Newsletter Spring 2016

Message from the President Jeff Bertholet



Hello everyone! I hope that spring finds you well, and like farmers, you are excited and optimistic as another field season quickly approaches.

For those of you I have not met, I thought I should provide a quick introduction. I am currently the Technical Development Manager with BASF, based in Saskatoon. I have worked for the 33 years with the company in a variety of technical and marketing roles in both eastern and western Canada.

I am very pleased to be the 2016 CWSS-SCM President and will work hard to continue the success and momentum achieved by Eric Johnson and the 2015 Board of Directors. I would like to thank Eric for the strong work ethic, positive attitude and team work he brought to

the role. Our Society is fortunate to have a dedicated Board of Directors working to chart our course. I would like to thank those Board members whose term was completed this past November. They include Hugh Beckie, Past President, Ken Sapsford, Member At Large (west) and Katherine Stanley, Graduate Student Representative. I am very pleased to welcome the following people to the Board; Rene Van Acker, 2nd Vice-President, Steve Shirtliffe, Member-At-Large (west) and Breanne Tidemann, Graduate Student Representative. Our current Board is very engaged in supporting the Society. Our five year strategic plan provides clear direction and we hope to build on the success and positive momentum

Inside this issue: Check page 2 for the index of this newsletter

Our appreciation to the following companies for their support:

Platinum:

BASF Canada
Bayer CropScience
Dow AgroSciences
Canada Inc.
Monsanto Canada
Syngenta Canada
Inc.

Gold:

FMC Nufarm DuPont Canada

Silver:

AgQuest
Arysta LifeScience
Valent
Agriculture Institute
of Canada (AIC)



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President's Message continued

achieved to date.

Looking back on 2015, I certainly need to extend a big thank you to Rory Degenhardt and the LAC team that hosted the 2015 Annual Meeting in Edmonton. Rory and the team were extremely well organized and worked tirelessly to plan and deliver a high caliber, successful meeting. Highlights for me included the joint meeting with the Alberta Invasive Species Council, NEXT, the forward looking plenary session and as always the graduate student presentations.

Plans are well underway for the 2016 Annual Meeting in Moncton. The meeting will take place at the Delta Beausejour Hotel located in downtown Moncton. The city of Moncton is geographically in the center of the Maritimes and maritime hospitality. More information on the program is in the newsletter. Each LAC puts its unique stamp on the Annual Meeting. This year's plenary session, Forensic Weed Science will prove to be very interesting and informative.

In the meantime, we continue the work of the Society:

- The membership and meeting survey was uploaded to the website.
 Many excellent suggestions for improvements were provided and
 are being reviewed by the Membership Committee. In terms of
 the Annual Meeting, the LAC is implementing many of the sugges tions made, including maintaining the evening Banquet and the
 dine-arounds on Tuesday evening.
- The website is being updated with the 2016 information. The website is our main communication tool with members and outside the Society. More features will be added to the website over the course of the year.
- The webinar from the 2015 meeting has proven to be more work than expected. However, the first of the series is complete and the others will be available shortly.

I hope you enjoy the spring newsletter. We strive to be open and inclusive, so please do not hesitate to contact me or any member of the Board with your suggestions or ideas. My email address is jeff.bertholet@basf.com.

The 2016 November CWSS-SCM Annual
Meeting will be held
at the Delta Beausejour in Moncton, New
Brunswick,
from November 22 to 24, 2016



JOIN OUR SOCIETY

If you have not paid your membership dues for 2015, you can now do so online. If you attended our Montreal meeting, your fees for 2015 were included in the meeting fees. If you weren't able to attend you can become a member or renew your membership by the online link: http://www.regonline.ca/canadianweedsciencemembership.

Regular: (Educators, extension agents, government employees, growers, commercialization agents, regulators, researchers) - \$100

Student in an International University: - \$50

Retired: (Any person who has been a member of CWSS-SCM and has retired) - \$0

Student in a Canadian University with signature of supervisor: - \$0, please send in a copy of the registration form signed by your supervisor. Send in a copy of our membership form.

CWSS-SCM 2016 Moncton Photo Contest

Start collecting photos for the Moncton Photo Contest. The objective of our photo contest is to encourage CWSS-SCM members to hone their photographic skills and to make excellent weed and weed management images available for use by CWSS-SCM members and in CWSS-SCM publications.

The three best photos submitted in each of three categories will be recognized. The winning photos will be selected by a panel of judges selected by the Photo Contest Co-ordinator. For more information on submission of Photo Contest entries, see the Photo Contest section of the Annual Meeting notice on the CWSS-SCM webpage.

The photo categories for 2016 (for the Moncton meeting—2016 November) will be

- Category 1: Agriculture and Forestry: Individual botanical subject is not the prime theme of the image. For example, production (seeding, spraying, cutting...) or general views (landscape)
- Category 2: Weeds: Pictures of plants (patches, whole individual or parts) considered as weeds. Images should demonstrate morphological characteristics and/or weed invasion/competition. For example, dandelion seeds transported by wind, vetch on evergreen, soybean field with common ragweed...
- Category 3: Research in action: Pictures of research activity whether it be in the lab, or in the field. For example, canola breeding greenhouse, plot seeding, hand spraying...

DEADLINE—September 30, 2016: Send photos to assistant@cwss-scm.ca or upload them to the meeting registration site. (The latter will be ready when fees and program are finalized.)

Prizes: 1st - \$100, 2nd - \$50, 3rd - \$25 in each of three categories. There will also be a People's Choice Award.



2015 Edmonton CWSS-SCM Annual Meeting - Plenary Session

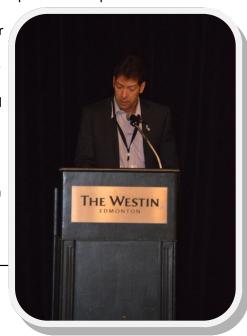


Opportunities for resistant weed control— Dr. Doug Sammons

Dr. Doug Sammons obtained his PhD from Ohio State University in 1982 and completed a National Institutes of Health postdoctoral fellowship at Penn State University with Dr. Stephen Benkovic before joining Monsanto in 1984. Starting in the Herbicide Discovery Program his work focused on the molecular mechanism of glyphosate inhibition of the target enzyme EPSPS. Dr. Sammon's studied methods to control corn rootworm while leading the insecticidal protein discovery team and he completed the required characterization

studies for the Cry1Ac Bt toxin for

the registration of Bollgard® cotton. Dr. Sammon studied glyphosate herbicide physiology using Roundup Ready® soybean to elucidate the major barriers to glyphosate delivery and efficacy. His studies on Roundup Ready® soybean determined that sufficient glyphosate in soybean was metabolized to aminomethylphosphonate to induce Yellowflash. Dr. Sammon's studies on glyphosate physiology supported the WeatherMax™ launch and he has been involved in training field sales teams and distributors on the best use of glyphosate. In the past 27 years Doug has worked on several major commercial products and is now a Senior Fellow in the Chemistry Unit leading a discovery research team focusing on the mechanisms and management of glyphosate resistant weeds.



Plenary Session-Brief retrospective — **Dr. Hugh Beckie**



Molecular Weed Science – Down the rabbit hole of big data Dr. Todd Gaines

Dr. Todd Gaines is an assistant professor at Colorado State University in molecular weed science. He completed his PhD at CSU, followed by post-docs in Western Australia and Germany. His research goal is to support sustainable weed management that helps contribute to sustainable cropping systems, including identifying the molecular and genetic basis of complex herbicide resistance mechanisms; utilizing next-generation sequencing to study complex traits in weeds; and developing molecular markers for rapid resistance diagnostics.

Plenary Session -continued



Plenary Session Chairs, **Dr. Rob Nurse** and **Dr. Linda Hall**



The latest developments in weed science and control Dr. Kevin Price

Dr. Kevin Price grew up working on a farm/ranch in the very rural area of Green River, Utah. He is currently a Professor with joint appointments in the Departments of Agronomy and Geography at Kansas State University (KSU). His Ph.D. is in Geography with specialty in remote sensing/GIS and his Master's and Bachelor's are in Range Science. He is an author of over 200 publications. He has multiple publications on remote sensing of crop and grasslands of Inner Mongolia, China; environmental impacts of coffee plantations on rainforests of El Salvador; and studied cropping, deforestation and modeling of dark earth soil distributions in the Amazonian region of Brazil, but the bulk of his work on the crop and grasslands of the Central Great Plains.

Kevin is receiving much national and international attention for his work on the use of remote sensing of crop and grasslands using small unmanned aircraft systems (SUAS), with specific focus on crop stressors such as disease, insects, weeds and inadequate nutrients.



Next Gen Herbicides – Natural Products Dr. Franck Dayan

Dr. Franck Dayan is a Research Plant Physiologist at the Natural Products Utilization Research Unit of USDA, ARS. His work focuses on the mechanisms of action of natural and synthetic herbicides. Franck was born in France came to the USA as an exchange student. He obtained his B.S. (1988) and M.S. (1992) in Botany from Stephen F. Austin State University in Texas. He then received his Ph.D. in Plant Physiology from Auburn University in Alabama in 1995.

He is currently serving as treasurer for the International Weed Science Society. He has served as treasurer of the Phytochemical Society of North America from 2006 to 2011 and will assume the presidency of that society in August 2014. He is a Regional Editor for the Allelopathy Journal and an Associate Editor for Weed Science and Pesticide Biochemistry and Physiology.

Franck has published 172 publications that include 114 peer-reviewed scientific articles and 48 book chapters and reviews in scientific journals. Dr. Dayan's authorship has a google h-index of 46, which reflects his sustained research productivity and significant impact on the research of other scientists (at least 6317 citations as of July 2015). He has been invited to numerous national and international conferences and symposia.

2015 CWSS-SCM Industry Award Winner— Mark Lawton



Steve Shirtliffe (left) presents the award to Mark Lawton

CWSS-SCM Industry Award Mark Lawton

Mark Lawton is the Technology Development Lead for Canada. In this role Mark's team is responsible for the technical assessment and support of Monsanto's canola, corn, soybean and crop protection technology that is being developed prior to commercialization and sold commercially. His team is focused on germplasm, biotechnology, pesticide, biologicals and agronomic system research across Canada.

Mark has been with Monsanto since 1989 in a series of roles in both eastern and western Canada. While most of his career has focused in Technology Development, Mark has also had roles in marketing and in seed manufacturing with Monsanto.

A native of Windsor, Ontario, Mark completed his Bachelor's degree in Botany at the University of Toronto. He completed his Master's and Doctorate degrees in Plant Pathology at the University of Guelph and more recently the Executive Development Program at Northwestern University.

2015 CWSS-SCM Edmonton Excellence In Weed Science Award Winner — Stephen Darbyshire



Steve Shirtliffe (left) and Jamshid Ashigh (right) Dow AgroSciences present the award to Stephen Darbyshire

CWSS-SCM Excellence in Weed Science Stephen Darbyshire

Stephen Darbyshire is a nationally and internationally known plant taxonomist with Agriculture and Agri-Food Canada in Ottawa, Ontario, who has provided leadership, knowledge and support for advancing weed science in Canada. He received his B.Sc in Biology from the University of Guelph in 1977 and his Masters of Science in Plant Taxonomy and Evolution from the University of Ottawa in 1992. In his career, Stephen has collected approximately 10,000 specimens of plant, bryophyte, and fungal specimens, primarily from Canada. These specimens are stored in either the DAO, Ottawa (also known as the Collection of Vascular Plants) or the Nation-

al Herbarium of Canada (located in the Canadian Museum of Nature, Ottawa). Stephen's research pursuits in terms of botanical collections include the family Poaceae and weeds. His contributions have been integral in the DAO grass collection being known as "one of the best in Canada and one of the best in the world. With the worldwide importance of cereals to humans, it is naturally an important world resource. The importance of the collection with regard to grasses is a result of a long tradition of major contribu-

tions of AAFC researchers to grass systematics". In addition, Stephen's taxonomy expertise is constantly sought to assist in plant identification through workshops and field days. He has served as an advisor to the Canadian Food Inspection Agency, the United States IR-4 program and has been a member of the Weed Science Society of America's Weed Nomenclature Committee. Stephen has provided leadership and knowledge in program development for managing Invasive Plant Species, including an ad hoc Interdepartmental Committee on Invasive Alien Species, which was the primary origin of the National Invasive Alien Species Strategy. He participated in a CFIA working group developing an eradication program for wooly cupgrass in southern Quebec. Stephen has been very active in CWSS-SCM including LAC committees, organizing and obtaining funding for a symposium on Invasive plants at the 2006-07 Annual meeting, acting as co-editor for a Topics in Canadian Weed Science volume, and serving as Publications Director on the Board of Directors. He was the CWSS-SCM appointed Associate Editor for the Canadian Journal of Plant Science from 2003-2009 and has been a very active contributor and reviewer to the Biology of Canadian Weeds series. Stephen has authored or co-authored 98 scientific publications, and written 50 book chapters or books. He has contributed to 32 conference or workshop proceedings, as well as written 30 miscellaneous publications. A very important publication that Stephen has authored is the "Inventory of Canadian Agricultural Weeds", which has entries for 872 species and 198 subspecific taxa, for which over 9000 common and scientific names are given, including the most common synonyms. Stephen has also been very active in the organization of "Weeds Across Borders" conferences in both United States and Canada.

2015 CWSS-SCM Meritorious Service Award Winner — Ken Sapsford



Steve Shirtliffe (left) presents the award to Ken Sapsford

CWSS-SCM Meritorious Service Ken Sapsford

Ken Sapsford recently retired from the Department of Plant Sciences at the University of Saskatchewan where he worked as a Research Assistant from 2000 – 2015. Ken received his Bachelor of Science in Agriculture from the University of Saskatchewan in 1979, majoring in agronomy. Upon graduation, Ken farmed with his brother on a 3000 acre grain farm near Perdue, SK and managed a farm input supply business until 1986. He continued to

maintain an interest in the farm until it was sold in 2012. In 1987, Ken began a career in soil conservation extension first working as a District Soil Conservation Technician, followed by the position of Regional Soil Conservationist with the Saskatchewan Soil Conservation Association until 2000. His extension efforts help spearhead the widespread adoption of no-till production in Saskatchewan. In 2008, Ken was recognized for his contribution to soil conservation with the Distinguished Agrologists Award from the Saskatchewan Institute of Agrologists. His extension activities continued as part of his duties with the University of Saskatchewan and his weed extension contributions were recognized in 2013 when he received the CWSS-SCM Excellence in Weed Extension Award. Ken has been very active in CWSS-SCM, including three Local Arrangement Committees (Saskatoon 2002, Victoria 2006, and Regina 2010) and sitting as Member-At-Large (West) on the Board of Directors since 2010. His ability to persuade has been valuable on the nominations committee, as he has helped recruit a diverse group of members to sit on various committees and the Board of Directors. His knowledge of rules of order has been an asset at Board meetings ensuring that proper protocols are met. Ken & his wife Joy are now operating a small vineyard south of Penticton. Ken and Joy have three daughters and recently welcomed the arrival of their first grandchild in 2015.

2015 CWSS-SCM Montreal Excellence in Weed Extension Award Winner — Danielle Bernier



Steve Shirtliffe (left) and Julie Schipper (right) of Valent Canada present the award to Danielle Bernier

Excellence in Weed Extension Award Danielle Bernier

Danielle Bernier obtained her Bachelor of Bioagronomy degree from Laval University in 1981. At the end of her baccalaureate, she worked for the Quebec Ministry of Agriculture, Fisheries and Food (MAPAQ) while pursuing her studies to obtain her master's degree in plant material biology-weed specialist supervised by late Dr. Robert Beeraj and Mr. Bruno Maltais at Laval University in 1985.

While studying for her master's degree, Danielle assisted Mr. Bruno Maltais with research projects in weed science.

Mrs Bernier occupied between 1986 and 1990 a job as responsible of the weed science diagnostic laboratory in phytoprotection at the MAPAQ. She also conducted weed science researches, primarily with herbicide trials and the repression of specific types of weeds. Consequently, Danielle occupies a full time task at the MAPAQ as a researcher and person in charge of the weed science laboratory

In the mid 90's, a governmental restructuring brings Danielle to cease her research projects for the benefit of providing extension services to consultants and agricultural producers. Over the years, different tasks and responsibilities are added to her workload: collaboration with the Réseau d'avertissements phytosanitaires (RAP), expert for SAgE pesticides and IRIIS phytoprotection and very much involved with the Quebec phytosanitary strategies in agriculture. She is also member of governmental and intra-governmental committees as well as being responsible for the Agri-Réseau phytoprotection website and is counsellor on a regular base for different research and development projects.

Danielle is very active in many organisations. She became president and vice-president turn after turn with the Weed Science Commission, today known as the Commission de phytoprotection du Centre de référence en agriculture et agroalimentaire du Québec (CRAAQ), and is also a member of different CRAAQ subcommittees. She is also involved in the Quebec Society for the Protection of Plants (QSPP), where she accedes to the presidency. Danielle has also been for six years an advisor for the administration and the executive for the Canadian Seed Growers' Association (CSGA). Danielle is also a lifetime honorary member of the CSGA. Danielle also occupied different tasks for the Canadian Weed Science Society: she represented eastern Canada, the provincial governments, was member and president of the acknowledgement and bursaries committee, member and responsible for the extension and regulatory affairs, judge for student presentations, for posters, judge and master of ceremony for recognition awards, member of the organizing committee in 1995, 2007 and 2014, and responsible for the 2002 reunion. Danielle has given many conferences, courses and workshops within her functions. She has cooperated and written many formation and information documents, guides and articles for producers, counsellors and students in her career.

——-

Danielle Bernier a obtenu son baccalauréat en bioagronomie à l'Université Laval en 1981. À la fin de son baccalauréat, elle a partagé travail, au ministère de l'agriculture des Pêcheries et de l'Alimentation (MAPAQ), et études pour obtenir sa maîtrise en biologie végétale-malherbologie en 1985 de l'Université La-

2015 CWSS-SCM Montreal Excellence in Weed Extension Award Winner — continued

val sous la direction de feu M. Robert Beeraj, Ph. D., et de M. Bruno Maltais. Durant ses études à la maîtrise, Danielle assistait M. Maltais dans la réalisation de travaux de recherche en malherbologie. Entre 1986 et 1990, Mme Bernier occupe un emploi occasionnel au MAPAQ comme responsable de la section malherbologie du Laboratoire de diagnostic en phytoprotection, en plus de conduire des travaux de recherche en malherbologie, principalement des essais d'herbicides et de lutte à des problèmes de mauvaises herbes spécifiques. Par la suite, Danielle fait son entrée au MAPAQ à temps plein comme chercheure et responsable de la section malherbologie du Laboratoire. Au milieu des années 90, une restructuration du secteur de la recherche l'amène à délaisser le secteur de la recherche au profit de services de vulgarisation et de diffusion d'information agricole pour les conseillers et les producteurs agricoles. Au fil des ans, différents dossiers s'ajoutent à ses responsabilités : collaboratrice au Réseau d'avertissements phytosanitaires (RAP), membre expert pour SAgE pesticides et IRIIS phytoprotection, elle est également très impliquée dans le dossier de la stratégie phytosanitaire québécoise en agriculture. Elle siège sur de nombreux comités ministériels et interministériels, en plus d'être pilote du site d'Agri-Réseau phytoprotection. Elle est régulièrement conseillère sur différents projets de recherche et développement anielle est très active dans plusieurs organisations. Elle devient tour à tour présidente ou vice-présidente de la commission de malherbologie, aujourd'hui la Commission de phytoprotection du Centre de référence en agriculture et agroalimentaire du Québec (CRAAQ). Elle est aussi membre d'autres comités du CRAAQ. Elle est également très impliquée au sein de la Société de protection des plantes du Québec (SPPQ). Il y occupe divers postes pour finalement accéder à la présidence. Elle a également siégé pendant plus de 6 ans sur le conseil d'administration et, par la suite, au conseil exécutif de l'Association canadienne des producteurs de semences (ACPS). Danielle a reçu le titre de membre honoraire à vie de l'ACPS. Elle a aussi occupé différents postes pour la Société canadienne de malherbologie : représentante de l'Est du Canada , représentante des gouvernements provinciaux, membre et présidente du Comité des bourses et reconnaissance, membre et responsable du Comité extension et affaires réglementaires, juge pour les présentations étudiantes, juge pour les affiches, juge pour les prix académiques, juge et maître de cérémonie pour les prix de reconnaissance, membre du comité organisateur en 1995, 2007 et 2014 et responsable de la réunion de la société en 2002. Danielle a également donné de nombreuses conférences et de nombreux cours et ateliers dans le cadre de ses fonctions. Au cours de sa carrière, elle a écrit et collaboré à un grand nombre de documents de formation et d'information, de guides et d'articles destinés aux producteurs, conseillers et étudiants.

Next CWSS-SCM Newsletter

Our next newsletter will contain on information the CWSS-SCM / the Alberta Invasive Species Council (AISC) Plenary portion of the 2015 meeting and more information on the AISC in general.

Also there will be more information on the Tuesday Plenary session and the resulting webinar series.

If you have any information on upcoming summer open houses or field days, let me know and we can put them in the newsletter.

2016 CWSS-SCM Montreal Graduate Student Award Winners



1st Place Award for Ph.D. Student Provided by Monsanto

1st Place Award for Ph.D. student presented by Steve Shirtliffe (left) and Joe Vink (right) of Monsanto — Breanne Tidemann (centre), University of Alberta



2nd Place Award for Ph.D. Student Provided by Syngenta

2nd Place Award Ph.D. student presented by Steve Shirtliffe (left) — Charles Geddes (right), University of Manitoba



3rd Place Award for Ph.D. Student Provided by CWSS-SCM

3d Place Award Ph.D. student provided by CWSS-SCM — Holly Byker, University of Guelph



1st Place Award for M.Sc. Student Provided by Monsanto

1st Place Award for M.Sc. student presented by Steve Shirtliffe and Joe Vink (right) of Monsanto Canada — Katherine Stanley, University of Saskatchewan



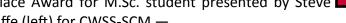
2nd Place Award M.Sc. Student Provided by Dow AgroSciences Inc.

2nd Place Award for M.Sc. student provided by Dow AgroSciences Inc. — Christopher Budd, University of Guelph



3rd Place Award M.Sc. Student Provided by CWSS-SCM

3rd Place Award for M.Sc. student presented by Steve Shirtliffe (left) for CWSS-SCM — Amy Mangin (right), University of Alberta







2015 CWSS-SCM Edmonton—Poster Awards



Steve Shirtliffe (left), Master of Ceremonies for the Banquet and Jeff Bertholet (right) of BASF Canada presents the poster awards for the meeting:

1st—Bob Blackshaw, Agriculture et Agroalimentaire Canada | Agriculture and Agri-Food Canada at Lethbridge 2nd – Rob Gulden, University of Manitoba

3rd—Martin Laforest, Malherbologie Moléculaire | Weed Science, Agriculture et Agroalimentaire Canada | Agriculture and Agri-Food Canada at Saint-Jean-sur-Richelieu



Steve Shirtliffe (left), Master of Ceremonies for the Banquet, and Allan Kaastra (right) of Bayer CropScience present the best student presentation awards for the meeting:

Breanne Tidemann Charles Geddes



General Meeting Photos









The Audience at the Plenary Session

Graduate Student Presentations



Holly Byker— Glyphosate-resistant common ragweed: twopass herbicide programs in Roundup Ready and Roundup Ready Xtend Soybean Allison Taziar— Sulfentrazone Tank-mix Partners for Grass Control in Ontario Dry Beans (Phaseolus vulgaris L.)



Ally Mierau— Evaluating a two-pass herbicide system for managing glyphosate-resistant canola in glyphosateresistant soybean crops



Christopher Budd— How to improve the consistency of glyphosate-resistant Canada fleabane (Conyza canadensis L. Cronq.) control with saflufenacil: an investigation of tank

Charles Geddes— vestigation of tan Volunteer Canola in mix partners and optimal time of day application



Matthew Underwood— Interaction Between Xtendimax™ and Group 1 Herbicides for the Control of Volunteer Corn in Soybean.



Soybean: Shifting the competitive balance

Andrew McKenzie— Gopsill—Singlet oxygen signals response of soybean seedlings to neighbouring weeds





Zhenyi Li—Halosulfuron tank mixes applied PPI and PRE in white bean



Mackenzie Lesperance—Unique subcellular discoveries in glyphosate resistant giant ragweed, a role for programmed cell death?



Graduate Student Presentations



Leila Kamino—Below ground activities as influenced by crops and weeds: the case of extracellular DNA (eDNA) Nikki Burton— Evaluating Seed Shatter of Economically Important Prairie Weed Species



Vladimir Pajic— Unlocking the potential of spectroscopy in herbicide research



Breanne Tidemann
—Potential Effects
of Harvest Weed
Seed Control on
Wild Oat (Avena
fatua) Populations
Based on Demographic Modelling



Sharavari Kulkarni— The Role of Olfaction in Brassicaceous Weed Seed Predation



Amy Mangin—Wild oat (*Avena fatua* L.) populations resistant to triallate may also be resistant to pyroxasulfone and sulfentrazone



Lysandra Pyle—Linking seed bank composition and spatial variation in vegetation to pipeline disturbance in mixedgrass prairie



Tasha Valente— Exploiting Weaknesses in Weeds Life Cycles in Order to Optimise Herbicide Resistance Prevention Strategies



Mathew Vercaigne— Evaluation of new herbicide options for control of foxtail barley (*Hordeum jubatum*) in spring wheat



Graduate Student Presentations



Sahar Mansourian— Comparison of Artificial Neural Network (ANN) and Logistic Regression as potential models for predicting weed populations in dryland winter wheat fields in Kurdistan province, Iran



Katherine Stanley— Inter-row Cultivation in Organic Pulse Production

Moria Petruic— Improving weed management in flax with integrated weed management



Sierra Harris— Manuka Oil: A Potential Herbicide for Organic Vegetable Production





Kali Kasper— Determining optimum plant populations in different lentil classes



Dilshan Benaragama
—Weeds in organic vs.
conventional cropping
systems: What we
have learned after 18
years of research

2015 Photos of Other Sessions















2015 Photo Winners

Agriculture and Forestry



3rd After the Storm— Breanne Tidemann



2nd Christopher Budd



1st Quiet Sunrise, Amy Mangin

Weeds



3rd Piglettes —Tasha Valente



2nd And so it begins— Breanne Tidemann



1st Stain from Weeds in Soys— Dave Bilyea

Research in Action



3...

Field of Dreams—Matthew Underwood



2nd Dave Bilyea



1st Christopher Budd



2015 Photo Winners



Steve Shirtliffe (left) and Michael Vanhie (second from right) from DuPont present awards to Amy Mangin and Breanne Tidemann (Agriculture and Forestry)



Steve Shirtliffe (left) and Michael Vanhie (left) from DuPont present award to Matthew Underwood (Research in Action)



Steve Shirtliffe (left) and Michael Vanhie (left) from DuPont present award to Eric Johnson (People's Choice Award

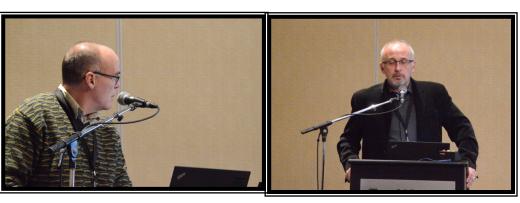
People's Choice: Borage Pollination by Eric Johnson



Professional Workshops from 2015 Annual Meeting Montreal



Workshop A: I've Never Seen That Weed Before – Weed Families & Kin ID Workshop with Stephen Darbyshire



What every agronomist should know about Stats with Eric Johnson, Neil Harker, and Steve Shirtliffe

Special Thanks for the 2015



A special thanks to Rory Degenhardt who worked tirelessly throughout the year and is still working on putting on the finishing touches for the 2015 CWSS-SCM meeting in Edmonton.

Another special thank you goes to Steve Shirtliffe who took up Chris Willenborg's role as Master of Ceremonies for the Banquet. Chris did all the lead up work for the Awards and Scholarships and for 2015 and Steve

completed the job at Edmonton.

In the News

In February 2016, the CBC carried the story of "Sask. man donates kidney to his fiancée after finding out they are perfect match". "Christian Willenborg donated one of his kidneys to his fiancée, Errin Tollefson, after finding out they were a scientifically perfect match." After waiting for a while and surgery be delayed by more tests, Chris and Erin underwent surgery in February.

You can check out the original story at

http://www.cbc.ca/news/canada/saskatoon/saskatchewan-man-donates-kidney-to-fianc%C3%A9e-1.3442292





Thanks to the 2015 Edmonton Local Arrangements Committee

Position	Name	Affiliation
First Vice President (LAC Overseer)	Jeff Bertholet	BASF
Local Arrangements Committee Chair	Rory Degenhardt	Dow AgroSciences
Hotel Arrangements	Rory Degenhardt	Dow AgroSciences
Plenary Session Co-Chair & Publications	Linda Hall	University of Alberta
Plenary Session Co-Chair & Publications	Rob Nurse	AAFC
Pre-Conference Events	Breanne Tidemann	University of Alberta
Graduate Student Presentations	Kristina Polziehn	
Awards Banquet	Chris Willenborg/ Rory Degenhardt	University of Saskatchewan
Industry Reception	Don Hare	Dow AgroSciences (Retired)
Photo Contest	Nicole Kimmel	AARD
Poster Session	Pat Forsyth	duPont
Continuing Education and Professional Development Workshop	Pat Forsyth	duPont
Sponsorship - National	Greg Wilson	Syngenta
Sponsorship - National	Joe McNulty	IPCO
Sponsorship - Local	Bill Hamman	Hamman Ag Research
Commercial Displays	Graham Collier	Nufarm
A/V	Matt Crooks	Monsanto
Registration	Anita Drabyk	cwss
Media Coverage & Local Publicity	Ryan Low	Bayer CropScience
Program Committee Chair.	Jeff Bertholet	BASF
Scholarships and Awards	Chris Willenborg	University of Saskatchewan
Local Arrangements Advisor and Pre- Conference Events	Neil Harker	AAFC
CWSS Executive Liaison and Treasurer	Frances Boddy	DuPont
CWSS Grad Student Representative	Katherine Stanley	University of Saskatchewan

Thanks to Ryan Low for all his photos in this issue. All photos were taken by Ryan unless noted otherwise.



Our Canadian Weed Science Society 70th Annual Meeting November 22—24, Delta Beauséjour Moncton, New Brunswick

Plenary Session—Forensic Weed Science

Herbicide Injury: Dr. Peter Sikkema

Application Issues: Dr. Tom Wolf

Tank Mixing: Dr. David Jordan

Soil Parameters: Dr. Jeff Schoenau

Interactive Case Studies

Optional Events

Ag Research Manager (ARM) Update

(Monday afternoon Nov 21)

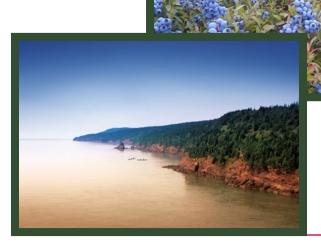
Field Tour of Local Region (Thursday afternoon Nov 24 for tour)

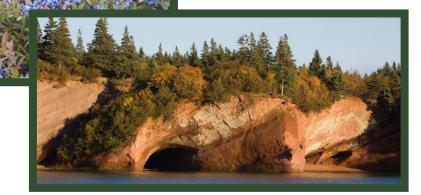
Sprayers101.com Grower Ses-

(Friday Nov 25 for sprayer session)



weedscience.ca @CWSS_SCM #CWSS_SCM16







Delta Beauséjour

Mark your calendars for November 22 to 24, 2016, for the CWSS-SCM Annual Meeting. It will be held at Delta Beauséjour in Moncton, New Brunswick. This Meeting will be chaired by Gavin Graham. Check out more on the hotel at https://www.deltahotels.com/Hotels/Delta-Beausejour-Hotel

Photos below are unretouched photos by Gavin to give us a realistic look for next year but it all may be green grass too.



The picture above is the view from the Past President's Suite.





Awards and Scholarships

Remember to start thinking of nominations and applications for the Annual Meeting in Moncton. .

- Graduate Student Scholarships
- CWSS-SCM Outstanding Industry Member Award
- Dow AgroSciences Canada Inc. Excellence in Weed Science Award
- CWSS-SCM Fellow
- CWSS-SCM Meritorious Service
- Excellence in Weed Extension Award

2016 CWSS-SCM Board of Directors



Jeff Bertholet (left) takes over the gavel as the President of CWSS-SCM for 2016 from Eric Johnson (right). Jeff presents Eric with a plaque for his term as President of CWSS-SCM for 2015.

The Board also thanks Ken Sapsford (Member-At-Large (West)) and Hugh Beckie (Past-President) for their work on the Board of Directors. At the same time we welcome the following to Board:

Member-At-Large (West)......Steve Shirtliffe 2nd Vice-President......Rene Van Acker

We also welcome the 2016 LAC Chair, Gavin Graham. Gavin and his team gathered from far and near are already well on their way in developing the meeting for Moncton in November 2016.



BULLETIN OF THE ENTOMOLOGICAL SOCIETY OF CANADA BULLETIN DE LA SOCIÉTÉ D'ENTOMOLOGIE DU CANADA

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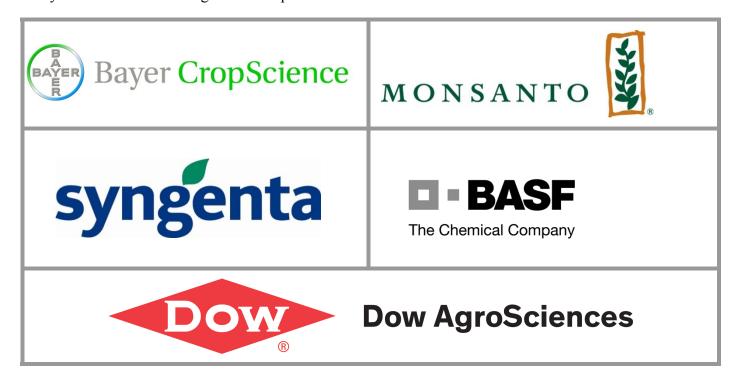
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THE INVADER NEWSLETTER



The new Anti-Spam legislation came into effect in 2014. We are actively re-building our distribution list. How can you help? Encourage your friends, enemies, contacts and co-workers to go to the AISC website (www.abinvasives) and sign up for the newsletter. THE INVADER newsletter is published regularly and will keep you up to date with the latest news on AISC and invasive species. Follow us on Twitter and Facebook.

Thank you to our 2015 Meeting Platinum sponsors:



Thank you to our 2015 Meeting Gold sponsors:





The miracles of science™



Thank you to our 2015 Meeting Silver membership:

Arysta LifeScience Corporation	AgQuest
Valent	Agricultural Institute of Canada (AIC)

Thanks also go to our local sponsors:

Crop Production Services, Richardson Pioneer, Gowan, ICMS, Agri-Trend, Hamman AG Research, Gylling Data Management (GDM), Zürn, West Wind Ag Research, Olds College Centre for Innovation



AIC 2016—Disseminating Agricultural Research





April 13-14, 2016 - Ottawa, ON

While agriculture research findings may not be discussed at dinner tables across the country, it affects Canadians on a daily basis, whether they know it or not. In our era of instant news, building public trust in research and effectively communicating it to the public has never been more important.

Hear from award-winning writer **Gabrielle Bauer** and **Mary Ann Binnie**, Manager, Nutrition and Food Industry Relations with the Canadian Pork Council in this training workshop at *AIC* 2016 where they will discuss how to take complex research findings and effectively communicate them to the public. After this workshop participants will be able to:

- Identify diverse communication techniques to translate complex research findings into a language and format that non-experts can understand.
- Compare various tools and methods to engage the public and build greater consumer trust in agricultural innovation.
- Develop a dissemination plan to encourage social engagement and acceptability of agricultural research.

Click <u>HERE</u> to learn about this and other exciting workshops taking place at AIC 2016: Disseminating Agricultural Research.

Register for AIC 2016 today

View this email in French.

We are pleased to announce Alberta's Deputy Minister of Agriculture and Forestry, **Bev Yee**, as a featured speaker on Thursday April 14.

Visit the **<u>conference programme</u>** to learn more about conference speakers.





AIC 2016—Disseminating Agricultural Research continued

Already registered for the conference but still need to book your accommodations? Book your room by March 18, 2016 to receive the special discounted room rate of \$199 + tax at the Ottawa Marriott Hotel reserved for conference participants! Book here or or call 1-800-853-8463 and quote conference ID Agriculture Institute of Canada (AIC).

Hotel & Travel Discounts Info



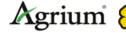




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Not on the AIC mailing list but want to receive up-to-date information on AIC 2016?

Sign-up here

For more information contact:

Bridget Schrempf 613-232-9459 x304

events@aic.ca

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Februrary 2016 Global Plant Council Bulletin

This is a bulletin from the Global Plant Council, of which Plant Canada is a member (and thus CWSS is too)

ACSS Biweekly e-news: *issue No.108* Global Plant Council E-Bulletin February 2016 http://globalplantcouncil.org/

Dear colleague,

*

Have you subscribed to ACSS Biweekly news?

It's free-of-charge. Hundreds of crop scientists in Africa as well as worldwide subscribe to ACSS Biweekly news to stay abreast of the latest debates, tools and news on crop sciences and it is related subjects in the workplace, and more. This biweekly news alerts serves as an African clearinghouse, tapping and disseminating new resources from related organizations in Africa and worldwide, alongside our own.

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Best Regards

Kasem Zaki Ahmed, Ph.D.

Previous President, African Crop Science Society;

Representative of ACSS to Global Plant Council (GPC)

Professor of Genetics, Dept. Genetics, Fac. Agric., Minia University, El-Minia, Egypt, Eg-61517.

Tel & Fax: ++ 20 (86) 2 36 21 82. Cell Phone: ++ 20 (122) 10 37 50 4.

E-mail: ahmed kz@yahoo.com Visit our website at: www.acss.ws



Global Plant Council continued

E-Bulletin /

February 2016

Welcome to your monthly e-Bulletin from the Global Plant Council! As usual, this newsletter provides an overview of some of the new and fascinating plant science going on around the world, as well as details of new reports, funding opportunities, events and other information we thought you might find useful.

Don't forget to check out our <u>website</u>, <u>blog</u> and social media channels for even more content, and if you have any questions, comments or feedback for us then please <u>send us an email!</u>

Latest News / View more...

If you have news you would like us to share on our website, please contact <u>lisa@globalplantcouncil.org</u>

This month 58 new breaking news stories were posted on the GPC website including...

<u>In Nature Plants: Ancient flowering plant was beautiful, but probably poisonous</u>

Researchers have announced the discovery of the first-ever fossil specimens of an "asterid" – a family of flowering plants that gave us everything from the potato to tomatoes, tobacco, petunias and our morning cup of coffee.

<u>In New Phytologist: Study documents drought's impact on redwood</u> forest ferns

A comprehensive study of water relations in native ferns, conducted during one of the worst droughts in California's recent history, shows that extreme conditions have tested the limits of drought tolerance in these plants.

High resolution insights into how roots grow

Researchers in Frankfurt have used a high-tech optical microscope and computer simulation analysis to conclude that, in Arabidopsis, root shape is determined by a combination of genetic predisposition and the self-organization of cells.

A new role for vitamin B6 in plants

Researchers from the University of Geneva, Switzerland, have discovered an unexpected role for the micronutrient vitamin B6, in relation to nitrogen metabolism.

Finding the best seeds to meet Africa's needs

A new coordinated soybean variety evaluation program is underway that will give African growers more and better seed options.



Global Plant Council continued

On the blog / View more...

Would you like to contribute an article to the GPC's blog? Please get in touch! Email lisa@globalplantcouncil.org

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The Global Plant Council is a not-for-profit entity registered in Switzerland.

Our registered mailing address is:

Global Plant Council 3rd Floor, Bow House 1a Bow Lane London, EC4M 9EE United Kingdom

Flowers of the Global Plant Council

Following on from <u>December's GigaScience post</u> about sequencing the genome of Hong Kong's national flower, Amelia Frizell-Armitage takes a look at some of the other national plants of our member organizations' home countries.

More...

Integrated Pest Management Systems

What is integrated pest management (IPM), and how is it achieved? All is explained in this GPC blog post.

More...

Plant Artificial Chromosome Technology

Could artificial chromosome technology transform plant genetic engineering? Find out more about this emerging technology.

More...

2016 Survey of the Most Common and Troublesome Weeds in U.S. and Canada

We are launching the 2016 survey of the most common and troublesome weeds in the U.S. and Canada. This year's survey will focus on weeds in broadleaf cropping systems (i.e. alfalfa, canola, cotton, etc..), fruit & nut crops, and vegetables. The survey is open to ALL members of weed science societies in the U.S. and Canada.

Survey link: https://www.surveymonkey.com/r/2016weeds

We hope to use the data to make informed policy decisions and control strategies, promote awareness of emerging threats, and monitor trends and progress over time. To view last year's results, please go to: http://wssa.net/wssa/weed/surveys/

Thanks for your help in distributing this to your members.

Lee

Lee Van Wychen, Ph.D.

Science Policy Director

National and Regional Weed Science Societies



Job Opportunity



Manager, Plant Health Unit Abbotsford BC Annual Salary: \$64,701.20 - \$80,811.61

The Plant Health Manager contributes to and supports the overall development, communication and implementation of Branch and Ministry business. Consistent with the fundamental objective, the Plant Health Manager also leads a team of staff that is responsible for protecting the capacity of BC's agricultural land resource from the adverse impacts of plant pests. This team provides expertise and works with stakeholders to protect plant health and quality through the application of innovative sustainable pest management technologies and practices.

If you're looking to live and work in a location that's equally close to the amenities of Vancouver and the coastal mountain range, please consider this exciting opportunity to live and work in
Abbotsford, a modern urban core – right in the middle of the scenic Fraser Valley of British Columbia, one of the most beautiful and bountiful agricultural areas in Canada.

This position offers a competitive salary working in a varied environment with attractive work hours. Working for the public service offers a healthy work/life balance, and excellent benefits. In addition to the base salary, there is an allowance to cover professional fees, strong dental and medical plans and <u>much more</u>. Salary listed does not include the additional 7% Overtime Shift Standby (OSS) provision that can be taken as taken as time off or salary on an annual basis which is on top of four (4) weeks annual leave.

To be considered for this position your resume must clearly demonstrate that you have the following:

Master's degree specializing in plant science, plant health, pest management or related discipline with a minimum of 5 years' experience in plant health.

An equivalent combination of education and experience.

Experience with a plant diagnostic lab or demonstration of in-depth understanding of the diagnostic process.

Registration as a Professional Agrologist, or immediately eligible for registration, with the British Columbia Institute of Agrologists.

Courses and/or training and/or experience in management and leadership.

For more information on this career opportunity including how to apply online by April 14th 2016, please visit: https://search.employment.gov.bc.ca/cgi-bin/a/highlightjob.cgi?jobid=32102

Job Posting for AAFC

Agriculture and Agri-Food Canada - Science and Technology Branch Charlottetown (Prince Edward Island)

Posting: 15-AGR-ATL-EA-ST-52 (SE-RES / Research Scientist – Weed Science / Chercheur ou chercheuse scientifique - Malherbologie) The poster for the SE-RES Research Scientist – Weed Science process in Charlottetown has been posted on PSRS, with a closing date of March 29, 2016. Please see link below.

https://emploisfp-psjobs.cfp-psc.gc.ca/psrs-srfp/applicant/page1800?poster=873760



Upcoming Meetings				
June 19-25, 2016	International Weed Science Congress will be held at Clarion Congress Hotel Prague, Prague, CZECH REPUBLIC			
June 30 to July 03, 2016.	6th Annual World Congress of Bioenergy will be held in KINTEX, Gyeonggi-do, South Korea. For more information, please kindly check on http://www.bitcongress.com/wcbe2016/default.asp.			
Jul. 17 - 20, 2016	Aquatic Plant Management Society (APMS), Grand Rapids, MI www.apms.org			
November 22-24, 2016	CWSS-SCM Annual Meeting at Delta Beausejour in Moncton, NB			
Dec. 12 - 15, 2016	North Central Weed Science Society (NCWSS), Des Moines, IA www.ncwss.org			
Jan. 2017	Northeastern Weed Science Society (NEWSS), Philadelphia, PA www.newss.org			
Jan. 23 - 25, 2017	Southern Weed Science Society (SWSS), Birmingham, AL www.swss.ws			
February 2017	Weed Science Society of America Annual Meeting, Tucson, Arizona			
November 2017	CWSS-SCM Annual Meeting in Saskatoon SK			
CWSS-SCM Facebook and Twitter				

Remember to regularly check out our CWSS-SCM social media tools for the membership. We hope these tools will help our membership connect and help distribute information on weed science throughout the year. The hyperlinks are listed below and the links are also posted on our main website, www.weedscience.ca.

Please follow, like and tweet about these tools! <u>CWSS-SCM Facebook Page</u>, CWSS-SCM Graduate Students Page (Login to Facebook required) and CWSS-SCM Twitter. We post timely information on abstract submissions, job postings and other information on these sites.

Articles for Newsletter

Articles, photos, letters and news items for the newsletters can be emailed to assistant@cwss-scm.ca at any time.

Anita Drabyk CWSS – SCM, Executive Assistant P.O. Box 674 Pinawa, Manitoba R0E 1L0 Telephone: (204) 205-0297 or (204) 753-2915 Fax: (204) 753-2363 E-mail: assistant@cwss-scm.ca

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