

***ASSOCIATION FOR THE ADVANCEMENT OF
INDUSTRIAL CROPS***

INTERNATIONAL CONFERENCE

“INDUSTRIAL CROPS: PROMOTING SUSTAINABILITY”

24-28 September, 2016

Rochester, NY

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Conference Program

Sunday, September 25

7:30 AM-6:30 PM	Niagara Falls Tour –both US and Canadian sides (Passport required)	Meet outside hotel
6:30- 7:30 PM	Registration Desk Open	Foyer-Riverview Lounge
6:30-7:30 PM	Poster Set up	Anthony (A)
6:30-7:30 PM	AAIC Board of Directors Meeting	Boardroom
7:30-9:00 PM	Welcome reception	Riverview Ballroom-Lounge

Monday, September 26

Plenary Session

Moderator: Marisol Berti

Room: C&D

8:00-10:00 AM	Registration Desk Open and Poster set up	
8:00 AM	Welcome and introduction	
8:15 AM	Jack Grushcow, Linnaeus Plant Sciences Inc., Canada	Camelina advances in breeding and market opportunities
9:00 AM	Edward Fletcher, Herbal Ingenuity	Sustainable production of herbal medicines
9:45 AM	Coffee Break	Room: Anthony (A)
10:15 AM	Charles Mullen, Sustainable Biofuels and Coproducts Eastern Regional Research Center, ARS, USDA	Guayule Pyrolysis biorefining
11:00 AM	Bus departs to Casa Larga vineyard	
11:30 AM	Vineyard tour and wine tasting- lunch	Lunch
3:00-5:00 PM	Visit to Worm Power Farm, Avon, NY	

6:00 PM	Dinner on your own	
6:30-8:30 PM	CGC meeting- David Dierig	Boardroom

Tuesday, September 27

TECHNICAL SESSIONS

Concurrent sessions

1. Oilseeds Division

Moderator: Liv Severino, EMBRAPA Algodao, Brazil

Room: C

8:00 AM	<u>Keynote speaker Alexandre N. Cardoso</u> , B.G. Laviola, Gilmar S. Santos, S.P. Favaro, M.T. Souza, L.S. Severino, Luiz C. Veras ² , Humberto U. de Souza, M.F. Braga, R Ciannella ⁵	Macaw palm - a potential biomass for oil production in Brazil
8:30 AM	<u>Elodie Gazave</u> , E.E. Tassone, D.C. Ilut, M. Wingerson, E. Datema, H. M. A. Witsenboer, J. B. Davis, D. Grant, J.M. Dyer, M.A. Jenks, J. Brown, and M.A. Gore	Population genomic analysis reveals differential evolutionary histories and patterns of diversity across subgenomes and subpopulations of <i>Brassica napus</i> L.
8:50 AM	<u>Federica Zanetti</u> , C. Eynck, M. Christou, M. Krzyżaniak, M. Stolarski, D. Righini, E. Alexopoulou, E.N. Van Loo, D. Puttick, J. Tworowski, and A. Monti	Camelina [<i>Camelina sativa</i> (L.) Crantz.] - an attractive new oil crop for Europe and Canada
9:10 AM	<u>Marisol T. Berti</u> , B.L. Johnson, D. Samarappuli, and R. Gesch	Integrating winter camelina [<i>Camelina sativa</i> (L.) Crantz.] into corn and soybean cropping systems
9:30 AM	<u>Efthymia Alexopoulou</u>	A comparison between a number of new released castor (<i>Ricinus communis</i> L.) hybrids and two native castor varieties in Greece
9:50 AM	<u>Federica Zanetti</u> , C. Chieco, E. Alexopoulou, A. Vecchi, and A. Monti	Bringing back castor (<i>Ricinus communis</i> L.) to Europe: a promising multipurpose crop

10:10 AM	<u>Liv S. Severino</u> , D.L. Auld, L.S. Vale, L.F. Marques, and O.J. Gaona-Cordoba	Castor (<i>Ricinus communis</i> L.) plants establish interplant hierarchy according to the planting density
10:30 AM	Coffee Break – Room: Anthony (A)	
11:30 AM	Oilseeds Division meeting	
12:00 PM	<u>Lunch</u>	Room: Douglass (B)

Concurrent Session

2. Fibers and Cellulosics

Moderator: Dilpreet Bajwa, North Dakota State University

Room: D

8:00 AM	<u>Keynote speaker : Anil N. Netravali</u> Dept. of Fiber Science & Apparel design, Cornell University	Cellulose Fiber Reinforced ‘Green’ Composites
8:40 AM	<u>Panjak Pandey</u> , S.G. Bajwa, and D.S. Bajwa	Effect of UV weathering on DDGS fiber filled thermoplastic composite
9:00 AM	<u>Cindy S. Barrera</u> , and K. Cornish	Statistical modelling of natural rubber composites properties based on filler’s characteristics
9:20 AM	D.S. Bajwa, <u>Greg A. Holt</u> , S.G. Bajwa, S.E. Duke, and G. McIntyre	Enhancement of termite resistance in mycelium reinforced biofiber-composites
9:40 AM	<u>Dilpreet S. Bajwa</u> , and E.D. Sitz	Processing and manufacture of soybean and wheat straw medium density fiberboard utilizing epoxidized sucrose soyate resin
10:00 AM	<u>Efthymia Alexopoulou</u> , and Tang Shouwei	The importance of bast fiber crops as feedstock for biobased products and bioenergy
10:20 AM	_Coffee break	Room:Anthony
10:50 AM	<u>Burton L. Johnson</u> , B.K. Hanson, J. Kostuik, M.T. Berti, and P.J. Petersen	Industrial hemp (<i>Cannabis sativa</i> L.) Stand establishment and yield in North Dakota
11:10 AM	Fiber and Cellulosics Division Meeting	

12:00 PM	<u>Lunch</u>	Douglass
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Concurrent Session

3. General Crops Division

Moderator: Efthymia Alexopoulou, CRES, Greece

Room: C

1:30 PM	<u>Keynote speaker: Ana Luisa Fernando</u>	Production of industrial crops in marginal soils – Is it a sustainable option?
2:10 PM	<u>Efthymia Alexopoulou</u>	Switchgrass (<i>Panicum virgatum</i> L.): An ideal perennial crop for marginal lands
2:30 PM	<u>Nicola Di Virgilio</u> , Osvaldo Facini, Federica Rossi, and Andrea Monti	Ecosystem gas exchange of switchgrass (<i>Panicum virgatum</i> L.) in the Mediterranean area
2:50 PM	<u>Ana Luisa Fernando</u>	Is it sustainable to produce <i>Miscanthus x giganteus</i> Greef et Deu in sewage sludge contaminated soils?
3:10 PM	Coffee Break	Room: Anthony
3:30 PM	<u>Valerie H. Teetor</u> , C. Schmalzel, and D.T. Ray	Planting sweet sorghum (<i>Sorghum bicolor</i> [L.] Moench) in clumps reduces lodging but not yields
3:50 PM	<u>Alan G. Taylor</u> , W. Huang, M. Amirkhani, H.S. Mayton, and D. Wang	Seed technology of eastern gamagrass [<i>Tripsacum dactyloides</i>] to enhance germination and seedling survival and break dormancy
4:10 PM	General Crops and Products Division Meeting	
5:00-6:30	Poster session (All divisions)- Room: Anthony	
	Dinner on your own	

Concurrent session

4. Natural Rubber and Resins

Moderator: Katrina Cornish

Room: D

1:30 PM	<u>Keynote speaker: Howard Colvin</u>	Securing the future of natural rubber – an
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		American tire and bioenergy platform from guayule (<i>Parthenium argentatum</i> Gray)
2:10 PM	M. Dorget, A. Amor, <u>Serge Palu</u> , and D. Pioch	European guayule (<i>Parthenium argentatum</i> Gray) market
2:30 PM	A. Amor, C. Sanier, J.-L. Verdeil, M. Lartaud, T. Punvichai, E. Tardan, <u>Serge Palu</u> , and D. Pioch	Biomass imaging as a tool for addressing the challenge of multiple-product guayule (<i>Parthenium argentatum</i> Gray) biorefinery
2:50 PM	L. Brancheriau, <u>Serge Palu</u> , D. Pioch, N. Boutahar, E. Tardan, P. Sartre, J.M. Ebel, and E. Becourt	NIRS measurement at field level to measure rubber and resin content of guayule (<i>Parthenium argentatum</i> Gray) plants
3:10 PM	<u>Douglas J. Hunsaker</u> , and D.M. Elshikha	Guayule (<i>Parthenium argentatum</i> Gray) rubber production in the US desert with surface and subsurface drip irrigation and five water levels
3:30 PM	<u>Daniel C. Ilut</u> , P.L. Sanchez, J.M. Dyer, M.A. Jenks, and M.A. Gore	Applications of modern genomics for domestic natural rubber development: taking stock of guayule (<i>Parthenium argentatum</i> Gray) germplasm
3:50 PM	<u>Lauren D. Johnson</u> and M. Fraley	Panaridus update on guayule (<i>Parthenium argentatum</i> Gray) plant breeding and direct seeding
4:10 PM	<u>Hussein Abdel-Haleem</u>	Phenotypic characterization of guayule (<i>Parthenium argentatum</i> Gray) USDA collection under field conditions
4:30 PM	A. Pantel, S. Park, V.M.V. Cruz, D.T. Ray, W.S. Niaura, and <u>David A. Dierig</u>	Rate of apomixis in USDA germplasm for guayule (<i>Parthenium argentatum</i> Gray) breeding
5:00-6:00	Poster session (All divisions) Room-Anthony	
	Dinner on your own	

Wednesday 28 September

TECHNICAL SESSIONS

Concurrent Sessions

5. Natural Rubber and Resins

Moderator: Katrina Cornish

Room: D

8:00 AM	<u>Colleen McMahan</u> , U. Hathwaik, and D. Lhamo	Role of proteins and amino acids in natural rubber: guayule (<i>Parthenium argentatum</i> Gray) rubber addition studies
8:20 AM	<u>Varun Venoor</u> , K. Cornish, K. Koelling, and Y. Vodovotz	Bio-based composites for food packaging
8:40 AM	<u>B.A. King</u> , L.D. Johnson, and M. Fraley	Genetic and environmental effects on quality of guayule (<i>Parthenium argentatum</i> Gray) natural rubber
8:50 AM	Keynote: Katrina Cornish , S. McNulty, N. Amstutz, and G. Bates	Progress in improving rubber yield of <i>Taraxacum kok-saghyz</i>
9:30 AM	B. Iaffaldano, <u>Yingxiao Zhang</u> , and K. Cornish	CRISPR/CAS9 genome editing of rubber producing dandelion <i>Taraxacum kok-saghyz</i> using agrobacterium rhizogenes without selection
9:50 AM	<u>Muhammad Akbar Abdul Ghaffar</u>	Increasing rubber production by post-harvest ethephon application in <i>Taraxacum kok-saghyz</i> roots
10:10 AM	Coffee break	Room: Anthony
10:30 AM	<u>Zinan (Lily) Luo</u> , B. Iaffaldano, X. Zhuang, M. Ma, and K. Cornish	Transcriptome analysis of <i>Taraxacum kok-saghyz</i> using RNA-seq and identification of candidate genes related to the rubber biosynthesis pathway
10:50 AM	<u>Ming Ma</u> , S.K. McNulty, S.E. Kopicky, Z. Luo, and K. Cornish	Quantification of natural rubber in <i>Taraxacum kok-saghyz</i> by near infrared reflectance spectroscopy
11:10 AM	<u>Richard J. Roseberg</u> , T.B. Silberstein,	Agronomic management of rubber dandelion

	K. Cornish, S. McNulty, and N. Amstutz	(<i>Taraxacum kok-saghyz</i> Rodin) for root biomass and natural rubber production in Oregon
11:30 AM	<u>David A. Ramirez-Cadavid</u> , F. Michel Jr., and K. Cornish	<i>Taraxacum kok-saghyz</i> : an alternative source of natural rubber and other valuable bioproducts
12:00 PM	Lunch-Business Meeting	Douglass (B)
1:30 PM	Rubber and Resins Division Meeting	
2:00 – 3:30 PM	Poster session and coffee (all divisions)	

Concurrent session

6. Medicinal and Nutraceutical Plants Division

Moderator: Rodolfo Juliani

Room: C

8:00 AM	Keynote speaker, <u>Lyle Cracker</u>	Trends in research and development of the new marijuana (<i>Cannabis</i> sp.)
8:40 AM	<u>Jianbo Xiao</u> , X. Wang, S. Wu, J. Cao, and Q. Wang	Fern species in China: potential for medical applications
9:00 AM	<u>Susana Fischer</u> , R. Wilckens, F. Graff, L. Bustamante, J. Jara, W. Valdivia, and M. Aranda	Characterization of proteins in quinoa (<i>Chenopodium quinoa</i> Willd.) seeds from plants submitted to water stress
9:20 AM	<u>Rodolfo Juliani</u>	Headspace gas chromatography for the determination of volatile components in essential oil research
9:40 AM	<u>Diana Jasso de Rodríguez</u> , D.A. Carrillo-Lomelí, M.E. Rocha-Guzmán, M.R. Moreno Jiménez, R. Rodríguez-García, and J.A. Villarreal Quintanilla	Antioxidant, anti-inflammatory and apoptotic activities of two extracts of <i>Flourensia microphylla</i> in HT-29 cells in vitro
10:00 AM	Coffee Break	
10:20 AM	<u>Diana Jasso de Rodríguez</u> , L.C. García-Hernández, N.E. Rocha-Guzmán, M.R. Moreno-Jiménez, R. Rodríguez-García, M.L.V. Díaz-Jiménez, A. Sáenz-Galindo, J.A.	Hypoglycemic and anti-inflammatory activities of the corm extract of <i>Psacalium paucicapitatum</i>

	Villarreal-Quintanilla, and F.M. Peña-Ramos	
10:40 AM	Ramnarain Ramakrishna, D. Sarkar, and K. Shetty	Evaluation of phenolic linked anti-hyperglycemic potential of barley (<i>Hordeum vulgare</i> L.) cultivars targeting for the management of early stages Type 2 diabetes using in vitro models
11:00 AM	Medicinal and Nutraceuticals plants Division meeting	
12:00 PM	Lunch-Business meeting	Douglass
2:00 – 3:30 PM	Poster session (all divisions)	

Awards Banquet

6:30 PM	Cash bar Riverview Lounge
7:00-9:00 PM	AAIC Awards Banquet-Riverview Ballroom and Lounge

Posters Presentations

Room: Anthony (A)

Fiber and Cellulosics		
1	<u>Efthymia Alexopoulou</u> , T. Shouwei, and Y. Papatheohari	Screening field trials for several kenaf (<i>Hibiscus cannabinus</i> L.) varieties in terms on growth and yields in Greece.
2	<u>Defang Li</u>	Comparison of the nutritive value of seven kenaf (<i>Hibiscus cannabinus</i> L.) varieties harvested depending on stubble height
3	<u>Huang Siqi</u>	Physiological response in the roots of kenaf (<i>Hibiscus cannabinus</i> L.) seedings under cadmium stress
General Crops		
4	<u>Efthymia Alexopoulou</u>	Comparative studies among several fiber and sweet sorghum [<i>Sorghum bicolor</i> (L.) Moench] varieties in Greece
5	E.G. Papazoglou, and <u>Ana Luisa Fernando</u>	Sugarbeet (<i>Beta vulgaris</i> L.) Cultivation in contaminated land for bioethanol production: a promising perspective
6	<u>Ana Luisa Fernando</u> , M.P. Duarte, M.D. Curt	Delaying sorghum (<i>Sorghum bicolor</i> (L.) Moench) harvest dates in the Iberian peninsula – balancing yields and effects on soil quality
7	M. Christou, and <u>Efthymia Alexopoulou</u>	Long term studies on giant reed (<i>Arundo donax</i> L.) in a marginal land in central Greece
Medicinal and Nutraceutical		
8	<u>Ashish Christopher</u> , J. Orwat, D. Sarkar, M. McFarland, and K. Shetty	Stress-induced enhancement of phenolic antioxidants in grapes (<i>Vitis vinifera</i> L.), targeting bioactive compounds for the management of early stages Type 2 diabetes
9	V. Gomes Lauriano de Souza, and <u>Ana Luisa Fernando</u>	Bioactivity and physical properties of chitosan films incorporated with different natural antioxidants
10	<u>J. Bradley Morris</u>	Production comparisons of Chinese water chestnut [<i>Eleocharis dulcis</i> (Burm. F.) Trin. Ex Hensch] functional corms grown in hydroponics versus flooded

		sand
11	<u>Diana Jasso de Rodríguez</u> , N.A. Gaytán-Sánchez, R. Rodríguez-García, F.D. Hernández-Castillo, M.L.V. Díaz-Jiménez, S. González-Morales, A. Sáenz-Galindo, J.A. Villarreal-Quintanilla, and F.M. Peña-Ramos	Antifungal activity of extracts of <i>Juglans mollis</i> , <i>Juglans microcarpa</i> and <i>Carya ovata</i> , against <i>Fusarium oxysporum</i> and <i>Alternaria alternata</i> in vitro
12	<u>Rosemarie Wilckens</u> , S. Fischer, and Ismael Obal.	Synthesis of antioxidants in sprouts of quinoa (<i>Chenopodium quinoa</i> Willd.) in response to abiotic stress
13	R. Rodríguez-García, A. Reyes-Sebastián, <u>Jose Ángel Villarreal-Quintanilla</u> , D. Jasso de Rodríguez, M.L.V. Díaz-Jiménez, H. Ramírez-Rodríguez, and N.A. Ruiz-Torres	Effect of plant extracts semi-desert in the induction of germination and seedling growth of melon
14	M.L. Flores-López, J.M. Vieira, M.A. Cerqueira, <u>Diana Jasso de Rodríguez</u> , and A.A. Vicente	Effect of aloe vera (<i>Aloe barbadensis</i> Miller) nano-laminate coating on the shelf life parameters of tomato fruits (<i>Lycopersicon esculentum</i> Mill.)
15	<u>H. Rodolfo Juliani</u> , A.R. Koroch, and J.E. Simon	Essential oils of basil (<i>Ocimum</i> sp) and their associated antioxidant and antimicrobial activity
16	<u>Diana Jasso de Rodríguez</u> , E. de J. Salas-Méndez, R. Rodríguez-García, F.D. Hernández-Castillo, M.L.V. Díaz-Jiménez, A. Sáenz-Galindo, S. González-Morales, J.A. Villarreal-Quintanilla, and F.M. Peña-Ramos	In vitro antifungal activity of extracts of ethanol and water of leaves and stems of <i>Flourensia</i> spp. against fungi postharvest
Rubber and Resins		
17	<u>Muhammad Akbar Abdul Ghaffar</u> , T. Meulia, and K. Cornish	Histological study of laticifer and rubber particle ontogeny in <i>Taraxacum kok-saghyz</i> roots
18	<u>Cécile Bessou</u> , D. Snoeck, T. Chapuset, F. Jäger, S. Mok, I. Lewandowski, D. Pioch, S. Palu, and Y. Biard	Life cycle assessment of guayule (<i>Parthenium argentatum</i> Gray) natural rubber production in Europe
19	<u>Thierry Chapuset</u> , V. Anleu, D. Snoeck, and C. Nájera	Improving rubber productivity by reducing tapping frequencies in Guatemala
20	<u>Yingxiao Zhang</u> , B. Iaffaldano, X. Zhuang, J. Cardina, and K. Cornish	Chloroplast genome resources and molecular markers differentiate rubber dandelion <i>Taraxacum kok-saghyz</i> from weedy relatives

21	<u>Zinan (Lily) Luo</u> , and K. Cornish	Induction and identification of tetraploids in <i>Taraxacum kok-saghyz</i>
22		
Oilseeds		
23	<u>Reza Keshavarz Afshar</u> , and C. Chen	Yield and yield components of winter camelina (<i>Camelina sativa</i> L. Crantz) in response to seeding date and rate
24	<u>Roque L. Evangelista</u> , T.A. Isbell, R.W. Gesch, and S.C. Cermak	Processing of brassica seeds for feedstock in biofuels production
25	M. Christou, <u>Efthymia Alexopoulou</u> , M. Stolarski, M. Krzyżaniak, and J. Hinge	New oil crops for bioenergy and biorefinery in Europe
26	K. Pacella, <u>Ana Luisa Fernando</u> , F. Zanetti, and A. Monti	Growth and yield of oil crops irrigated with wastewaters – the effect of ammonium ion and nitrates
27	C.S. Nascimento, G. Molina Regalado de Oliveira, T. Rodrigues Baran, and <u>Winthrop B. Phippen</u>	Evaluation of the germination rate of pennycress (<i>Thlaspi arvense</i> L.) in different conditions of storage and temperature
28	E. Koukouna, E.G. Papazoglou, R.A. Babahmad, A. Ouhammou, A. Outzourhit, and <u>Efi Alexopoulou</u>	Life cycle assessment of biodiesel production from (<i>Jatropha curcas</i> L.)