate Editors to support a lead Editor. Their role will be to assess papers, allocate reviewers and work with the authors to get the papers published in a timely manner.

One of the major challenges continues to be getting willing reviewers for our papers - yet this is a critical step for a peer reviewed Journal. It is hoped that our Associate Editors will be really valuable due both to their topic knowledge and their networks for reviewers. This has been a considerable challenge for our last two editors.

Finally, this is a plea for those who are asked to review - please consider supporting all our authors by taking on the request. If you aren't sure of the reviewing process or have never done it before ask the Associate Editors for help. Remember you may be an authors whose paper is struggling to get a reviewer one day.

Currently I am filling the role of Editor as we all learn a new Editorial Process. However if anyone is interested in taking on this role in the future feel free to get in touch with me to see what is involved. Note that this is no longer a spreadsheet and email model - it is an online journal and publishing management system!

Ray Brougham Lecture Series 2023

REMINDER to put this in your diary for July!

In 2023 the NZ Grassland Trust awarded the Ray Brougham Trophy to Dr David Chapman for his Leadership, knowledge, and an astute ability to communicate pertinent research on ryegrass-white clover ecology, physiology, productive performance, persistence, nutrient cycling, and genetic improvement to the benefit of New Zealand dairy and sheep/beef farming systems.

This year the lectures return to a face-to face event and will be held in the following venues:

Ruakura	11 July
3.30 – 5.00pm	McMeekan Centre; Ruakura
Palmerston North	12 July
3.30 – 5.00pm	The Factory; Palmerston North
Lincoln	19 July
3.30 – 5.00pm	R2; Ross Building; Lincoln University
Invermay	20 July
3.30 – 5.00pm	George Holmes Room; Invermay

Lulu Jordan is a PhD student at Lincoln University and her travel was supported by NZGA and NZGT to attend the IGC.

On May 14th a committee of organizers from the International Grassland group created the space for international exchanges of research, innovation and restoration stories. From the first keynote speaker, Professor Richard Bardgett from the University of Manchester, the theme of the conference was set, it was clear we were focused on health. Health of ecosystems, health of soil and health of humans and animals in them. This was framed through the lens of a changing world with some significant challenges to face now and in the coming years. Nothing too big, nothing that we can't figure out, just diminishing agricultural land area, an increasing population, an increasing demand for animal protein and food, diminishing freshwater quality, greater climate instability, and in many areas, more pests and less options for controlling these.

Richard presented research focused on ways to enhance and protect grassland soil health. Increasing functional biodiversity in the pastures was a focus, with data presented from the long-term Jenna project showing the positive effects biodiversity of plants had on soil microbe diversity and ecosystem resilience under climatic extremes. The facets of soil health measured and mentioned included; nutrient retention, carbon sequestration, stable soil aggregate formation and water infiltration. However, it was also clear that ecosystems have different priorities to what we might want our pastures to do, and often aboveground production was not an advantage of increasing diversity. A key area of further research identified by Bardgett was studying the effects of grazing interactions on grassland from a framework that incorporates functional traits, plant and animal interactions and evolution.

This talk was followed by another series of case studies from alpine grassland in China and inner Mongolia, identifying overgrazing and the melting of permafrost as an issue for the persistence of grassland. A loss of habitat for grazing animals and restoration projects aimed at finding the best way to restore diversity to areas that have had a legacy of overgrazing.

The volunteer presentations were many, but unfortunately, I could not attend all. Sam Wilson from Massey University presented findings for Plantain's tolerance to waterlogging. Showing that its physiology does give it some moderate tolerance.

Tuesday May 15th

In the morning plenary sessions, I was struck by how the topic of diversity was covered from so many different angles. Sometimes my feelings about New Zealand grassland agriculture is that we really only look at benefits from farming our pastures that make sense from a perspective of production improvement or management ease improve-

ment. Most likely a product of our limited ability to change things that don't pay the bills. However, Isselstein speaking about his research in Germany analyzed the overall state of research and future opportunities in diversifying grassland that allowed ecosystem services to benefit, in a more targeted way. For this, he said "it is necessary to increase the knowledge of trade-offs between different services and the control options through adapted use. This has to be done at the local scale of the paddock but also at the level of the farm or livestock production system". This resonated with me as he made note that all farm systems are different and one result in an area does not necessarily translate to that of another country, climate, or stock regime.

Tuesday morning and afternoon sessions yielded varying perspectives from across the world on livestock production systems that showed different ways of doing things and can be summed up with a simple "horses for courses". Kiwis led the discussion on endophytes and David Stevens did a great job of showing how incredibly confusing feed flows are in a deer farm system with forage cropping, yet how it somehow works. Tuesday afternoon included a very different yet interesting presentation by Paulo Carvalho which looked at whether we could use sheep and cattle grazing behaviors to determine when to allow the stock to move, the grazing residuals and the grazing rotation. The details of how this was achieved escaped me. Later a session on white clover and its future uses in global forage systems by Derrick Woodfield demonstrated convincing progress in breeding white clover with condensed tannins that could go some way in mitigating bloat problems.

Wednesday the 16th was a field day and like many others, the chance to be let out of a stuffy room and onto farms with intriguing fixtures was more than welcome. The tour I went on was called "Green Acres" and it consisted of two farms, both run following regenerative agricultural practices. One had been run that way for more than 70 years and the other a recent convert from 40 years of continuous cropping of maize and soybean. Fascinating observing the soil of both farms, one almost completely lacked a horizon with a very platelike structure and was quite pale. When I asked the soil organic matter content the tour guide replied it was about 0.7 % in the recently converted farm. Around here I was used to seeing around 8 to 12% so I had never seen soil like that. The original farm boasted cattle, sheep and chickens and was used as an educational facility to demonstrate regenerative agriculture practices. The species diversity when I walked through pastures that had been there more than a few years was really mainly made up of tall fescue, white clover with a wee bit of cocksfoot, Kentucky bluegrass and red clover, on a paddock scale there were more species present, but you'd have to walk a good 10 steps to encounter the others. My impression of the property overall was that grazing management was overly lax and it was likely understocked, but the pastures were in good health as were the animals. The facility Green Acres

was making a large effort to contribute to research and solving common problems for farmers who may want to convert to a regenerative system. I commend them for this and could see how much more sustainable pasture grazing practices were for soil and ecosystem health when compared with the alternative of continuous row cropping.

Thursday the 17th saw a return to the ballroom for an interesting presentation by Dr Frederic Leroy on the evolution of humankind in conjunction with the expansion of grassland and the consumption of meat. His research background in Food science and biotechnology was used to emphasize how the products of grassland agriculture (red meat and dairy products) are fundamental for global human health and flourishing. He made a point that plant-only diets, often promoted hand in hand with a world view of sustainability often incorrectly claim environmental and health benefits.

The afternoon sessions were kicked off with Dr Dana Kelly's presentation on the social challenges in Grassland management. This went over everything from farmers in China feeling as if they did not have a voice in decisions made by the government to convert pastureland into resort towns to gender inequity in agriculture across the world. An interesting perspective that made me reflect on how little I'd felt gender discrimination at home. The rest of the afternoon sessions I attended talked about training the next generation of grassland specialists and good mentoring skills. Considering my generation's (millennials) attention span, I thought to myself that those in the position of mentoring, certainly have their work cut out for them!

Thursday saw a conclusion of all presentations finished with a formal dinner which was very tasty.

Summary overall:

I really want to thank the New Zealand Grassland Association for funding me with a scholarship to travel to the international grasslands congress in Kentucky because, without you guys, I would not have had the opportunity to go, nor realize how broad the field of grassland research is worldwide. It was a very valuable experience for me at the beginning of my research career and I hope to go to many more in the future.

I found that overall, the benefits of listening to the speakers over the week of lectures were not so much due to the convincing evidence they were presenting on their field of expertise, but more to the breadth of the concepts within grassland and rangeland management that I had barely considered.

The other obvious benefit was meeting people in the inter-

national grassland industry and making connections that could help me adjust, plan and execute my own research being at the early stages of my PhD in diverse pastures. I was particularly stoked to find someone I could borrow a soil corer from, saving me from digging multiple thousands of holes! But don't worry for character building sake I'll still dig some.

It struck me particularly that there were even speakers covering the importance of sharing the value grassland has with others. I may be different to many of you, but I caught myself realizing that I often reply to the question "What do you do"? With "I watch grass grow". Not a particularly helpful response if we are to go on a crusade shouting grassland benefit to soil, animal and human health, especially given the onslaught of arguments criticizing meat production, dairy production and the benefits of veganism for the environment lalala.

As a result of the conference, I synthesized my own elevator speech for the benefit of our humble pastures and then made a poem, because I like poems. I challenge you to think about it also.

My new elevator will go something like this:

Grass can grow nearly everywhere, crops cannot. We can eat crops, but we can't eat grass. If chickens, pigs and cows are eating crop-based food, then what they consume is arguably in direct competition a human mouth, so why eat so much chicken? If cows eat grass, and we eat beef, then we get a nutritionally balanced protein source from land area we could not otherwise use. We can improve or sustain a healthy environment with well-managed pastureland yet no matter what we crop, if we do it continually, we're damaging the soil and ecosystem function.

When considering that the worldwide population is set to double over the next 50 years, food security is an almost universal issue we will face, however, it will hit subsistence farming hardest. Farmland area worldwide is set to decline, climates to become more unstable and in many areas farming inputs will also be reduced due to regulations and cost. There needs to be an increase in the efficiency with which land is used, an increase in the sustainability of systems, and a decrease in the environmental cost. Time and time again growing permanent pastures well, has been shown to be the best way to improve degraded soils, increase carbon sequestering and improve ecosystem services. Grassland and animal grazing of it has great value and an important place in the future of food security.

MARK the Date

NZGA Conference 2023

"The land, the lakes, the people. This is Rotorua"

Planning is well underway for the next conference to be held at the Rotorua Energy Events Centre from the **14-16th November 2023**.

The Conference dinner will be held at the Rydges Hotel and there is an accommodation discount for conference attendees.

Full details on how to book and claim the discount are available on the grassland.org website [here](#).

Watch out for further details and registration soon.

*"In the vast expanse of grassland wide,
where challenges for food security reside,
A story unfolds of nature's grand plan,
Of grazing livestock, a symbiotic clan.*

*Oh, grassland, woven tapestry of green,
where future's struggles must surely be seen,
With world populations poised to double in pace,
A daunting task, feeding the human race.*

*Crops, they can falter, where grass can prevail,
On every corner, at least browntop won't fail,
For grassland knows no bounds, it conquers all,
From fertile valleys to the southern Alps tall.*

*Yet, the riddle persists, as we ponder and roam,
how to nourish mankind, yet sustain us at home?
Good grazing of livestock, must hold the key,
Unlocking the benefits for my grandsons and me.*

*Grassland, a haven for our ruminant's souls,
As they tread gently, fulfilling their roles,
turning tender cellulose to nutrient-rich meat,
a protein source, that makes a feast complete.*

*But beyond the plate, the wonders unfold,
for grassland's tale is young and is old,
In the dance of ecosystems, it plays a big part,
cycling nutrients, sequestering carbon, a bloody work of art.*

*So, let us treasure these vibrant green lands,
With well-managed pastures and well-calloused hands,
For we face a future of daunting plight,
Yet grasslands and grazing offer lumens of light.*

*So, an ode to our grasslands so diverse and so wide,
Let's forget about pine trees as our "sustainable" guide,
We'll treasure your gifts and the wisdom of this land,
For in your embrace, a secure future we'll withstand".*

Lulu Jordan, May 2023

Attention women in the farming and agriculture sector! You have an amazing opportunity to secure a partial scholarship worth \$1,000 - \$5,000 from Women & Leadership New Zealand. This scholarship opens doors to four exceptional leadership and workplace skill development courses specifically designed for you. Don't miss out on this chance to take your career to new heights!

womenandleadership.co.nz/farmingagriculture

Apply by 15 September 2023

