

# CSA Newsletter

Canadian Society of Agronomy

February 2012



## PRESIDENT'S MESSAGE

Nearly a year has passed since I took on the responsibility of being president of the CSA. Your society accomplished some of our goals for this year, but not all. That was to be expected because the goals we set were extensive and the organization runs on volunteers. We have tried to encourage more student participation in the society, reform the Canadian Journal of Plant Science, develop new partners and conferences that delivered more bang for your conference buck, and expand the membership in times where it seems every organization is cutting.

We modified the by-laws to allow for a student director, on-line voting and other things to comply with new federal regulations. I hope that everybody voted for the by-law amendments. We need your participation and voting was easy on line. I also hope you voted for new your new executive. There were enough volunteers and nominated candidates this year so that we held an election! I wish to thank everybody who let their name stand. Your society is only as strong as the effort that you are willing to put into it.

We also refined the definition for content for the Canadian Journal of Plant Science and have begun a process to make our journal stronger. The publishers have been working to upgrade the system of manuscript submission, review and publication, but there is a long way to go. These days, competition for our research publications is fierce, and it seems that a new on-line journal from Asia, claiming high circulation and impact factor, pops up in our in-boxes daily. The Canadian Journal of Plant Science needs to publish high quality Canadian research in order for it to improve. Consider publishing your next manuscript in our journal. The Canadian Journal of Plant Science runs on the volunteer participation of reviewers and editors and I would like to take this opportunity to thank all of the people who have contributed their valuable time to our journal.

It is hard to be optimistic about the future of agricultural research in this country when it has been cut, yet again, so drastically. It is not possible, in our minds, to rationalize more cuts when we all feel that we are working towards the goal of safe and nutritious food for Canadians now and in a future filled with change. It remains to be seen if there are enough Canadian private companies left to step-up, fill the void, and do the research applicable to our producers, or if our agricultural technology will be imported, second-hand, from other countries. It will truly be a sad day when we are no longer leaders and innovators in the field of agriculture, but followers. As I have said before, we all need a huge pat on the back for the job we have done in our careers to support the Canadian farmer and the agriculture sector. Go ahead, pat your colleagues on the back, and be appreciative of the work they are doing. Participate in our society; nominate those who have worked for this country for Fellowships and Awards.

I would like to close by thanking the members of the executive for their hard work this year. Some, like Rigas Karamanos, Perry Miller, Jas Singh and Michel McElroy have finished their terms and are taking a well-deserved break while others like Pat Juskiw, Tarlok Sahota, Yvonne Lawley and Gavin Humphreys will remain on for a while longer. Then there is Steve Sheppard and Barb, who keep everything running, send out emails, news, elections and most of the time know where I have left my car keys the night before. These people and many others have made my year as President memorable and fun. Thanks go out to all the membership of the Canadian Society of Agronomy who have stepped-up and made a difference.

*Malcolm Morrison*  
*President*



## New Executive Members

### President-Elect—Derek Lynch

Dr. Lynch is an Associate Professor and Canada Research Chair (Organic Agriculture) at the Department of Plant and Animal Sciences, Nova Scotia Agricultural College in Truro, Nova Scotia. He obtained his education at McGill (B.Sc.Arg. and M.Sc.) and University of Guelph (Ph.D.). He has served in various capacities in his career, almost exclusively dedicated to organic agriculture as Sessional Lecturer and Research Associate at the Nova Scotia Agricultural College (NSAC), Truro, Nova Scotia, then Agricultural Consultant / Co-Manager of Agrosystems Atlantic, Truro, Nova Scotia and currently as Research Professor (Organic Agriculture) prior to his current appointment.



Dr. Lynch's research, as Canada Research Chair in Organic Agriculture, is among very few targeted efforts in North America, that are attempting to examine the scope and nature of impacts of organic farming systems on soil, air and water biospheres. At the same time, the focus of the research is on developing innovative and appropriate management approaches for all agricultural systems. These results add to a growing body of evidence regarding the environmental impact of, and environmental goods and services (EG&S) derived from, organic farming systems which have been keenly adopted by the sector. Further, his research has contributed to improving our ability to gauge nitrogen dynamics and use efficiency in sustainable organic cropping systems and compiled the information in an invited chapter for a book examining sustainable potato production internationally. Among other, Dr. Lynch demonstrated for the first time the efficacy of in situ use of anion and cation exchange probes as a predictor of soil N availability in organic potato production rotations when amended with composts or manures of varying N-supplying ability. He is the authors or co-authors of over 400 publications and has supervised or co-supervised 15 graduate students post doctoral fellows.

Dr. Lynch has served as Eastern Director of the Canadian Society of Agronomy from 2006-2010.

### Director—Helen Booker

Dr. Helen Booker completed a BSc (Honours) in Molecular Biology and Genetics and an MSc in Plant Physiology at the University of Guelph. She obtained a PhD in Plant Breeding and Genetics from the University of West Indies, a Centre that is well recognized for its excellence in the breeding of tropical crops. After completing her PhD, Dr. Booker was employed as a Natural Sciences and Engineering Research Council (NSERC) Post-doctoral Fellow with Agriculture and Agri-Food Canada at the Saskatoon Research Centre. She then worked as a Research Associate in Cereal Breeding at the University of Alberta. Her move to the University of Saskatchewan in 2009



## New Executive Members (continued)

brought the opportunity to apply her training in plant breeding and experience with other self-pollinating crop plants (legumes and wheat) to the only university-based flax breeding program in Canada. She has worked closely with Prof. G. Rowland, the founder of the flax breeding program at the CDC. Dr. Rowland retired at the end of 2010 and she has assumed full responsibility for the flax breeding and genetics program.

Dr. Booker also brings with her teaching experience in Canada, Trinidad & Tobago and Japan. She finds the learning and research environment of the University stimulating, and working closely with students rewarding and enjoyable. Dr. Booker would like to attract students to her basic science program and help rectify the shortage of qualified individuals in plant breeding, as well as involving graduate and undergraduate students in my research and providing them with hands-on experience in field-scale experimentation and plant breeding.

### Director—Elroy Cober

Elroy Cober is a Research Scientist with Agriculture and Agri-Food Canada at the Eastern Cereal and Oilseed Research Centre in Ottawa. Elroy holds a M.Sc. in plant genetics and a Ph.D. in crop breeding from the University of Guelph. He has been an Associate Editor (2003 to 2008) and Special Issues Editor (2009 to the present) with the Canadian Journal of Plant Science. Elroy is a soybean breeder with a focus on specialty natto and tofu cultivars adapted to short-season areas of Canada. He works to understand the genetic control of photoperiodism as it relates to time to flowering and maturity, as well as functional seed traits which are important to soybean food producers. Elroy also previously worked in Zambia as a soybean breeder with a focus on cultivars for small-holder farmers. Elroy has served as Secretary and currently serves as the Chair of the Ontario Oil and Protein Seed Crop Committee and as Coordinator for the Maturity Group 00 and 0 Zones.

### Student Representative—Vijay Bhosekar

Vijay holds a B.Sc. in Plant Agriculture and an M.Sc. in Agronomy from Marathwada Agricultural University in India and a PhD in Agronomy from Acharya N G Ranga Agricultural University, India. He is currently a Ph.D. candidate at University of Guelph, Ontario graduating in 2014. He also holds an Ontario Certificate in Environmental Control from Sheridan College, Brampton (2007) on Waste Management, Environmental Site Assessment, Environmental Audit, Water Treatment, Environmental regulations and Legislations.



Prior to commencing his studies at the University of Guelph, Vijay has served as an Agribusiness Consultant (2006-2011) for the India Agribusiness Consultants Inc, Toronto ON, Research Assistant, Assistant Professor, Associate Professor (1990-2005) at Acharya N G Ranga Agricultural University, India and Technical Analyst (1985-1990) for the Consortium of Environmental Organizations, India. He is a member of the Ontario Institute of Agrolgists, Canadian Society Agronomy, Canadian Society of Weed Science, Society of Plant Physiologists and American Society of Agronomy, Crop Science Society of America.



## 2012 CSA “Best Paper” Award

### Report of 2012 CSA “Best Paper” Award Committee:

For 2012, the CSA Best Paper Award from the publications in the 2011 Canadian Journal of Plant Science is awarded to:

A. G. Nelson, S. Quideau, B. Frick, D. Niziol, J. Clapperton, and D. Spaner for their publication entitled - **Spring wheat genotypes differentially alter soil microbial communities and wheat breadmaking quality in organic and conventional systems.**



This manuscript reports on a field study comparing a diverse set of Canadian spring wheat cultivars grown under organic and conventional management systems for grain yield, breadmaking quality and soil phospholipid fatty acid (PLFA) profile. The study’s integrative approach also considered the interaction of weeds a soil microbial diversity. The paper is well written and includes a strong review of the literature. The analyses used the full functionality of Proc Mixed by using locations as random effect, thereby allowing prediction over diverse environments. The discussion integrated research results from various disciplines including agronomy, soil microbiology and cereal quality. This manuscript provided an enriching opportunity to learn about the relationships between plant diversity and soil microbial interactions with resource use efficiencies and productivity.

#### 2011 CSA Balance Sheet

### Canadian Society of Agronomy Balance Sheet As of December 31, 2011

**ASSETS**

**Current Assets**

Chequing/Savings

Sunova Credit Union

Dec 31, 11

Chequing - Organizational CNC 3,042.50

Common Shares SHARE #1 5.00

Joint w/ Chequing SSUP #2 52,814.91

Pest MGMT ChI Fund SSUP #1 13,701.20

Total Sunova Credit Union 69,563.61

**Total Chequing/Savings 69,563.61**

**Total Current Assets 69,563.61**

**TOTAL ASSETS 69,563.61**

**LIABILITIES & EQUITY**

Retained Earnings 66,291.11

Net Income 3,272.50

Total Equity 69,563.61

**TOTAL LIABILITIES & EQUITY 69,563.61**

Equity

#### 2012 CSA Corporate Sponsors



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## In a time of plenty

After a great growing season and high crop prices in 2011, the farming community has come back to earth with a thump. The recent cut-backs to Agriculture and Agri-Food Canada has deadened a euphoric high. The most notable cut is the closure of the Winnipeg Cereal Research Centre. While the scientists will be moved, there will be job cuts which may amount to 30% of the present staff. The remaining programs and staff will be redistributed to U of Manitoba, CCARM (Canadian Center for Research in Medicine), Brandon and Morden AAFC stations. Once called the Dominion Rust Lab, the station was established in response to leaf and stem rust epidemics early in the 20<sup>th</sup> Century. It is a case of a job so well done that many have forgotten or have no idea of total crop losses on the Prairies due to leaf and stem rust epidemics.

There have also been cuts to the small fruit breeding programs in Canada and the cuts to science positions at all research centres across the country. Research Branch of AAFC is being merged with the newly created the Agri- Environment Services Branch (formerly PFRA) to create the Science and Technology Branch. Over 900 people from AAFC have received a letter informing them their position has been “affected”. Unfortunately, the majority of the information on cuts to jobs and positions has not been released to protect those who have been affected, so the agricultural industry in Canada will not know the full impact of these cuts until after they have occurred.

While we are in a time of plenty, with great crop yields and prices, one has to ask what happens in the next 5 to 10 years, when the variety pipeline begins to run dry. Reactive rather than proactive response to diseases is expensive, and in plant breeding the time necessary to ramp up production of resistant lines is not as simple as vials of anti-biotics. Cuts to agricultural research are hard to fathom because all of the studies done have shown greater than a 30 to 1 payback. Yet they have occurred at the provincial, university and federal levels over the past 25 years with the constant hope that private industry will fill the void. There is a 10 to 20 year time lag between research findings and implementation and we are just starting to notice the cuts made to our industry from the mid 1990s. Eventually, these cuts will result in our producers losing their competitive edge in the global marketplace. So, yes we are lucky to live in a time of plenty, but with the global population expected to hit 9 billion in the next 25 years, this surely is not a time to risk catastrophic crop failures

## Senate Standing Committee on Agriculture and Forestry

The AIC was invited to make a presentation to the Senate Standing Committee on Agriculture and Forestry for the report it is preparing on research and innovation efforts in the agriculture sector. The committee is examining how to support innovation with regulations, information and science from the point of view science professionals. The list of organizations, companies and individuals is extensive. What is interesting, and very telling, is that there are very few actual research scientists testifying on their own behalf. The majority of those testifying seem to be only flogging their own organization or associations rather than examining the big picture. The AIC asked for the input of the Canadian Society of Agronomy and I tried to write a document showing that Canadian agricultural research, at all levels, is linked to a successful, innovative agricultural sector. There is a time lag between the money invested in agriculture research and the return on investment and we are just noticing the cuts from the mid 90's now. The testimony provided by Dr. Lianne Dwyer, Vice President of AIC, also identified future stresses that will undoubtedly affect agriculture such as population and climate change. A discussion period with the Senators followed which can be read as part of the transcripts.

The presentation made by AIC can be found at [http://www.aic.ca/issues/AIC\\_Senate\\_Presentation\\_2012.pdf](http://www.aic.ca/issues/AIC_Senate_Presentation_2012.pdf). A transcript of the discussion period with the Senators will be posted on the Committee's website [http://www.parl.gc.ca/SenCommitteeBusiness/CommitteeStudies.aspx?parl=41&ses=1&Language=E&comm\\_id=2](http://www.parl.gc.ca/SenCommitteeBusiness/CommitteeStudies.aspx?parl=41&ses=1&Language=E&comm_id=2) in the near future.

## CSA CONFERENCE

### “Adapting Crops to Change”

with a special joint symposium: “Technology Transfer in the 21<sup>st</sup> Century”  
University of Saskatchewan, Saskatoon, Saskatchewan

July 16–19, 2012

#### A Joint Meeting of the:

Canadian Society of Agronomy  
Certified Crop Advisors – Prairie Board  
Agricultural Institute of Canada

Canadian Society for Horticultural Science  
North American Fruit Explorers

We are pleased to announce the 2012 conference of 5 societies under the theme: “*Adapting Crops To Change*” with a special joint symposium: “*Technology Transfer in the 21<sup>st</sup> Century*” held on the beautiful campus of the University of Saskatchewan (U of S), Saskatoon, from July 16 - 19, 2012. The Agricultural Institute of Canada (AIC) will also be here for part of the meetings.

### Featured Symposium Speakers

**Tuesday, July 17 am**      **Conference Plenary: Adapting Crops to Change**  
Thomas Sinclair              Ron DePauw              Henry Janzen

**Tuesday, July 17 pm**      **Technology Transfer Symposium**  
Guy Lafond                  Marian L. Stypa              Steven Fabijanski

**Wednesday, July 18**      **Canadian Society for Horticulture Science Featured Speakers**  
Morning Mini-Symposium: Biocontrol Methods  
Karen Bailey                  Margaret Gruber              Ken Fry

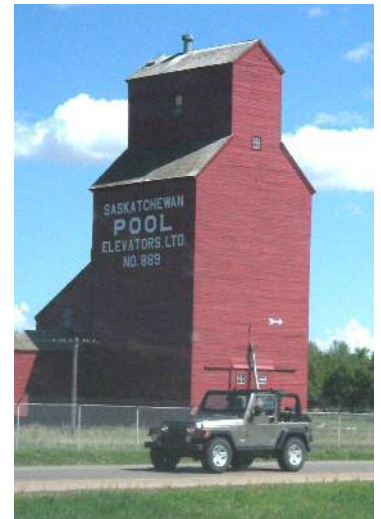
**Afternoon Mini-Symposium: Northern Greenhouses**  
sponsored by the International Centre for Northern Governance and Development  
Raju Soolanayakanahally      Nick Savidov                  Weizheng (John) Zhang

**Canadian Society of Agronomy, Borlaug Symposium**  
Curtis Pozniak

**Thursday, July 19 - CSHS-NAFEX Speakers**  
Artem Sorokin

**Conference Website: <http://www.usask.ca/saskatoon2012/index.php>**

Overall Conference Chair:	Rigas Karamanos	rigas.karamanos@viterra.ca
Local Organizing Committee chair:	Ros Bueckert	rosalind.bueckert@usask.ca
AIC chair:	Al Scholz	al@alscholz.com
CSA chair:	Tom Jensen	tjensen@ipni.net
CSHS chair:	Karen Tanino	karen.tanino@usask.ca
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CCA contact person:	Trish Meyers	patricia.e.meyers@monsanto.com
NAFEX chair:	Bob Bors	bob.bors@usask.ca
CSA president:	Malcolm Morrison	malcolm.morrison@agr.gc.ca
CSHS president:	Samir Debnath	samir.debnath@agr.gc.ca



## CSA CONFERENCE AGENDA

MON 16 JULY	TUE JULY 17	WED JULY 18	THURS JULY 19
<b>TOURS</b>	<b>CONFERENCE PLENARY SESSION</b>	<b>SOCIETY SESSIONS</b>	<b>SOCIETY SESSIONS/ TOURS</b>
<b>Tour: potash mine</b> <b>7:00 am - 1:30 pm</b>	<b>ADAPTING CROPS TO CHANGE</b>	8:00	CSA
	8:40 opening, 2 plenary talks		
	9:00		
	9:45		
	<b>10:30 BREAK</b>		
	10:50	10:30	
	11:35 Panel and open questions for 25 mins		
	<b>Lunch (Marquis Hall)</b>	<b>Society Meetings and Awards Lunch (1.5 hrs)</b>	-END-
<b>Afternoon Tours (4 hours)</b> <b>Tour A:</b> <ul style="list-style-type: none"> <li>• Canadian Light Source</li> <li>• Agriculture Greenhouses</li> <li>• Horticulture science plots</li> <li>• Patterson Gardens</li> </ul> <b>Tour B:</b> <ul style="list-style-type: none"> <li>• Grains Innovation Lab</li> <li>• AAFC Research Farm</li> <li>• Kernen Farm</li> </ul> <b>Tour C:</b> <ul style="list-style-type: none"> <li>• Phytotron</li> <li>• Plant Biotechnology Institute-National Research Council</li> <li>• Plant Gene Resources AAFC</li> <li>• Canadian Light Source</li> </ul> <b>CCA Crop Research Tour 2012</b>	<b>SYMPOSIUM: TECHNOLOGY TRANSFER for the 21<sup>st</sup> CENTURY</b> <b>1:30 - 2:30 pm</b> <b>Two plenary speakers</b>	1:30 - 3:00 pm  BORLAUG SYMPOSIUM	
	<b>2:30 BREAK</b>	<b>3:00 BREAK</b>	
	<b>Tech Transfer and Crop applications</b>	<b>Adapting Crops to Change</b>	
	3:00	3:15	
	3:30		
	4:00		
<b>Registration and Reception Wine &amp; Cheese in the Natural Sciences Museum Atrium (Geology) (4:30 – 7:00 pm)</b>	<b>Poster Session A (Agriculture Building Kenderdine Art Gallery area) (5:00 – 6:30 pm)</b>	<b>Poster Session B (Agriculture Building Kenderdine Art Gallery area) (5:00 – 6:30 pm)</b>	
	<b>AIC AGM (Food included) Rm 2C71 (5:30 - 6:30 pm)</b>		
	<b>Supper on your own</b>		
	<b>Student barbeque at Louis' 6:30 pm onward (see "Student Activities" for more details)</b>	<b>Banquet, Marquis Hall (7:00 – 9:00 pm)</b>	

## 2011 Financial Report and 2012 Budget

### Canadian Society of Agronomy Profit & Loss

	Budget	Actual	Budget
	Jan1 to Dec31 2011	Jan1 to Dec31 2011	Jan1 to Dec31 2012
<b>Ordinary Income/Expense</b>			
<b>Income</b>			
Conference surplus from previous year	7,625	7,625	10,000
Corporate Sponsorship	1,700	1,700	1,000
Member Fees, Subscriptions, Conference	156,340 <sup>1</sup>	194,329 <sup>1</sup>	14,000
Sponsorship for Awards	800	800	800
<b>Total Income</b>	<b>166,465</b>	<b>204,454</b>	<b>25,800</b>
<b>Expense</b>			
Awards and Grants	3,500	3,800	4,800
Bank Service Charges	10	0	10
Business Licenses and Permits	30	30	30
Conference flow through	156,340	184,080	0
Copying and Reproduction	1,000	1,548	1,200
Insurance	729	729	729
Internet website	520 <sup>3</sup>	0	1,040
Membership Fees (of CSA)	1,000	1,000	1,000
Payroll Expenses (book keeper)	1,121	2,343 <sup>4</sup>	1,500
Postage and Shipping	700	1,098	900
Professional Fees (audit)	175	150	175
Quarterly Fee Exec Dir	7,300	9,195 <sup>4</sup>	7,446
Reimbursable expenses	200	327	300
Subscriptions paid to AIC	4,000	4,054	4,000
Webinar at conference	675	675	0
<b>Total Expense</b>	<b>177,299</b>	<b>209,340</b>	<b>23,130</b>
<b>Net Ordinary Income</b>	<b>-10,834</b>	<b>-4,886</b>	<b>2,670</b>
<b>Other Income/Expense</b>			
<b>Other Income</b>			
Interest Income	900	1,159	1,000
Other revenue (conference travel grant)	7,000	7,000	0
<b>Total Other Income</b>	<b>7,900</b>	<b>8,159</b>	<b>1,000</b>
<b>Net Other Income</b>	<b>7,900</b>	<b>8,159</b>	<b>1,000</b>
<b>Net Income</b>	<b>-2,934</b>	<b>3,273</b>	<b>3,670</b>

#### NOTES

<sup>1</sup> CSA handled all registrations for Plant Canada

<sup>2</sup> 2012 includes travel for 2011 Pest Award recipient

<sup>3</sup> we presume the 2011 fee remains a liability

<sup>4</sup> one payment in 2011 was a late 2010 payment



## 2012 Pest Management Research Award Winner

### Evaluating Canola Genotypes and Harvest Methods to Reduce Seedbank Inputs and Longevity

Teketel A. Haile<sup>1</sup>, Steven J. Shirtliffe<sup>1</sup>, Robert H. Gulden<sup>2</sup>, Chris Holzapfel<sup>3</sup>

<sup>1</sup>Department of Plant Sciences, University of Saskatchewan, Saskatoon, SK, S7N5A8

<sup>2</sup>Department of Plant Sciences, University of Manitoba, Winnipeg, MB, R3T 2N2

<sup>3</sup>Indian Head Agricultural Research Foundation, Indian Head, SK, S0G 2K0

#### Abstract

Seed shatter in canola leads to a considerable yield loss and the dispersal of canola seeds into the soil seedbank. The volunteer canola can then create weed problem in the subsequent crops and result in crop yield loss. Gene dispersal in time particularly from genetically modified volunteer canola can be another undesirable consequence. Studies were conducted in Saskatchewan in 2010 and 2011 to determine the average seedbank inputs of canola from swathing and straight cutting operations in commercial fields and to evaluate the importance of variety selection, harvest methods and pod sealant products to reduce seed loss in canola. A total of 66 canola fields were surveyed within 3 weeks of harvest. These fields were sampled using a vacuum cleaner and seed loss per unit area was determined for each field. In a separate small-plot experiment the effect of harvest methods (swathed, Pod Ceal treated straight cut, Pod-Stik treated straight cut and untreated straight cut) on seed loss in five canola genotypes (InVigor 5440 LL, 4362 RR, 45H26 RR, InVigor 5020 LL and *juncea* 8571 CL) was evaluated. The average seed loss was found to be 184 kg ha<sup>-1</sup>, which is equivalent to 7.3% of the total yield and resulted in seedbank addition of approximately 5821 viable seeds per m<sup>2</sup>. Seed loss among producers ranged from 4.9 to 9% of the total yield and resulted in seedbank addition which is many times more than the normal seeding rate of canola. There was a significant difference in seed shatter among the evaluated canola genotypes. Selecting canola genotypes with less seed shatter can be effective to reduce the incidence of volunteer canola in western Canada. Pod Ceal and Pod Stik did not have effect on the yield as well as seed loss in canola. There was no difference in yield and seed loss between swathed and straight cut canola on commercial fields but swathed canola had lower yield and higher seed loss than the straight cut canola in the small-plot experiment. This indicates that straight cutting can be a viable option to harvest canola in western Canada.



Teketel Haile

#### Results of Vote on Changes to Bylaws and Constitution

It was difficult to get enough votes on this issue. Perhaps many people are bored by such things. CSA was forced to change its bylaws because of a change in Federal laws, and there were some outdated aspects to the previous bylaws.

The Executive is pleased to announce that the new bylaws have been passed. There were no negative votes about any aspects of the changes. These bylaws still must pass Industry Canada review, but we were careful to conform to their requirements.

## CSA EXECUTIVE

### PRESIDENT

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