



# *Canadian Society of Agronomy*

## *La Société Canadienne d'Agronomie*

CSA Newsletter

November 2022

### PRESIDENT'S MESSAGE

Dear Fellow CSA members,

My Greetings to all fellow CSA members, it has been a privilege and honour to serve the Canadian Society of Agronomy as President. Our CSA-CWSS 2022 conference is scheduled for November 14-18, 2022 at the Halifax Marriott Harbourfront Hotel, Halifax and it will be our first in person meeting in two years. The meeting has a great program and many great keynote speakers bringing wealth of knowledge and great expertise in their areas of research.

I am thankful to co-chairs and members of the local organizing committee Dr. Kathleen Glover (co-chair CSA-SCA) and Scott White (co-chair CWSS-SCM), Andrew Burt, Andrew McKenzie-Gopsill and Nancy Zubriski for organizing weekly meetings and making it happen. Jamie Larsen (Program Committee), Andrew Burt (Grad Presentation), Yousef Papadopoulos (Continuing Education/Grower Day), Rigas Karamanos (Sponsorship), Gurcharn Singh Brar (Finance), Nathaniel Ort (grad student Rep.), and other members of CSA have all made huge donations of their time and effort to get everything done from the scientific program to awards to student events organized for this year conference. Your CSA executive has also been working with the Canadian Phyto-pathological Society (CPS) and Canadian Society of Horticultural Science (CSHS) to plan a joint meeting in Ottawa in 2023.

Over the last year our graduate student representative Amy Mangin spearheaded our monthly Green Bagger series organizing 5 sessions which included 10 graduate student presentations. The goal of this event was to facilitate graduate students to present their work and answer questions from a live (zoom) audience. In addition, Amy Mangin and Laurel Thompson (western director) organized two CSA Brown Bagger Agronomy events featuring presentations on agronomy research across Canada. Watch for the kick-off of the next Green Bagger series in early 2023 and an announcement about a Brown Bagger session coming soon.

The CSA AGM will be held on November 16, 12:00 pm - 1:00 pm during the CSA/CWSS 2022 Joint Conference. At that meeting we will say farewell to several executive members who have completed their terms including: Dr. Andrew Burt (Past President), Laurel Thompson (Western Director), Amy Mangin (Student Representative) and Logan Skori (Industry Representative). I would like to thank them for their great contribution and services to the CSA. I also want to welcome the new executive members joining the board including Harpinder Singh Randhawa (President-Elect), Hiroshi Kubota (Western Director), Nate Ort (Student Representative) and Jagroop Gill Kahlon (Industry Representation). I would also like to welcome our new Executive Director Marcie Wilson.



## President's Message (Con't.)

This AGM will also mark the end of my term as CSA president. I will continue to work with the executive committee as Past President. I would like to take this opportunity to thank Nancy Zubrski for her efficient and kind support as CSA Executive Director, Andrew Burt our past president, Jamie Larsen our in-coming president and other members of our executive for their support and hard work during my term as president. Let us work together and promote our mission through maintaining and stimulating membership, and importantly encourage your graduate students to become members. The CSA has a bright future, I encourage all CSA members to participate by volunteering for executive positions, or working on conferences, other committees. This is our society, our long-term legacy rests on all of our shoulders.

Mumtaz Cheema  
CSA President

## CSA Annual Meeting on Zoom

The 2022 CSA Annual Meeting and Conference will be held in conjunction with the Canadian Weed Science Society on November 13-19, 2022 in Halifax. The 2022 CSA Annual Business Meeting will be held on November 16, 2022 from 1:00 - 2:00 pm in Halifax.

CSA Members will be able to join the CSA Annual Business Meeting on November 16th by Zoom. Watch your inbox for a zoom link or email [CSAgronomy@gmail.com](mailto:CSAgronomy@gmail.com) for more information.

## Save the Date - 2023 Tri-society Conference

The 2023 Tri-society CPS-CSA-CSHS Conference is scheduled for June 17-21, 2023 at the Delta Hotel in Ottawa. More information will be available soon.

Please save the date and plan on attending.

# CSA Green Bagger Series



*Canadian Society of Agronomy*  
*La Société Canadienne d'Agronomie*

## **Announcing the Canadian Society of Agronomy (CSA) Graduate Student's 'Green' Bagger Sessions 2023**

*Are you a Grad Student looking for an opportunity to present your research? Contact Marcie at CSAgronomy@gmail.com to reserve your Green Bagger presentation date.*

### **What:**

Virtual 13 min graduate student presentations on their research proposals, early project findings or completed research

### **Purpose:**

- Connect graduate students studying agronomy
- Build the CSA graduate student community
- Provide a positive and supportive platform for young scientists to share their research
- Help prepare graduate students for live oral presentations at future CSA meetings.

### **When:**

Last Wednesday of each month from January 2023 to May 2023, 12:15 – 12:35 CST

- January 25, 2023, 12:15 – 12: 35 CST
- February 22, 2023, 12:15 – 12: 35 CST
- March 22, 2023, 12:15 – 12: 35 CST
- April 26, 2023, 12:15 - 12:35 CST
- May 31, 2023, 12:15 - 12:35 CST

### **Who:**

- All CSA graduate student members are eligible and encouraged to present and attend sessions. CSA graduate student memberships are available for \$25 (<https://agronomycanada.com/membership/sign-up-and-renewal/>)
- All CSA members are welcome to join us and learn about the diverse CSA graduate student research projects

*\*Please share this information with all graduate students, supervisors, and institutions with agronomy graduate student programs*

### **Sign up:**

Graduate students interested in making a presentation should email CSAgronomy@gmail.com and indicate their name, school, supervisor, degree, presentation title and their preferred presentation date.

*\*Note: if students find they cannot make these presentation times work due to class scheduling conflicts, we are happy to adjust presentation times.*

### **Did you know?**

- CSA graduate students are eligible for many cash travel and presentation awards including:
  - o \$500 - Ali Navabi Grad Student Travel Award (<https://agronomycanada.com/awards/student-travel-award/>)
  - o Up to \$1500 - Graduate Student Pest Management Award (<https://agronomycanada.com/awards/pest-management-award/>)
  - o Various cash awards for Graduate student oral and poster presentations (<https://agronomycanada.com/awards/graduate-student-presentation-and-poster-awards/>)

# Canadian Society of Agronomy Awards

## CSA 2022 Fellow



### Dr. Helen Mary Booker

Dr. Helen Booker's academic training began at the University of Guelph, where she attained her Bachelors and Master's degrees. She then obtained her PhD in Plant Science in 2006 from the University of the West Indies, St. Augustine, Trinidad, an institution recognized for its excellence in the breeding of tropical crops. Her doctoral research focused on the survey and diagnosis of plant pathogens, identification and utilization of host plant resistance, and evaluation of crop loss. Importantly, her research showed for the first time the quantitative nature of inheritance of disease resistance in the tropical legume cowpea, resulting in the development and release of cowpea varieties with resistance to a major viral and fungal pathogen for production in the West Indies.

Dr. Booker's professional experience includes a postdoctoral fellowship at Plant Gene Resources Canada (PGRC), Canada's seed bank, where she conducted research on host-pathogen interactions in the chickpea-*ascochyta* system. She helped to develop segregating populations and a

novel detached leaf assay. After her postdoctoral fellowship, she was employed as a Research Associate at the University of Alberta in the Cereal Breeding Program, where she was responsible for the day-to-day management of the field research program at the Edmonton Research Station. Between 2009 and 2020, Dr. Booker led the Flax Breeding and Genetics Program at the University of Saskatchewan. This was a critical time for the program with the discovery of transgenic flax in the Canadian flax supply, resulting in the implementation of an industry-wide stewardship program to mitigate this contamination. Dr. Booker led the re-release of important CDC flax cultivars from reconstituted breeder seed. Her breeding and research program during this time released eight new flax cultivars for production in Canada and she published significant contributions in the areas of germplasm development (on the Canadian flax core collection) and the genetics of key traits such as early flowering, seed coat colour, and cadmium accumulation in flax. Dr. Booker was senior author on an important publication in the Canadian Journal of Plant Science (CJPS) on the pedigrees and genetic basis of flax cultivars registered in Canada. She assumed leadership of the University of Guelph Wheat Breeding and Genetics Program in July 2020. Her appointment as holder of the GFO Professorship in Wheat Breeding at the rank of Associate Professor in the Department of Plant Agriculture began in September 2020. In this role, she assumed responsibility for the breeding pipeline and research initiated by her predecessor, the late Dr. Alireza Navabi. Since 2021, Dr. Booker and the wheat breeding group have received support for new soft red winter wheat candidate lines exhibiting merit for registration – OAC Moon, OAC Twilight, and OAC20-SRW-03. Her research program currently focuses on the identification of novel sources and mapping genic regions associated with resistance to fusarium head blight, which is the most destructive disease of wheat in Ontario. Moreover, Dr. Booker has been a recognized Plant Breeder with the Canadian Seed Growers Association (CSGA) since 2009, and in July 2022 received an Honorary Life Award for distinguished services to the Association and contributions to the betterment of the seed sector and Canadian agriculture.



# Canadian Society of Agronomy Awards (Con't.)

## Distinguished Agronomist



### Dr. Robert Graf

Dr. Robert Graf was raised on a mixed crop/livestock farm near Humboldt, Saskatchewan, Canada. Following Bachelor of Science in Agriculture (BSA) and Ph.D. degrees from the University of Saskatchewan, he started his career as a spring wheat breeder with the Saskatchewan Wheat Pool. While there he developed three successful CWRS wheat cultivars, the most notable being McKenzie & Prodigy. McKenzie was the first doubled haploid wheat cultivar registered in North America. He also initiated the crosses and initial selection work that resulted in CDC Imagine, the first Clearfield wheat in Canada. In 1999, he joined AAFC Lethbridge as a research scientist responsible for western Canadian winter wheat breeding. His areas of concentration were improved agronomics, disease and pest resistance, and end-use quality to meet diverse and changing customer needs. Notably, Emerson was

the first wheat cultivar of any class in Canada to be rated "resistant" to FHB, and AAC Wildfire is currently the most popular winter wheat in western Canada. Recent varieties are AAC Network, AAC Vortex, AAC Coldfront, and soon to be registered W614. Cultivars developed at AAFC Lethbridge accounted for 90% of western Canadian winter wheat acres in 2021. To date, Dr. Graf has been the principal developer of 15 spring and winter wheat cultivars, and co-developer of another 15 cultivars of winter wheat, spring wheat and triticale. After 35 years of professional plant breeding, he retired from AAFC in fall 2022, though continues to serve on various industry committees and advisory boards.

## 2021 CJPS Best Paper



### Dr. Aaron Mills

Aaron Mills is an Agronomist with Agriculture and Agri-Food Canada based out of Charlottetown, Prince Edward Island. His work is focused on cropping system sustainability, aboveground-belowground interactions, and closing the yield gap for grains, oilseeds and pulses. Aaron has helped to bring the Yield Enhancement Network to North America and is using this model as a platform to capture on-farm innovation and to identify factors that are driving grain yields on the East Coast. He also works with the Canadian craft beer sector to foster the nascent production of local ingredients including both malt barley and hops, and his work has helped to increase the number of Maritime acres under malt barley production. He has recently completed a National Barley Cluster project which highlights the potential benefits of including legumes in rotation with malt barley in both eastern and western Canada. He holds degrees from Nova Scotia Agricultural College (BSc Agr.), UPEI (MSc – Biology) and Dalhousie University (Ph.D. – Biology).

# Canadian Society of Agronomy Awards (Con't.)

## 2022 Ali Navabi Travel Awards



### **Kaylie Kryz**

Kaylie Kryz is a second year MSc. Candidate in the Department of Plant Science at the University of Saskatchewan working with Dr. Steve Shirliffe in the Agronomic Crop Imaging (ACI) lab. Her project focuses on creating a methodology for the application of UAV imagery to estimate canola emergence at a field scale. Kaylie completed a diploma in Environmental Sciences from Lakeland college and completed a 2 for 2 transfer to Usask to finish her BSc in Agriculture with a Major in Soil Science and a minor in field crop production. Kaylie comes from a small mixed commercial cattle and grain farm near Vermilion, AB. She was a 4-H member for 12 years, and currently sits on the local ag society and is the secretary/treasurer for her community hall. Kaylie has sat on the Usask Plant Science Graduate Student

Association executive for 2 years now and is the 2022-2023 President.



### **Mohammed Musthafa**

Mohammed Musthafa Mukthar is a first-year master's student at the University of Alberta and is also affiliated with the Lethbridge Research and Development Centre, Agri and Agri-Food Canada as a graduate research assistant. His work is focused on the enhancement of lipid content in forage legumes like sainfoin and alfalfa by conventional and molecular plant breeding techniques to reduce the methane emissions from ruminants. Supplementation of lipids in the ruminant's diet can reduce enteric methane emissions by improving feed efficiency and targeting the process of methanogenesis. This can drive forward the sustainability of the cattle industry in Canada. He completed his bachelor's in agriculture (Honours) at the Tamil Nadu Agricultural University, India in 2021. His bachelor's has played

an important role in finding his research interest. He is also very passionate about reading books and writing. He is interested in diverse areas and would like to indulge in research connecting plant breeding, sustainable agriculture, and nanotechnology.



### **Muhammad Usman**

Muhammad Usman is currently a graduate student in boreal ecosystem and agricultural sciences at Grenfell campus, Memorial university of Newfoundland. He completed his bachelor's in agricultural sciences with specialization in soil science from University of Agriculture, Faisalabad, Pakistan. He started his MSc in January 2021 at Grenfell campus and he is working in agricultural clean technology program with focus on effects of cropping sequence and nitrogen stabilizers on soil carbon pools, enzymatic activities, microbial communities abundance and structure. The main goal of his research is to expand scientific knowledge on effect of cropping sequence and nitrogen stabilizers on carbon sequestration in podzol soils under boreal climate. Outcome of his research can be

beneficial in making management strategies to combat climate change.

# Canadian Society of Agronomy Awards (Con't.)

## 2022 Ali Navabi Travel Awards (Con't.)



### **Adam Fast**

Born and raised in Lethbridge, AB, Adam always had a passion for science education and a love for the outdoors in his leisure time. These interests eventually melded during his first summer of university, where he developed a keen interest in agriculture as he worked in the agronomy program at Agriculture and Agri-Food Canada's Lethbridge Research and Development Center. Soon thereafter, he switched majors from Biology to Agricultural Studies and never looked back. Adam has worked in the field of agronomy at AAFC-Lethbridge for nearly six years while he completed his B.Sc. from the University of Lethbridge and is now a Research Affiliate in conjunction with his M.Sc. thesis work at the University of Alberta. He has field experience in a multitude of large-scale agronomic

trials, as well as small-plot breeding adaptation work. During his undergrad degree at the UofL, Adam completed a technical studies semester at Lethbridge College where he attained honors. Adam is currently a second-year master's student at the UofA majoring in Plant Science, with a focus in Agronomy. His research pertains to the use of enhanced efficiency fertilizers in spring wheat production in western Canada. He has been fortunate enough to receive several graduate student scholarships, namely being one of the 2022 Rotary Club of Lethbridge East and Lethbridge & District Exhibition Ag Scholars, and one of the 2022 Ali Navabi Grad Student Travel Awardees. Adam's thesis co-supervisors are Dr. Brian Beres (AAFC) and Dr. Dean Spaner (UofA), and he anticipates defending in the spring of 2023. Adam has been fortunate enough to present his research at several academic conferences, industry meetings, field days and in guest lectures of post-secondary agriculture classes. He is very much so looking forward to the CSA-CWSS conference in Halifax and very thankful for being chosen to receive this award!



### **Danielito Dollete**

Danielito Dollete, graduated with a Bachelor's Degree in Biology from the Polytechnic University of the Philippines, currently taking an MSc in Plant Science at the University of Alberta under the Plant-Microbe Interaction laboratory headed by Dr. Malinda Thilakarathna. Sponsored student of the Department of Science and Technology Science Education Institute (DOST-SEI), Republic of the Philippines.

## Canadian Journal of Plant Science Outstanding Reviewers Award



**Dilshan Benaragama**  
*University of  
Saskatchewan, Canada*



**Muhammad Iqbal**  
*University of Alberta,  
Canada*



**Julie Lajeunesse**  
*Agriculture and Agri-  
Food Canada,  
Canada*

# 2022 Canadian Society of Agronomy Annual Meeting



*Canadian Society of Agronomy*  
*La Société Canadienne d'Agronomie*

**Canadian Society of Agronomy  
Annual General Meeting Agenda  
November 16, 2022 | 1:00 pm to 2:00 pm AST  
Room: Halifax A, Marriott Harbourfront & Zoom**

1. Call to Order & Introductory Remarks
2. Review and Acceptance of Agenda
3. Approval of 2021 AGM Meeting Minutes
4. Executive Board Report
5. Treasurers Report and Appointment of Auditor for 2022
6. Discussion and Vote on Canadian Journal of Plant Science Society Membership Renewal
7. CSA Executive
  - Retiring Executive Members (Mumtaz Cheema, CSA 2021-22 President)
  - Introduction of New Board (Jamie Larsen, CSA 2022-23 President)
  - Upcoming Conferences and Next AGM (Jamie Larsen, CSA 2022-23 President)
8. Concluding Remarks (Mumtaz Cheema, CSA 2021-22 Past President)
9. Adjourn



# Canadian Society of Agronomy

## Reviewed Financials for the Year Ended December 31, 2021

### CANADIAN SOCIETY OF AGRONOMY

### STATEMENT OF FINANCIAL POSITION

Year Ended December 31, 2021

	2021	2020	2019
<b>ASSETS</b>			
Current Assets			
Cash	\$ 88768	88712	77,548
Accounts Receivable	115	0	1,000
Grants Receivable	<u>3000</u>	<u>0</u>	<u>8,000</u>
	<u>\$ 91,883</u>	<u>88,712</u>	<u>86,548</u>
<b>LIABILITIES</b>			
Current liabilities			
Accounts payable and accrued liabilities	\$ 4955	0	0
<b>SURPLUS</b>			
Surplus	<u>86,928</u>	<u>88,712</u>	<u>86,548</u>
	<u>\$ 91,883</u>	<u>88,712</u>	<u>86,548</u>

# Canadian Society of Agronomy

## Reviewed Financials for the Year Ended December 31, 2021 (Con't)

### CANADIAN SOCIETY OF AGRONOMY STATEMENT OF OPERATIONS AND CHANGES IN NET ASSETS Year Ended December 31/21

	2021	2020	2019
<b>INCOME:</b>			
Award Sponsorships	1000	0	5,000
Conference	6562	3736	
Corporate Sponsorships	0	0	625
Photo Contest Sponsorship	500		
Grants	3000	8000	8,000
Interest	691	1192	1,754
Surplus Shares	20		
Misc. Revenue	125		
Member Fees & Subscriptions	<u>11132</u>	<u>6920</u>	<u>9,588</u>
<b>Total Income</b>	<b>23,030</b>	<b>19,848</b>	<b>24,967</b>
<b>EXPENSES</b>			
Advertising	129	450	500
Awards & Grants	4246	599	6879
Bank Service Charges			0
Bookkeeping Services	693	380	
Business Licenses & Permits	0		20
Conference/Event Costs	1450	1781	300
Executive Director Fees	13513	10364	9,825
Honorarium	0	0	1,500
Insurance	1124	1029	961
Memberships	60		
Miscellaneous	0	4	21
Office Supplies	2464		906
Professional Fees	224	224	0
Subscriptions	475	959	1,669
Travel			919
Website	<u>436</u>	<u>1894</u>	<u>887</u>
<b>Total Expenses</b>	<b>24,814</b>	<b>17,684</b>	<b>24,387</b>
<b>NET INCOME</b>	<b>-1,784</b>	<b>2,164</b>	<b>580</b>
 RETAINED EARNINGS - BEGINNING OF YEAR	 <u>88712</u>	 <u>86,548</u>	 <u>85,968</u>
RETAINED EARNINGS - END OF YEAR	<u>\$ 86,928</u>	<u>88,712</u>	<u>86,548</u>

## Retiring CSA Executive Members



Andrew Burt  
Agriculture & Agri-Food  
Canada



Laurel Thompson  
Lakeland College



Amy Mangin  
University of Manitoba



Logan Skori  
Skorbio Ltd.

## 2021 CJPS Best Paper Abstract

Below is the abstract from our 2021 CJPS Best Paper by lead author Aaron Mills from Agriculture & Agri-Food Canada. This article is available online at <https://cdnsiencepub.com/doi/full/10.1139/cjps-2020-0011>

### Cultural practices to improve malt barley quality in the northeast with focus on the craft sector

A.A.S. Mills, M Izydorczyk, T.M. (Alek) Choo, J. Durand, N. Moountain, M. Sorrelss, and S.A.E. Filmore

#### ABSTRACT

Demand is increasing for locally grown malt barley (*Hordeum vulgare* L.) in northeastern North America, driven primarily by growth in the craft beer sector. A multi-site experiment was conducted to evaluate how variety (V), seeding rate (S), and nitrogen (N) fertilizer affect maltquality in the northeast. Two barley varieties (Cerveza and Newdale), two seeding rates (200 and 400 seeds m<sup>-2</sup>), and five rates of actual applied N fertility (0, 30, 60, 90, and 120 kg ha<sup>-1</sup>) were tested at Charlottetown, PE, Canada, Ithaca, NY, US, Princeville, QC, Canada, and New Liskeard and Ottawa, ON, Canada. Basic agronomic data were collected from all environments including yield, thousand kernel weight, and hectoliter weight. Barley of suitable quality was micromalted and subjected to malt quality analysis. Both V and S resulted in small effects on malt quality, however, N had the greatest effect on most measured variables. Increased rates of N application resulted in increased yield, hectoliter weight, and thousand kernel weight but had a negative effect on most quality traits, especially with increased protein content, reduced fine extract, Kolbach index, and friability, though it increased wort  $\beta$ -glucans. This study shows that for most years at most sites, it is possible to achieve malt quality in the northeast; however, excessive protein and the prevalence of preharvest sprout damage are the main barriers. The results of this study have implications for increased malt barley production for the craft sector as well as potential access to commodity markets for

# Canadian Society of Agronomy Executive Committee 2022/2023

## CSA Executive - to be appointed at the 2022 Annual Meeting

### PRESIDENT

Jamie Larsen  
Harrow Research and Development  
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### EXECUTIVE DIRECTOR

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### PRESIDENT-ELECT

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