

Newsletter March 2021

President's Report



Welcome to the first Agronomy Society Newsletter for 2021. As a result of the Covid-19 pandemic the past 12 months have been very different ones to those experienced in the first 49 years of the Agronomy Society. For the first time that I am aware the Agronomy Society Conference was cancelled although we did manage to hold the 2020 Annual General Meeting online. Other planned activities such as the 50th Anniversary Symposium and indeed this Newsletter, also planned as a regular publication for 2020, had to be postponed. As we enter 2021, while the pandemic continues to have a dramatic impact on many aspects of people's lives, the distribution of vaccines now underway gives some optimism that there may be a return to something closer to "normal" life in the not-too-distant future.

Council has reactivated planning for the **50th Anniversary Symposium** which will now take place from 1-2 September both as a physical and online meeting. The theme for the Symposium is unchanged: ***'Environmental impact and solutions for arable and horticultural farm systems'***. On the evening of 1 September there will be a dinner to belatedly celebrate 50 years of the Agronomy Society. Our thanks go to Edith Khaembah, Aimee Dawson, and Murray Craighead for all the work they have undertaken that has enabled us to quickly reactivate the symposium. More details on the symposium are included elsewhere in this newsletter. We look forward to seeing you at the symposium.

The Agronomy Society will once again hold its **2021 Conference** with the New Zealand Grassland Association. The Conference will be in Invercargill. Conference dates are 9-11 November. The theme for the 2021 Agronomy Society Conference is ***'Advancing Agronomy to meet Current and Future Needs'***. This year the Animal Production Society will join us in Invercargill for their Conference. Bringing these three organisations together will make for a wide and varied series of presentations for the conferences. More details on the Agronomy Society Conference, including session topics and key dates for paper submission, can be found elsewhere in this newsletter. We look forward to seeing you at the Conference, especially after the enforced absence in 2020.

One of the many impacts of the global pandemic has been the increased use of online platforms. It is timely therefore to remember that the Agronomy Society is active in social media (thanks to Aimee Dawson). If you are able, we encourage you to contribute to these platforms: **Facebook** ([Agronomy Society of NZ](#)) and **Twitter** ([@nz_agronomy](#)), by using them to inform or promote activities relevant to the Agronomy Society, and also to follow/like/share/comment on the Facebook/Twitter pages and stories. This will help the Agronomy Society and its activities become more widely known.

In my previous President's Report, I commented that most people would prefer to forget 2020, but that hopefully 2021 would be a productive 51st year for the Agronomy Society. With the Symposium in September, the Conference in November, and the Newsletter underway we are well on our way to achieving that goal.

Best wishes, Craig McGill

Short Profile – Murray Craighead

I have been on the executive of Agronomy NZ since 2000 although I cannot remember when I first became involved in the Agronomy Society. Certainly, I can recall presenting papers back in the 1980's and I was aware of the Society's existence when I was an agricultural student.

After graduating from Lincoln University in 1976 with a BAgSc, I travelled to Australia, spending time on farms in northern NSW before starting work for the NSW Department of Agriculture in Sydney. Initially I worked as a research technician on urea foliar absorption in deciduous fruit trees which led to me undertaking a M.Sc. through Macquarie University on the foliar absorption of zinc in plums. In my last year I was also involved in the diagnosis of nutrient disorders by leaf analysis for the Department's regional advisers. This gave me a good grounding on trouble shooting, setting up research trials, radioisotopes, analytical techniques, bioassays, and electron microscopy.



Murray Craighead

Six years later I moved back to New Zealand where I worked for 19 years for Ravensdown Fertiliser Co-operative, based in Christchurch. Initially I was an agronomist for the Upper South Island undertaking field trials, trouble shooting, and training field staff and farm merchants. During this time, I did a great deal of work on arable crop nutrition and nitrogen testing, mainly with cereals and potatoes; and formulating fertiliser programmes many of which are the basis of those still used today. During a

merger with East Coast Fertiliser Co and the formation of Ravensdown in the late 1980s, I became research agronomist and then agronomic development manager. Initially I still undertook research and helped train staff, but there was also a role on the industry Fertiliser Association Research Committee and the organising of Ravensdown contracted research.

In my research role several projects stand out:

- The first was coordinating and publishing a comprehensive series of dryland pastoral trials (14 sites for six years) investigating the use of slow-release phosphate fertilisers containing sulphur. These were to fill the gaps in the MAF national series of phosphate trials.
- A second set of trials, spread over 12 years, led to the development of sulphur fertilisers for South Island hill and high country. These not only developed maxi (high) sulphur fortified supers, but also the timings and rates needed to maximise production through clover persistence.
- I was also involved with Massey University staff on the first precision agriculture trials in New Zealand and in the initial Fertiliser Codes of practice for the fertiliser industry in New Zealand.

In late 2001 I started up my own consultancy business, providing individual farmer advice, and undertaking research and monitoring for various farmer groups. Projects have included monitoring and research on thallium and potassium for both West Coast dairy farms and grapes, and several research projects on the nutrition and crop management of blackcurrants. More recently I have worked on wastewater disposal for the grape industry. I have also taught hydroponics (even in Antarctica!) and pasture production to adult students.

As a sideline, for 12 years, I also ran a small herd of breeding cattle where I lived in North Canterbury. In 2016 my wife and I moved to the Tasman region where we still run some cattle but now concentrate on growing grapes and helping our eldest son produce natural wine. ***So, despite winding down my consultancy business I now seem to spend more time sitting on a tractor. So much for retirement!***

Wine – what is natural wine? - Murray Craighead

In the past decade there has been a worldwide renaissance in the production of boutique wines. Many (younger) people are interested in smaller producers making more traditional wines. Natural wines are part of this journey.

Natural wine is making wine the old-fashioned way with no additives, the way the Greeks and Romans used to do it. It is based on using organic fruit but differs from organic wine in that there is no intervention at the winery stage such as yeasts, sulphur, and fining additives. This makes it very challenging to produce. It can taste slightly different from traditional wines and often benefits from leaving in the glass to aerate for a few minutes.

New Zealand has some of the highest costs of production in the world. Organic fruit production is more complicated as there are severe restrictions on inputs, particularly plant protection and nitrogen inputs. Harvest can be very harrowing with the vagaries of weather, disease, managing labour, particularly under Covid-19 restrictions. While harvest times do not differ from traditional vineyards (March-May), harvesting is by hand for improved fruit quality.

Natural wine needs fruit grown organically and through necessity this involves BioGro certification for this part of the farm. This means any replacement posts cannot be tanalised and when laying down canes for next season we lay down fewer canes than a conventional vineyard to better match nutrient management and maintain air flow. Organically registered fertiliser must be used. Hence yield potential is much lower than for a conventional vineyard.

In spring fungicide spraying starts in earnest. We could spray 15-20 times/season, (more than a conventional vineyard). The programme is based on proactive application of sulphur sprays with restricted use of copper. Without herbicides weed control is by under-vine trimming and cultivation (with variable success), complemented by regular inter-row mowing. Sheep are also used in winter and at times in summer for leaf plucking around the fruiting zone.



Pinot Noir post-leaf plucking the vines using sheep around Christmas

At harvest, depending on the type of wine my son wishes to make, fruit may be destemmed and pressed or whole bunch fermented before pressing later. With no sulphur intervention wines are taken through to dryness so are not sweet. Wine is stored in tanks, barrels, and tinajas (large Spanish clay pots) as a point of difference.

Natural wine is a niche market, in its infancy in New Zealand but with a large following in Europe, US and Japan. Many are as blends as is traditional in Europe, although some straight wines are made (Pinot Noir, Chardonnay). Pét-nat¹ (slightly sparkling) is quite popular, while this year piquette and cider have been made. Currently most wine is exported under the Don & Kindeli wine labels (Alex Craighead Wines), to 21 countries. Most is sold before it is bottled, and demand dictates that most wine is not held as long as my son would like.



Kindeli vines at netting in February

You can perhaps understand now why organic and natural wines can be expensive. On the plus side - without additives in theory there is less of a hangover, unless of course you drink too much.

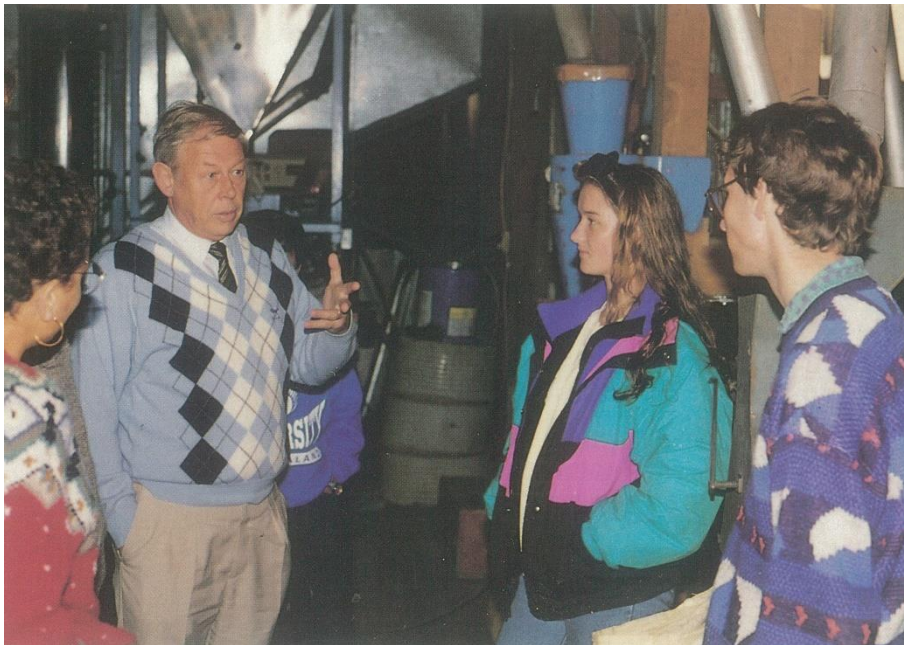
¹ pétillant-naturel

Obituary – Murray Hill

Professor Murray Hill, a fellow of the Agronomy Society passed away on 10 June 2020 after a short illness.

Murray began his career as an undergraduate student at Massey University. Murray then went on to join the New Zealand Department of Agriculture Official Seed Testing Station in Palmerston North, where he eventually became Officer in Charge. At the Station Murray furthered his study completing a Masters in Agricultural Science in Plant Pathology in 1966. A PhD in Agronomy on ryegrass seed production followed, also at Massey University, in 1971. In this study Murray was supported by his first wife Phillipa, who sadly passed away in the late 1980s.

In 1975 Murray moved from the Official Seed Testing Station to become the Founding Director of the Seed Technology Centre at Massey University, where he remained until 1997. This was followed by him setting up the New Zealand Seed Technology Institute at Lincoln University in 1998 where he was the Director and Professor of Seed and Crop Science until he retired in 2004. Both the Seed Technology Centre and the New Zealand Seed Technology Institute had a strong emphasis on developing seed technology capability internationally through the education of students from across the world. Many of Murray's students have gone on to contribute to the seed sectors both in their home countries and internationally.



Murray Hill speaking with Massey University seed students.

After retiring from Lincoln University, Murray and his wife Karen moved to Queensland where they established the Seed Technology Institute Australia, an ISTA-accredited laboratory, at the Gatton campus of the University of Queensland. Following Karen's passing, Murray returned permanently to New Zealand to the lifestyle block in the Wairarapa that he and Karen had been developing. This gave Murray the chance to relax and enjoy another great passion in his life, fishing for trout in the nearby stream.

Murray made a huge contribution to the New Zealand and international seed sectors. His passing ends an era for seeds in New Zealand. We will miss his wit and humour that combined into much good-natured banter. While Murray may have gone his legacy of the many students he educated who continue to contribute to the seed sector will remain.

Agronomy NZ Symposium

As members were aware, due to the Covid-19 pandemic it was prudent to postpone the originally scheduled June 2020 two-day symposium to mark the 50th anniversary of the Agronomy Society of New Zealand.

It is with pleasure we announce that we intend to run the symposium in 2021. Dates for the 2021 symposium are **1-2 September** and will include an anniversary dinner on the 1st. The symposium will be held at **Lincoln University**. We are currently finalising the speakers and programme and will keep members up-to-date on our website when this is finalised: www.agronomysociety.org.nz

The symposium title remains the same '**Environmental impact and solutions for arable and horticultural farm systems**', however there will be some minor changes to accommodate previously unavailable speakers plus a session on new arable industries.

As well as in-theatre attendance, online attendance will be possible via Zoom Webinar. If Covid-19 prevents theatre attendance we will consider still running the symposium and it will be fully online.

Invited speakers are to talk on the following topics:

- Nutrient management for arable systems
- Soil Protection
- Greenhouse gases and carbon sequestration
- Alternative farm systems
- Extracting value from commodity products

2021 Agronomy Conference

'Advancing Agronomy to meet Current and Future Needs'

The 2021 Agronomy Society Conference will be jointly held with the New Zealand Grassland Association and Animal Production Society gatherings in Invercargill from **November 9-11, 2021**.

We are now calling for papers on all aspects of crop agronomy in a New Zealand production context. Papers that consider advancing agronomy to meet current and future needs are strongly encouraged. Topics of interest may include (but are not limited to):

- Crops for food and animal feed
- Crop management for efficient grazing
- Winter cropping
- Grazing management
- Cropping for catchment management
- Mixed farming practices
- Cash and forage crop opportunities
- Crop improvement

Title submissions due: 15 March 2021 (use official template and submit to sharon.woodward@xtra.co.nz)

Full manuscripts due: 8 June 2021

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