



Canadian Society of Agronomy

La Société Canadienne d'Agronomie

CSA Newsletter

August 2019

PRESIDENT'S MESSAGE

Hello CSA members!

This is my first newsletter as president. It is an honor to serve the Canadian agronomic community. I see the CSA as a great professional development and networking society. It provides our members with the opportunity to celebrate career milestones, to mentor students and to network with great Canadian professionals.

Thank you to all 51 CSA members who attended our AGM in Guelph as part of the Plant Canada meetings. For those of you unable to attend, I would like to highlight important parts of the meeting. First, I would like to thank our outgoing executive members for their years of service: Harpinder Randhawa, Helen Booker, and Mumtaz Cheema. I would also like to welcome our new CSA executive members: Gurcharan Singh Brar (Western Director), Jamie Larsen (Eastern Director) and Kathleen Glover (Eastern Director). I look forward to the new energy and ideas that these individuals will bring to CSA. I would also like the membership to know this newsletter contains the full financial statements as they were unavailable at the time of the AGM.

Our past-president, Jaswinder Singh, was very passionate about increasing CSA membership. Under his leadership, CSA membership increased from 68 in January 2019 to 155 members in July 2019. There are 73 regular members, 49 graduate students, 7 postdocs, 14 Canadian Journal of Plant Science (CJPS) members, 3 Emeritus, 3 retired and 6 honorary members.

I am very pleased to see that 31% of our members are graduate students. The CSA offers students opportunities for travel awards, oral and poster presentation awards, networking opportunities and professional development. This issue of the newsletter highlights our 2019 oral and poster award winners from the Guelph meetings. As the future of our organization, I would strongly encourage graduate students to become actively involved in CSA, attend our scientific and business meetings and apply for awards. If we can serve the student membership better, please contact me with your ideas and suggestions.

At our AGM, there was a call to action for the CJPS. To keep this archive of Canadian agronomy relevant, we need scientists working in the Canadian content to submit manuscripts to CJPS. I would encourage all members to submit at least one manuscript to CJPS annually. I would also encourage our experienced members to consider serving the CJPS as Associate Editors. We are looking for Associate Editors with experience in research combined with a publication record to adjudicate peer research and maintain a strong CJPS.

I would also like to salute our 2019 photo contest winners. Thank you to everyone who submitted stunning photos and thanks to Pioneer for the prize money. Award winners and their photos are highlighted in this issue of the newsletter.

With that I will sign off and invite you to attend our June 2020 annual meeting as part of the International Crop Science Congress in Saskatoon, SK. Enjoy the rest of your summer.

Sheri Strydhorst
CSA President



Meet the 2019-2020 CSA Executive

President, Sheri Strydhorst

Sheri Strydhorst is a cereal agronomic research scientist for the Livestock and Crops Research Branch of Alberta Agriculture and Forestry based in Barrhead, Alberta. She is also an adjunct professor at the University of Alberta - Department of Agricultural, Food and Nutritional Science Faculty of Agricultural, Life and Environmental Sciences.

Her work focuses on enhancing the profitability and competitiveness of Canadian agricultural crop producers. Her research program centres on maximizing the genetic potential of cereal cultivars by using cultivar specific agronomic management.

She completed her BSc, MSc and PhD at the University of Alberta. Her MSc work centered on developing agronomic practices for low tannin faba bean production and her PhD studied rotational benefits of pulse crops. She then worked as the Executive Director for the Alberta Pulse Growers Commission. Sheri returned to agronomic research in 2013 where her research activities

focused on cereal crop agronomy. She works on advanced agronomic practices including: nitrogen fertility, plant growth regulators and foliar fungicides. Her most interesting work involves studying different responses of these agronomic practices on various wheat cultivars. Sheri Strydhorst focuses on extension of her applied research so that it can be implemented on-farm. She has strong partnerships with industry and is currently collaborating with SeCan, BASF and Syngenta. Sheri authored or co-authored 11 peer-reviewed papers and has made over 100 invited presentations at producer meetings to over 6000 producers, agronomists and scientists. Currently she co-supervises a graduate student, sits on two graduate student committees and serves as an external examiner for numerous graduate student defenses.

She is a member of the Canadian Society of Agronomy (CSA), American Society of Agronomy (ASA), Prairie Grains Development Committee (PGDC), Alberta Regional Variety Advisory Committee, Wheat Initiative – Agronomy Expert Working Group Member, and Breton Plots Management Team. She has been a member of the organizing committee for CSA annual meetings in 2014, 2015 and 2018.

Sheri Strydhorst was raised in St. Albert, Alberta, but now farms with her husband, Shane in Neerlandia, Alberta.

President-elect, Andrew Burt

Andrew Burt is a research scientist and spring wheat breeder working with Agriculture and Agri-Food Canada based at the Ottawa Research and Development Centre. Andrew's research program focusses on developing spring wheat cultivars for Eastern Canada, from Prince Edward Island to North-Western Ontario, with good agronomy, excellent disease resistance, and good quality for the end user. Andrew obtained his MSc Biology from the University of Ottawa and his PhD in Plant Agriculture at the University of Guelph in 2011. He was trained in a maize breeding program that focussed on inbred development and worked as a research associated in a dry bean breeding program before joining AAFC in 2014 to direct spring wheat breeding programs for the Northern and Eastern Prairies while based in Brandon MB. In 2018 Andrew relocated to Ottawa to focus on breeding for Eastern Canada. To this point of his career, Andrew has participated in the release of 44 maize inbred lines, five dry bean cultivars, and gained support to register six wheat lines; he has authored and co-authored 19

peer reviewed research papers, and five published cultivar descriptions. Since 2014 he has worked as an associate editor for the Canadian Journal of Plant Science.



Meet the 2019-2020 CSA Executive (Con't.)



Past-President, Jaswinder Singh

Dr. Jaswinder Singh is currently an Associate Professor in the Department of Plant Science, McGill University, Canada. Dr. Singh received his PhD from the University of Sydney and CSIRO Plant Industry, Canberra Australia and did his postdoctoral studies at the University of California Berkeley, U.S.A. His research focuses on the enhancement of quality traits, stress tolerance and bioenergy capability of crop plants using modern genomic, molecular breeding and biotechnological tools. Dr. Singh is an internationally recognized innovator in the use of transposon tagging in cereal crops. His findings have shown for the first time the reversal of epigenetic silencing in plants. Recently, his laboratory discovered a key gene that acts as a switch to determine how a particular plant responds to high humidity and excess rainfall. The research opens up a new epigenetic-based direction for exploration of seed dormancy and Pre Harvest Sprouting (PHS). He has delivered 47 invited talks in international meetings and renowned academic

institutes. He has published over 48 research articles in high impact peer reviewed journals, books and conference proceedings. He also presented his research at prestigious conferences and published 78 abstracts. Additionally, he is actively involved in teaching plant breeding, plant biotechnology, genetics, plant biology courses, training graduate students, postdoctoral fellows and lab assistants. To date, he has trained 44 researchers, which include undergraduate, technicians, graduate students and PDFs. Beside this, he is an editor for two international journals (Canadian Journal of Plant Science, PLOS ONE) and a reviewer for numerous granting agencies. He is honored to serve as panel member for various national and international funding organizations including US Department of Energy, and Agriculture and Agri-Food Canada. He has served as Eastern Director of Canadian Society of Agronomy (2010-2012), executive member of International Committee of the American Society of Plant Biologists (2012-15) and executive committee member of International Association of Plant Biotechnology- Canada (2013-2014). He is currently a member of Gleb Krotkov award committee of the Canadian Society of Plant Biologists. In addition, he has successfully co-chaired two prestigious conferences (Canadian Plant Biotechnology -2014 and CSA-CSHS -2016) in Montreal.



Treasurer - Doug Cattani

Doug has been involved primarily with perennial horticultural, forage and now perennial grain and oilseed crops over the past 30 years. He completed his undergraduate and Masters degrees at the University of Manitoba and PhD at Wageningen University, the Netherlands. He has been employed in academia, government and private industry and has worked in both Canada and the United States. He is currently an Assistant Professor at the University of Manitoba with teaching responsibilities at the diploma, undergraduate and graduate levels in the areas of genetics and breeding, and agronomy of forage production. The areas of research that he is currently involved in are: herbaceous perennial crop development and agronomy (food, feed and forage); genetics as related to perennial crops; plant developmental morphology as it relates to both crop establishment and productivity; seed production and quality of herbaceous perennial crops; and the utilization of herbaceous perennials in the both agricultural and non-agricultural environments. He is also interested in the utilization of native plant materials for agricultural purposes, both as food and feed crops and for ancillary purposes (e.g. N₂-fixation). "I believe in strong professional societies to foster professional development, for networking and to provide for the development of the next generation of agricultural professionals

in Canada."



Western Director - Laurel Thompson

Laurel Thompson is an agronomic research scientist in North East Alberta. Her work focuses on agronomic solutions to increase cereal production and profitability, and has recently grown to include pulse crop research. Laurel explores interactions between cereal genetics, agronomic management practices, and the environment to assist producers in making targeted agronomic decisions. She has also taught the fungicide physiology component of the PISC 470 undergraduate course at the University of Alberta since 2016, and she provides teaching support for faculty in the Crop Technology program at Lakeland College.

Laurel Thompson was raised in Slave Lake, AB, and now farms grain and cattle with her husband, Duncan, in Mannville, AB. She completed her BSc and MSc at the University of Alberta. Her MSc work centered on assessing advanced agronomic practices for maximizing feed barley production, and on the interactions between feed barley genetics, advanced agronomic management, and the environment. Laurel has been in the Crop Research

Scientist role at Lakeland College for four growing seasons, where she has grown and developed the agronomic research program in Vermilion, AB. Laurel's work at Lakeland College focuses on agronomic solutions to increase profitability and efficiencies for producers at the farm-level, and she works on cereal, pulse, and oilseed crops. Since 2016, Laurel has developed the new research program to include cereal and pulse agronomy and varietal performance, and a strong extension component to local crop producers and industry. Recently, her work has focused on wheat and malt barley responses to various mixtures of plant growth regulators.

Laurel Thompson has developed strong partnerships both university and government researchers, and with industry. Current industry collaborators include Mosaic, Syngenta, SeCan, Engage Agro, and Anuvia. Laurel is the lead author on 3 peer-reviewed papers and is a member of the Canadian Society of Agronomy (CSA) and American Society of Agronomy (ASA).



Western Director - Gurcharn Brar

Gurcharn Brar is a Research Officer at the Crop Development Centre and the Department of Plant Science at the University of Saskatchewan. He obtained his PhD from the same department in March 2019. Originally from Punjab, India, Gurcharn came to Canada to pursue an MSc after obtaining a Bachelor of Science in Agriculture (Honours in Crop Protection) degree from the renowned Punjab Agricultural University, India. Gurcharn's graduate training focused on the study of plant pathogens, genetics/genomics of pathogen populations, genetics of host-pathogen interactions, resistance breeding, and plant imaging obtained through the University of Saskatchewan, Agriculture and Agri-Food Canada, National Research Council of Canada, the Canadian Light Source, and the International Maize and Wheat Improvement Centre. Currently, Gurcharn is working in the areas of gene cloning and functional pathogenomics with collaborators from across Canada, the USA, the UK, and Australia. Gurcharn has published 14 peer-reviewed full-length research papers and 13 peer-reviewed (not refereed) disease survey reports in the Canadian Plant Disease

Survey journal; supervised 5 undergraduate students for their six-credit thesis research; chaired a conference/ symposium in 2017 and many sessions at scientific meetings of professional societies across North America; and delivered many research presentations (including many invited talks) to his peers, extension talks on field days to growers. In the past, Gurcharn has served on several positions and committees in the Canadian Phytopathological Society, Canadian Society of Agronomy, Saskatchewan Advisory Council on Grain Crops, Plant Science Graduate Student Association of University of Saskatchewan, and Saskatoon Science Fair Committee. Gurcharn is a regular member of several professional societies including Canadian Society of Agronomy.

Meet the 2019-2020 CSA Executive (Con't.)



Eastern Director - Jamie Larsen

Dr. Jamie Larsen received his Ph.D. in Plant Agriculture with a focus on wheat breeding from the University of Guelph in 2012. From 2011 to 2018, his research at Agriculture and Agri-Food Canada's Lethbridge Research and Development Centre focused on developing perennial wheat, perennial cereal rye, fall rye, winter durum and winter triticale for grain and livestock producers with the goal of maximizing the sustainability of cereal production systems through breeding, agronomy and molecular genetic approaches. In 2018, he transferred to the Harrow Research and Development Centre to revitalize the AAFC dry bean breeding program for Eastern Canada. The focus of his research program at Harrow is to breed for resistance to fungal, bacterial, viral and nematode pests. The program also places a large emphasis on method development in dry bean breeding, including speed breeding and incorporating near infrared reflectance spectroscopy and other high throughput methods to assess dry bean cooking and canning quality.

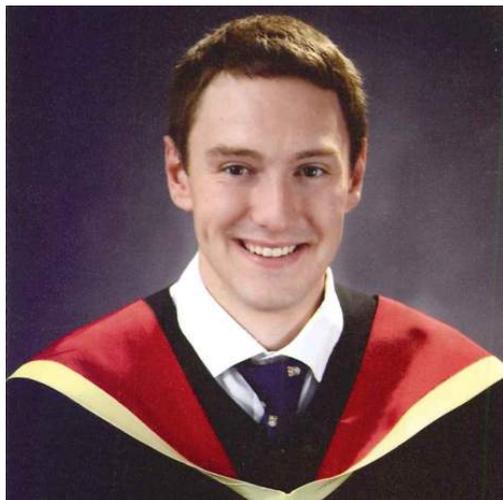


Eastern Director - Kathleen Glover

Dr. Glover completed a degree in agricultural science from the University of Guelph where she majored in Crop Science. She then did a M.Sc. at the University of Guelph specializing in forage agronomy and quantitative genetics. Dr. Glover went on to do a Ph.D. in the Department of Molecular Biology and Biochemistry at Dalhousie University studying the genetic origins of tRNAs in plant mitochondria. Following her Ph.D. she worked in private industry conducting applied research in both field and horticultural crops and was subsequently employed as a research chair/associate professor at the Nova Scotia Agricultural College where her research focused on using nutrigenomic approaches to understand the effects of fresh forage and lipid supplementation on ruminant animal metabolism and productivity. She also worked with government and industry partners to help improve pasture management for grass-fed beef production. Dr. Glover joined Agriculture and Agri-Food Canada's Kentville Research and Development Centre (co-located in Truro) in May 2017, as a forage

agronomist. She has over 30 years experience in Plant Science Research including both basic and applied sciences.

Meet the 2019-2020 CSA Executive (Con't.)



Student Representative - Caleb Niemeyer

Caleb Niemeyer completed a Bachelor of Science in Agriculture in 2017 from the University of Guelph, majoring in Crop, Horticulture, and Turfgrass Science. During the summers between years of university he worked for Reesor Seed and Grain, a farm input supplier in Stouffville, Ontario and Pioneer as a Technical Sales Intern based in Guelph, Ontario. As an undergraduate, he was a research assistant in the lab of Dr. Manish Raizada working on improved plant nitrogen tests and nitrogen fixation in legumes. He began his MSc in Plant Agriculture in 2018 under the supervision of Dr. Bill Deen at the University of Guelph and is the recipient of an NSERC Canada Graduate Scholarship. His research focuses on improving corn nitrogen fertilizer recommendations using rainfall effects on crop nitrogen demand.

2019 Graduate Student Presentation and Poster Awards

At each annual meeting, the Canadian Society of Agronomy provides awards for the best oral and poster presentations given by student members. These awards are given to acknowledge the contributions that graduate students make to the society and to encourage excellence in graduate student research and presentation.

At the 2019 Plant Canada meeting in Guelph, judges assessed student presentations for their scientific merit, content and presentation style.

In the category of 15 minute oral presentations, first prize (\$500) was awarded to Nate Ort, MSc. Student at the University of Manitoba, for his presentation: "Climate and day length influence on soybean phenology in Manitoba and Ontario". Second prize (\$300) was awarded to Mahnoor Asif, MSc. Student at the University of Alberta for her presentation "Assessing the impact of fungicides on FHB caused by *Fusarium* spp. on two wheat cultivars in Alberta". Third prize (\$200) was awarded to Wei-Yuan Chen, PhD. Student from McGill University, for his presentation: "Tackling pre-harvest sprouting in small grain cereals".

In the category of Poster presentations, first prize (\$500) was awarded to Annia Fatmawati, PhD student at the McGill University for her poster presentation: "Genetic transformation of oat to elucidate a gene associated with beta-glucan". Second prize (\$300) was awarded to Caleb Niemeyer, MSc. Student at University of Guelph for his poster presentation: "Improving corn N fertilizer recommendations using rainfall effects on crop N demand". Third prize (\$200) was awarded to Harpreet Hanzra, MSc. Student at the University of Guelph for the poster: "Phosphorus (P) and potassium (K) management in corn-soybean-winter wheat crop rotation in a long term experiment".

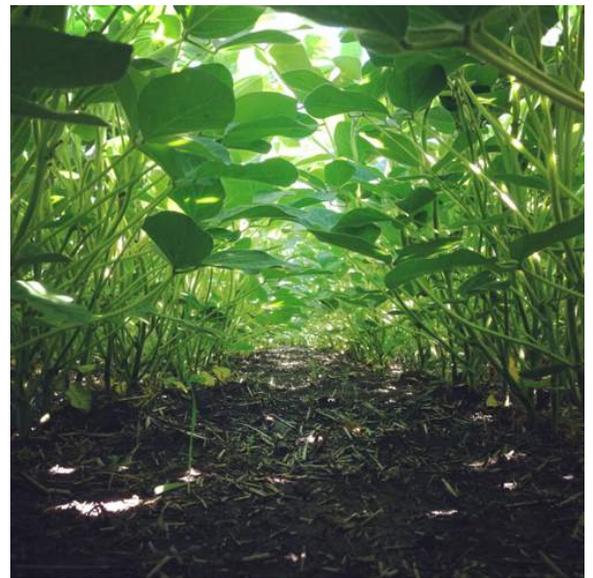
We would like to thank Mumtaz Cheema, Tarlok Sahota and Rigas Karamanos for judging the student presentations at the 2019 meetings.

CSA Photo Contest Winners
Category 1: Agronomy in Action



First Place - **Annis Fatmawati**
I am brave and ready to grow

Second Place - **Nathaniel Ort**
Between two soybean rows



Third Place - **Mo Clement**
Pretty in Pink

CSA Photo Contest Winners
Category 2: Crops and Biological Interactions



First Place - Irfan Iqbal
The golden spike

Second Place - Laurel Thompson
Dawn Dew Drops



Third Place - Gucharn Brar
Two heads from the same plot



CSA Photo Contest Winners
Category 3: Landscapes and Fieldsapes



First Place - **Allison Bailey**
Corn popping up in rows



Second Place - **Laurel Thompson**
Tourelle ready



Third Place - **Allison Bailey**
A sea of harvest gold

Save the Date!

The 8th International Crop Science Congress (ICSC 2020)

June 21 - 25, 2020 | Saskatoon, Saskatchewan

Exclusive Offer for CSA Members



**CROP SCIENCE
CONGRESS**
Saskatoon, Canada
June 21 - 25, 2020

Under the auspices of the International Crop Science Society and the Global Institute for Food Security (GIFS) at the University of Saskatchewan, the 8th International Crop Science Congress will be held at the Prairieland Park Convention Centre in Saskatoon from June 21 – 25, 2020 (icsc2020.com). The theme of the congress will be **Food Security & Safety – Globally**, and the program will address topics from fundamental to field-based work, and will also assess recent advances in translating

fundamental research discoveries to crop improvement in the field.

The scientific program will integrate keynote, plenary talks and concurrent sessions to address topical crop research areas, ranging from functional genomics, biotechnology and molecular breeding, root architecture and rhizosphere microbiology, to agroecosystems and sustainable crop production that impact soil health under environmental stresses. In addition, a combination of position papers and discussion forums will address issues, such as strategic planning to meet future food demands, as well as agro-economic aspects of agricultural sustainability; these sessions will be integrated with poster sessions. Finally, congress participants will be afforded opportunities to visit various prairie-related agricultural systems, including precision farming.

The congress encourages attendance of junior scientists, who will be incorporated into the scientific program through invitation to present their work (based on abstract submissions) during the concurrent oral sessions. In addition, recognition will also be made through presentation of scientific achievement awards for outstanding poster and oral presentations.

Exclusive offer for CSA members: ICSC2020 is happy to offer Canadian Society of Agronomy (CSA) members a 25% discount on registration! Registration opens in October 2019, so make sure to use the code “**CROPS25**” to save! We look forward to seeing you in Saskatoon in June 2020.



Canadian Journal of Plant Science Associate Editors and Manuscript Submissions

The Canadian Journal of Plant Science is looking for Associate Editors and manuscript submissions. If you are interested in becoming an Associate Editor contact Dr. Brian Beres at brian.beres@canada.ca. For information on submitting a manuscript visit <https://www.nrcresearchpress.com/page/cjps/authors#06>

Canadian Society of Agronomy

Profit and Loss as of December 31, 2018

Canadian Society of Agronomy
PROFIT AND LOSS
 January - December 2018

	TOTAL
INCOME	
Corporate Sponsorship	11,000.00
Member Fees & Subscriptions	7,029.39
Sponsorship for Awards	1,000.00
Total Income	19,029.39
GROSS PROFIT	19,029.39
EXPENSES	
Advertising and Promotion	543.35
Awards	607.88
Awards and Grants	
Cash Awards and Grants	4,000.00
Total Awards and Grants	4,000.00
Banking Service Charges	30.20
Bookkeeping & Registrar	4,677.80
Bundled Subscriptions	30.00
Business Licenses and Permits	20.00
Conference Expenses	3,867.57
Insurance	918.00
Internet website	585.45
Office Supplies	
Software Monthly Fee	56.72
Total Office Supplies	56.72
Postage and Shipping	385.24
Professional Fees	157.50
Quarterly Fee Exec Dir	5,856.90
Subscriptions	1,541.15
Total Expenses	23,277.76
OTHER INCOME	
Interest Income	1,697.17
Memb, dues and fees (non-rec'd)	145.00
Total Other Income	1,842.17
OTHER EXPENSES	
Reconciliation Discrepancies	186.01
Total Other Expenses	186.01
PROFIT	(2,592.21)

Canadian Society of Agronomy Balance Sheet Comparison 2017-2018

Canadian Society of Agronomy Balance Sheet

	Total	
	As of December 31, 2018	As of December 31, 2017
Assets		
Current Assets		
Cash and Cash Equivalent		
Sunova Credit Union		
Chequing - Organizational CNC (Chequing - 1 CAD)	1,533.30	2,135.26
Common Shares SHARE #1 (Share - 1 CAD)	345.00	285.00
Joint w/ Chequing SSUP #2 (Superior Savings - 2 CAD)	71,519.75	64,072.43
Pest MGMT Chl Fund SSUP #1 (Superior Savings - 1 CAD)	21,374.42	21,016.23
Petty Cash (Chequing Accounts - 1 CAD)	273.62	273.62
Total Sunova Credit Union	95,046.09	87,782.54
Undeposited Funds	0.00	0.00
Total Cash and Cash Equivalent	95,046.09	87,782.54
Accounts Receivable (A/R)		
Accounts Receivable	0.00	0.00
Total Accounts Receivable (A/R)	0.00	0.00
Total Current Assets	95,046.09	87,782.54
Total Assets	95,046.09	87,782.54
Liabilities and Equity		
Liabilities		
Current Liabilities		
Accounts Payable (A/P)		
Accounts Payable	0.00	54.00
Total Accounts Payable (A/P)	0.00	54.00
GST/HST Payable	0.00	0.00
Total Current Liabilities	0.00	54.00
Total Liabilities	0.00	54.00
Equity		
Retained Earnings	97,638.30	82,500.87
Profit for the year	-2,592.21	5,227.67
Total Equity	95,046.09	87,728.54
Total Liabilities and Equity	95,046.09	87,728.54

Canadian Society of Agronomy Executive Committee 2019/20

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