

Newsletter November 2019

President's Message



Welcome to what the Council expects will be the first of regular newsletters from the Agronomy Society. The newsletter will be edited by Sharon Woodward, who is also Editor of Agronomy New Zealand. Our thanks go to Sharon for taking on this additional role. The aim of the newsletter is to provide the membership with regular information on Agronomy Society activities. The intention is also to profile members of Council to enable, you the membership, to get to know Council members better. In this issue **Aimee Dawson**, a Council member based in the Science Extension Team at Ballance Agri-Nutrients and, a Massey colleague, **Svetla Sofkova-Bobcheva**, are profiled.

As you would expect with the **Agronomy Society Conference** being held in next week from **5-7th November at the Napier War Memorial Conference Centre** this newsletter has a focus on Conference information. As has been the practice for a number of years the Conference for 2019 will be held jointly with that of the New Zealand Grassland Association. On behalf of the Agronomy Society, I would like to acknowledge and thank the New Zealand Grassland Association for again allowing the Agronomy Society to hold its Conference with their Conference. This joint Conference approach, and in particular the support that comes from the New Zealand Grassland Association in terms of Conference planning organisation has been a key factor in the success of recent Agronomy Society Conferences.

The Agronomy Society also owes thanks to **Stephen Trolove** who has represented the Agronomy Society on the 2019 Grassland Association Conference Local Organising Committee and in particular for the organisation of the Agronomy Society field visits on **Tuesday afternoon (5th November)**. Stephen, with help from **Murray Craighead**, has put together a varied and interesting series of visits for us. Details of the visits can be found elsewhere in this newsletter. In addition, Murray has organised our keynote speaker for the Conference, Hugh Ritchie from Drumpeel Farms. Hugh will talk on "Utilisation of new technologies on Drumpeel farming operation" on **Thursday morning (7th November)**.

Looking forward to next year, the Agronomy Society will also organise a symposium on the theme of "Environmental impact and solutions for cropping systems". The Symposium will be held at Lincoln University in June 2020. More details for the Symposium are included later in the newsletter.

In addition to this newsletter, the Agronomy Society is also increasing its presence on social media. This is being led by Aimee Dawson from Council. An event for the Conference has been set up on the facebook page. This has included establishment of a twitter page (@nz_agronomy) and a facebook page (Agronomy Society of NZ). Council invites members to follow this page and to invite colleagues to like it. Please also make use of these social media to inform or promote activities relevant to the Agronomy Society. This will in turn help the Agronomy Society and its activities become more widely recognised.

In closing, I hope you enjoy the newsletter and look forward to seeing many of you at the Conference.

Best wishes, Craig McGill

Agronomy NZ Field Day:

Murray Craighead

Agronomy NZ have organised a field trip in conjunction with the NZGA/Agronomy NZ Conference being held at the Napier Conference Centre, Marine Parade, Napier, 5-7th November 2019.

This will take place on Tuesday 5th November leaving the conference event centre at 12.10 pm and returning by 4.30 pm.

The field day has three stops on the Heretaunga Plains, commencing at **Bostocks, Flaxmere** to discuss their organic farming system, in particular their organic onion production and the machinery used to control weeds, their squash operation where over 800 ha of squash are grown and organic apple production. Key issues in these production systems will be discussed as well as their vertically integrated production model.

The second stop is at **Plant and Food Research, Havelock North** where Stuart Tustin will discuss 'Future Orchard Production Systems'. These are more efficient at intercepting light, in theory increasing production by 50% as well as facilitating more efficient spraying and robotic harvesting. A pea trial will also be visited.

The final stop is at **LandWise Microfarm, Waipatu** where Dan Bloomer and staff will discuss a range of new technologies including using smartphones for scouting within crops, UAS/drone demonstrations to capture NDVI and Red Edge data, teralytic soil nutrient IoT probes and CoverMap iPhone applications for leaf area mapping.

NZGA are also organizing a field trip on the afternoon of **Wednesday 6th November** to **Brownrigg Agriculture**, Te Aute/Poukawa. The first part of this field day includes a look at their horticultural operations including maize, barley, squash, onions and hemp.

Field Trip Feature: **BOSTOCK New Zealand**

Murray Craighead

BOSTOCK New Zealand is a 100% New Zealand owned company specialising in organic production and marketing of apples, onions, squash, maize and free range chickens. It was set up by John Bostock and late wife Vicki in the 1980s to grow conventional apples and later squash. In 1996 the apple orchards were converted to the first and now largest commercial organic apple orchards in New Zealand. Since then organic onions, squash and, for a time, kiwifruit have been grown on a total of over 700 ha of BioGro certified land in the Hawkes Bay.

The initial buy in and ultimate purchase with D M Palmer, an exporting company, in 2003 has allowed BOSTOCK to export their products to over 20 countries. They also export conventional apples on behalf of independent orchardists. These operations are run through a state of the art packing shed and head office in Flaxmere.

More recently two of John's sons, Ben and George, set up Bostock Brothers Chickens, the largest commercial organic, free range chicken operation in New Zealand. Using one of the company's organic apple orchards, mobile sheds are rotated through alleyways within the orchard to run small well managed flocks of chickens, specifically grown for the table market. Compost made from the manure deposited on fresh wood shavings within the sheds is used as the base fertiliser on maize and barley crops grown for chicken feed and for the export vegetable products. The company has recently begun exporting chickens to three countries and is now looking to compostable plastic free packaging.



John Bostock in his organic squash

Recently a new company, Bostock Wines, has been set up and its vineyards are currently in conversion to organics. BOSTOCK also have associated companies that make organic and conventional juice, plus organic and conventional ice cream including New Zealand's oldest ice cream company, Rush Munros.

A further novel idea has been the development of an organic kitchen open to the public but primarily to provide subsidized meals for the staff, as part of the family's holistic approach to organic farming.

Emerging Career – Aimee Dawson

I grew up in Auckland and studied at Lincoln University, which exposed me to the amazing career opportunities in agriculture. I studied a Bachelor of Science in Environmental Science, then went on to study a Masters in Soil Science, graduating in 2013. After some time overseas, I came back to Canterbury joining Ballance Agri-Nutrients in their Farm Sustainability Team. For the last 4 years I have been working as the Science Extension Officer for the Upper South Island for Ballance and this role has exposed me to wider connections within the Food and Fibre sector. I joined the Agronomy Society in July 2018 and was elected to the committee during the 2018 annual general meeting in Twizel.

Agronomy is defined as being the science of soil management and crop production. I believe that without the former the latter would be difficult to achieve. Managing soils appropriately, through good testing and fertiliser use ensures that sustainable crop and pasture production can be achieved.

I have enjoyed being part of the Agronomy Society and love the diversity of papers presented annually at the conference. Since being on the committee I have set up the Agronomy NZ Twitter page and Facebook page. I hope that through social media we will be able to connect more widely with industry professionals and farmers throughout New Zealand and abroad.



I look forward to meeting more of the society at our 2019 Conference or at our Symposium in 2020.

Short Profile - Dr Svetla Sofkova-Bobcheva

I am a Lecturer in the School of Agriculture and Environment, Massey University. Prior to joining Massey, I was a Senior Scientist at the Research Institute for Vegetable Crops “Maritsa” in Plovdiv, Bulgaria where I led the legume (green beans and peas) breeding programme. During that time, I bred several green bean cultivars with improved disease resistance and cooking qualities.



I have authored and co-authored several national and international publications and also worked as a reviewer for reputable journals. I also co-authored an Agronomy Handbook for growing

beans and peas for conventional and organic cropping systems for Bulgaria.

I continue to actively participate in a range of societies and academies around the world, i.e. Bean Improvement Cooperative (BIC); USDA – Agricultural Research Station in Washington State, US; International Society of Horticultural Sciences (ISHS);

The New Zealand Institute of Agricultural and Horticultural Science (NZIAHS); International member of the Science Society of Galicia, Spain and Council member of the NZ Agronomy Society.

I have a Masters in Horticulture and Viticulture Engineering (1999) from the Agricultural University, Plovdiv (Bulgaria), and a PhD in Plant Breeding and Seed Production Sciences (2005) from the Agricultural Academy (Bulgaria). Since 2005 I have broadened my skills and experience while working in different projects related to plant breeding variety improvement and at different scales in Belgium, USA, Spain, Portugal and New Zealand. My research interests lie especially in developing better breeding strategies in response to abiotic (climate change) and biotic constraints in the context of food security and nutrition. I also specialise in horticultural crops and seek to understand how the genetic potential of a variety can be fully expressed by cultural and agronomical means. Currently I am involved in projects on genetic and cultural studies of juniper, sweet potatoes, potatoes and industrial hemp varieties in New Zealand.



2019 New Zealand Agronomy Society Conference Programme

Tuesday 5th November

- 10:50 Session 2c. Crop establishment: seed yield and quality** **Chair: Svetla Sofkova-Bobcheva**
10:55 Yield and quality of whole crop faba beans harvested and ensiled at different maturities
(Jakob Kleinmans)
11:15 Effects of seed treatments on the establishment of direct drilled rape in the presence of slugs
(Fred Milford-Cottam)
11:35 Effect of pinching and foliar sprays on seed yield of Dhaincha (*Sesbania aculeata*) (Nirmal Singh)
12:10 Agronomy Society Field trip (Bostocks; Plant & Food; LandWise)
Arrive back at Conference venue at 4:30.

Thursday 7th November

- 9:30 Keynote Address:** **Chair: Stephen Trolove**
9:35 Utilisation of new technologies on Drumpeel farming operation (Hugh Ritchie)
11:00 Session 3c. Crop production: Nutrients and water **Chair: Stephen Trolove**
11:05 Water stress responses of three potato cultivars (Alex Michel)
11:25 Effect of organic manures, fertilisers and their integrated combinations on seed quality parameters in wheat (*Triticum aestivum* L.) (Anurag Malik)
12:05 Session 4c. Crop production: Past and Future **Chair: Aimee Dawson**
12:10 An evaluation of climate forecast system reanalysis (CSFR) data for use in models that require meteorological weather station data in New Zealand (Aroon Parshotam)
12:30 Future scenario of better New Zealand adapted industrial hemp varieties (Shanika Dona Komahan)
12:50 Genetic resources of New Zealand's poplars and willows – looking to the future (Duncan McLean)

2018 Twizel Conference Best speaker awards

The **three winners** from last year's conference were:

1. **Overall best paper:** was awarded to **Jian Liu** from Plant and Food Research for:
[“A text mining analysis of proceedings of the New Zealand Agronomy Society 1971-2017 using Natural Language Processing”](#)
2. **Best postgraduate paper:** was awarded to **Allan Siano** from Massey University for:
[“Yield and tuber quality variability in commercial potato cultivars under abiotic stress in New Zealand”](#)
3. **Best undergraduate paper:** was awarded to **Quintin Swanepoel**, also from Massey University for:
[“Impact of varying plant densities on two industrial hemp cultivars grown in the Manawatu”](#)

Agronomy Society of New Zealand Contacts:

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