

The Cereals & Grains 18 Story

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Castles, moats, and bridges...

Cereals & Grains 18 in London brought together technical breakthroughs in cereal science with storytelling to put data and analytics into the broader context of major global trends like skeptical consumers, climate change, population growth, and food safety/security. Scientific sessions explored the latest advances in innovation throughout the value chain—from breeding in grain fields to messaging on labels in supermarkets—while participants also explored how to convey their data through stories and storytelling. Bridging logic and imagination, participants learned how to tell cereal stories.

This first AACCI Annual Meeting outside North America assembled more than 600 attendees from 36 countries in London; half of whom were first time attendees. The 2018 Annual Meeting Technical Program Planning Team, chaired by Katharina Scherf, pushed for fresh thinking. They approached this meeting with the overarching theme of Field to Fork, and for the first time, the program was shaped around daily themes. Key experts who are known and respected globally were invited to share their insights on

- Sustainability from Gene to Field (Sunday)
- Safe Ingredients and Quality Products (Monday)
- Formulating for Health and Wellness (Tuesday)

During the general sessions, attendees were also exposed to the storytelling movement, which was introduced in the corporate world in the early 2000s and has been gaining more momentum over the last 10 years. In fact, Nike, a forerunner in corporate storytelling, has had a chief storytelling officer since 1999 (E. Ransell, The Nike story? Just tell it! Fast Company, December 21, 1999). More recently, AACCI members from companies like General Mills and Kellogg's have been trained in storytelling.



View a presentation on the meeting content highlights, recorded by Jean Storlie.



AACCI President Laura Hansen

A storytelling framework helped attendees weave together the scientific sessions throughout the meeting.

To set the stage for the 2018 Story, outgoing AACCI President Laura Hansen, revisited information presented by 2017 keynote speaker Linda Eatherton, managing director and partner, Ketchum Global Food & Beverage Practice, who shared provocative data about the changing consumer landscape. Eatherton revealed some disruptive new truths:

- Consumers fear science
- Science denialism meets "fake news." Consumers don't trust science or the agriculture/food industry
- Science rejection leads to food inspection
- Skeptical consumers trust "Food eVangelists" (self-proclaimed experts) more than scientists!

Eatherton challenged us to communicate with these skeptical consumers in their language—through stories and dialogue.

While skeptical consumers challenge manufacturers and retailers, stressors like climate change and population growth will strain the capacity of the global food system to feed the world over the coming decades. Cereal scientists must innovate more rapidly to address these challenges.

"I found that this meeting gave me an opportunity to learn a lot of what is currently happening in the science world plus passing on some contact details regarding new product or machinery available on the market."



Professor Achim Dobermann

Professor Achim Dobermann, director and chief executive, Rothamsted Research, a leading authority on sustainable management of agricultural systems, led the first 2018 keynote session on Sunday. His presentation, “Leading from an Illustrative Past into a Demanding Future,” offered an aggressive and integrated approach to innovation.

He distinguished the differences between science, invention, and innovation. Innovation, which goes beyond science and invention, is the process by which science and invention are converted into commercially viable products. He asserted that the all-too common occurrence of “excellent science but poor innovation” will be insufficient to tackle tomorrow’s challenges. Doberman offered a model for merging visionary thinking with lean start-up. Rather than testing and refining until near perfection, he urged scientists and innovators to scale up while they build and learn in order to solve problems faster.

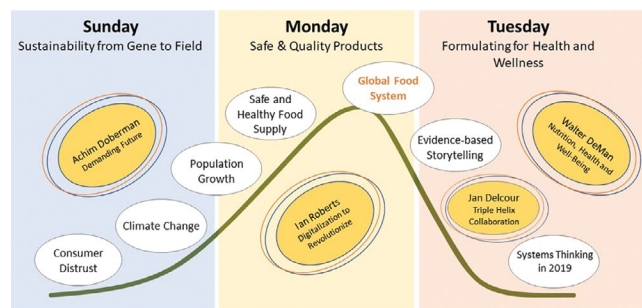


Dr. Ian Roberts

After an exhilarating first day connecting with colleagues from around the world and attending scientific sessions on breeding and sustainable agriculture, attendees gathered on Monday morning for the second keynote session. Dr. Ian Roberts, chief technology officer, Bühler Group, also stressed the impacts of climate change, but he brought deforestation, free

trade, the sharing economy, and food fraud into consideration. Roberts proposed that the grain value chain of the future can be enabled through digital tools, which are accelerating innovation in grain fields through “smart farms” and breeding technologies. Plus, digital tools throughout the value chain are contributing to innovations. With more consumers buying their food online and using smart technology to research their choices at point of purchase, the digital revolution is disrupting the landscape.

The Cereals & Grains 18 Story



Both Dobermann and Roberts pushed attendees to think beyond the traditional bounds of cereal and grain science. These keynote sessions revealed how cereals and grains fit into larger global and societal trends. The range of Monday sessions on Safe and Quality Products provided opportunities for attendees

to delve into the complexity of producing cereal products for a global food supply.

Operating and innovating within the web of interconnected, moving parts that comprise the global food systems will require new types of collaboration and push cereal scientist to find connections beyond traditional partners. Civil engineers will be needed to solve the problem of safely and efficiently transporting food around the world. Solving sociopolitical barriers will require the “soft skills” of influence and persuasion, as well as facts and data. Attendees had opportunities to explore one of these soft skills through an Evidence-Based Storytelling Workshop on Tuesday morning (see 264 for highlights).

“I was inspired by the Keynote presentation given by Ian Roberts from the Bühler Group. The insights he shared to the benefits and challenges posed by the implementation of emerging technologies, such as blockchain, were thought-provoking. This forward-thinking approach is something I am excited to bring back to my workplace.”

A wealth of valuable sessions on Tuesday explored facets of health and wellness, such as “Processing for Health” and “How to Define Whole Grains.” A provocative symposium on carbohydrate quality and lively debate on glycemic index provided a range of viewpoints on the controversies surrounding the role of carbohydrates in the diet and how to measure the quality of carbohydrate choices.

Cereals & Grains 18 Key Insights...

- “Excellent science but poor innovation” – insufficient to tackle challenges
- Food industry is fertile ground for blockchain use cases
- Think beyond traditional partners/ collaborators
- Soft skills of influence and persuasion = storytelling
- Top-down leadership buy-in + nutrition science expertise = shift in thinking
- Collaboration of government, academia, and industry (triple helix) = solutions/growth
- Explore the future through systems thinking

A dynamic panel discussion on fostering innovation, facilitated by Thorsten Koenig, EIT Food, closed out the Tuesday sessions. The Closing General Session featured two insightful keynote presentations. Walter de Man, global nutrition and science and regulatory affairs director, MARS Food and Drinks, shared one

industry case study on how nutrition can be used as a driver for health and well-being. He illustrated how it took top-down leadership as well as nutrition science expertise to shift the internal thinking within MARS to prioritize health and nutrition.



Jan Delcour

Jan Delcour, professor, KU Leuven, and past president of AACCI, summarized the scientific highlights and proposed the triple helix model approach to innovation, involving collaboration among government, academia, and industry, which is a critical plot point in the Cereals &

Grains 18 story. Delcour argued that one of these sectors alone cannot tackle the challenges of today and tomorrow. Instead, win-win partnerships among these sectors will result in research funding and new consumer solutions, as well as drive economic growth.

"I really liked the open forum concept to discuss key issues."

Incoming AACCI President Maureen Olewnick offered the final lesson from Cereals & Grains 2018 by challenging attendees to explore the future through "systems thinking," which involves integration and collaboration across the globe. In 2019, AACCI will build on the concept of systems thinking. Look for more on this in *Cereal Foods World* and other AACCI programs in coming months.



Maureen Olewnick

"This meeting offered high scientific value."

Special thanks to all the volunteers, from the program team to the session organizers, moderators, and presenters, who made this event such a success. It was a remarkable experience, with a wealth of science and stories to share and from which to learn. Make sure to mark your calendars for Cereals & Grains 19, which will be held in Denver, Colorado, U.S.A., November 3–5.

Why Storytelling? Introducing Evidence-Based Storytelling

Scientists are taught that anecdotal evidence is not valid, and stories are anecdotes. So why did AACCI promote storytelling at Cereals & Grains 18? Evidence-based storytelling conveys the idea that you don't replace data with stories, but rather package data in a story so that facts fall on more fertile ground.

Evidence from the field of neuroscience reveals why stories are transformational. In response to a good story, the brain releases oxytocin, a hormone associated with empathy, compassion, and trust.¹

Simply introducing a set of facts or series of events with the statement, "I'm going to tell a story," does not produce these changes in brain chemistry. The story must include four key elements: character(s), struggle, moment of truth, and change. Simply put, a character encounters an obstacle and during the struggle to overcome it, he/she experiences a "moment of truth" that results in an emotional transformation. When a story is well told, the audience takes the journey with the character and feels their emotions.

Business storytelling is an advanced communication skill that takes training, practice, and discipline to master and use

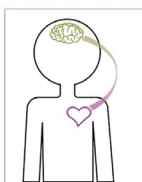
effectively in work settings. Using a three-phase approach, scientists and business leaders can build skills in storytelling:

1. Mine for Story Gems—Look for human angles about your research and technical projects. This phase involves brainstorming for "story gems," which are raw story ideas that have the potential to be developed into a story. Four pathways to find cereal story gems are
 - Inventor's journey
 - People who helped you
 - People who benefit from your work
 - How your work fits into the global food system
2. Develop Plot and Meaning—Use the story plotting visual to diagram the key elements of the plot. Distill down to the key plot points that set the stage, build tension, reveal the "Ah ha" moment of truth, and bring resolution/closure. Clarify what changed for the character during this journey and make sure that your story conveys the new truth.
3. Polish with Salient Details—Describe the setting and develop characters by including sensory details that bring an audience into the setting. Imagine the people and place through all five senses (sight, sound, smell, touch, taste).

Good stories change brain chemistry

- Character-driven narrative
- Struggle against an obstacle
- Emotional transformation

↓
Empathy



Zak, P.J. Why Your Brain Loves Good Storytelling. Harvard Business Review, 2014

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For an example and tools to learn this process, visit the AACCI Continuing Education page (www.aaccnet.org/meetings/continuinged). You will also find an example that shows how a business experience can be turned into a story using the tools.

Reference

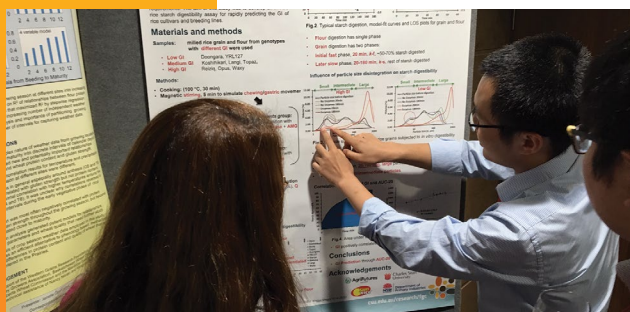
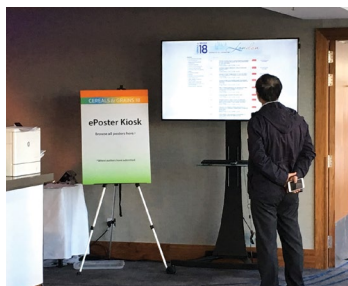
1. Zak, P. Why inspiring stories make us react: The neuroscience of narrative. *Cerebrum* Jan-Feb:2, 2015



Program Chair Katharina Scherf



Jean Storlie



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Christophe Courtin

KU Lueven



Watch a recap of all the action during the meeting, with this photo video!



2018 Technical Committees Report

The AACCI International Technical committees held annual meeting sessions in London during Cereals & Grains 18.

All committees reported active work agendas ranging from proposed new methods to method revisions and method

enhancements. Some committees are undergoing routine member updates and introducing new chairs. The technical committees work on a year-round basis, and all of them will have follow-up conference call meetings in the next three months and continue their work in the online discussion forum. The committees welcome new methods and guideline ideas and encourage you to contact the Approved Methods Technical Chair to share your ideas.

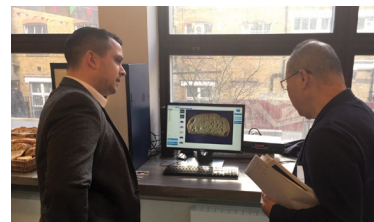
The technical committees are also working on plans for method training modules. In addition, they have formed a close liaison with the AACCI Check Sample and Laboratory Proficiency Program. The launch of the new proficiency rating program in July 2018 was reviewed, and several new

series and reference materials are under discussion. Watch for the AACCI webinar series, which provides a general discussion on laboratory data management and evaluations.



Enriched Educational Opportunities

Attendees seeking additional professional education took advantage of a pre-meeting course during Cereals & Grains 18. The onsite Enzymes in Cereal-Based Foods short course welcomed attendees who work as application bakery technologists, cereal scientists, bakery plant supervisors, and quality assurance employees from cereal-based product industries. The workshop was designed in response to enzymes' increasingly important role in the baking industry. It gave an overview on the latest developments in enzyme applications in baked goods via professionals from the leaders of enzyme research and development in the enzyme industry and academia.



Hands-on lab demonstration at the pre-meeting Methods in Action – Practical Baking Quality Workshop

A short tube ride away, participants traveled to the London Southbank University to take part in the Methods in Action – Practical Baking Quality Workshop organized by Calibre Control. The university environment provided the optimal setting for this practical, hands-on workshop. Following the methods through the grain chain relevant to research and professional organizations, three major global manufacturers gathered to present the AACCI Approved Methods.

Another unique opportunity was offered after the conclusion of the meeting – a field trip to tour the oldest continually operating agricultural research station in the world – Rothamsted Research.

Participants were welcomed with an introductory talk on the history of Rothamsted and its contribution to agriculture and an introduction to the wheat program. They were then divided into four groups who rotated through each of the following expertly guided:

- tour of the Broadbalk continuous wheat, planted since 1843 and the Park Grass continuous permanent grassland, since 1856
- visit on the farm to see two of the "Classical" experiments which established the science of plant nutrition
- tour of the automated field phenotyping system complete with a demonstration of drones
- tour of the archive of samples from the classical experiments (dating back to 1843)



Rothamsted's Malcolm Hawkesford explains the Broadbalk Wheat Experiment – running since 1843.

CEREALS & GRAINS 18 EXHIBITORS



The following exhibitors shared the latest products and services available to meet the industry's challenging need for solutions.

Agri-Neo, Inc.
AMETEK Brookfield
Ardent Mills
Avena Foods Limited dba Best Cooking Pulses
Baker Perkins Ltd.
BASTAK Instruments
BENEO Inc.
Brabender GmbH & Co. KG
Budenheim
Buhler
C.W. Brabender Instruments, Inc.
C-Cell
Campden BRI
Carmi Flavors
Cereal Ingredients, Inc.

Cgrain AB
CHOPIN Technologies
DSM Food Specialties USA, Inc.
Edlong
Elsevier
EnviroLogix
FOSS Analytical
FrigorTec GmbH
GlycoSpot
Gold Coast Ingredients, Inc.
Grain Millers, Inc.
Henriette (Flag Shop for The Low Carbohydrate Bread Society of Japan)
ICL Specialty Solutions
Klaus Ruttman GmbH
Lallemand Baking Solutions

Northern Crops Institute
NOVOLYZE
PacMoore Products, Inc.
Palsgaard, Inc.
Perten Instruments AB
Perten Instruments, Inc.
PGP International, Inc.
QualySense AG
Randex Food Diagnostics
REPCO
REVTECH Process Systems
Siemer Specialty Ingredients
Stable Micro Systems
U.S. Highbush Blueberry Council
Wenger Manufacturing, Inc.
Wiley



Reach all segments of the grain science community by reserving a booth at
Cereals & Grains 19 | November 3–5 | Denver, Colorado, U.S.A.

Contact:

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THANK YOU

CEREALS & GRAINS 18 SPONSORS



WILEY

2018 AACC INTERNATIONAL AWARD RECIPIENTS

Congratulations to AACCI's most prestigious awardees who are being recognized for their significant contributions in the field of cereal grain science!

AACC International Fellows



Marta Izidorczyk
Canadian Grain
Commission



Kristof Brijs
KU Leuven

Thomas Burr Osborne Medal



Kaisa Poutanen
VTT Technical
Research Centre

Phil Williams Applied Research Award



Vijay Singh
University of Illinois

William F. Geddes Memorial Award



Jon M. Faubion
Kansas State
University

Excellence in Teaching Award



Weining Huang
Jiangnan University,
China

Young Scientist Research Award



Katharina Scherf
Leibniz-Institute for
Food Systems Biology,
Germany

Edith A. Christensen Award



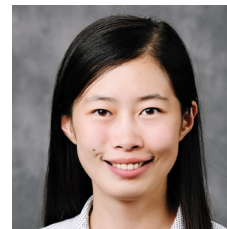
Ray Shillito
BASF Corporation

Texture Technologies Quality Research Award – Best Paper



Jayne Bock
University of Guelph

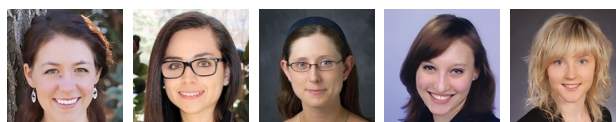
Texture Technologies Quality Research Award – Best Presentation



Fang Fang
Purdue University

Student Competition Winners

Best Student Research Paper Competition



In order of appearance:

First Place, **Emma Jobson**, Montana State University
Second Place, **Ana Maria Magallanes Lopez**, North Dakota
State University
Third Place, **Leigh Schmidt**, Purdue University
Finalist, **Sabina Jakobi**, Technical University of Muni
Finalist, **Anke Boeswetter**, Technical University of Muni

Student Baked Product Competition Awards

Core Breakfast Bar – London Southbank University – Best
Overall, Best Taste & Texture
QuickStick – Università degli Studi di Milano – Most
Nutritious, Overall runner-up
Pinole – CeProBi-IPM – Most Novel Use Ingredients
Grainious, University of Wisconsin, Madison – Best Overall
Appearance

Carbohydrate Division Megazyme Awards

First, **Denisse Bender**, University of Natural Resources and
Life Sciences Vienna
Second, **Elena Marasca**, ETH Zurich
Third, **Mankea Malalgoda**, North Dakota State University

Engineering and Processing Division Best Student Paper Award

Sravanthi Budaraju, University of Minnesota

Nutrition Division Best Student Research Award

Anna Hayes, Purdue University

Student Travel Awardees



For the 2018 meeting, students applied for an AACCI Student Travel Award to help support their participation in the AACCI Annual Meeting as part of the annual meeting abstract submission process form.

Student Travel Awards were limited to the first 50 students who had requested the support, who had an accepted abstract, and who are members of AACCI. **Awards of \$500 were provided from the AACCI Foundation as a credit toward registration for the meeting.**

Elisa Arte, University of Helsinki
 Eden Barrett, University of Wollongong
 Yaiza Benavent-Gil, IATA-CSIC
 Jose Bonilla, Purdue University
 Julia Brantsen, Texas A&M University
 Andrea Bresciani, University of Milan
 Sravanthi Budaraju, University of Minnesota
 Esther Callcott, Charles Sturt University
 Gaetano Cardone, University of Milan
 Kristina Cook, Louisiana State University
 Stephen Cork, Functional Grains Center
 Cesar Cornejo Hurtado de Mendoza, Universidad Nacional Agraria La Molina
 Janelle Courcelles, University of Manitoba
 Princess Tiffany Dantes, Iowa State University
 Jaya Dhungana, University of Minnesota
 Sabrina Geisslitz, Leibniz-Institute for Food Systems Biology at the Technical University of Munich
 Audrey Girard, Texas A&M AgriLife Research
 Stefanie Hackenberg, Technical University of Munich
 Jenny Hayek, University of Minnesota
 Anna Hayes, Purdue University
 Ye Eun Hong, Pusan National University
 Brasathe Jeganathan, University of Alberta
 Soojeong Jeon, Pusan National University

Duyun Jeong, Chonnam National University
 Amber Kaiser, North Dakota State University
 Xiaojing Li, Jiangnan University
 Misen Luu, University of Minnesota
 Maneka Malalgoda, North Dakota State University
 Coline Martin, INRA Montpellier -UMR IATE
 Juan Mogoginta, University of Minnesota
 Zeinab Mohammadi Shad, University of Arkansas
 Yujin Moon, Pusan National University
 Sviatoslav Navrotskyi, University of Nebraska
 Olivia Ogilvie, University of Auckland
 Mayra Perez-Fajardo, Kansas State University
 Rachana Poudel, University of Nebraska Lincoln
 Laura Roman, University of Valladolid
 Aylin Sahin, University College Cork
 Nancy Saji, School of Biomedical Science
 Xiaojuan Tang, Jiangnan University
 Alfonso Topete-Betancourt, CINVESTAV Unidad-Querétaro
 Pablo Torres Aguilar, Purdue University
 Michelle Toutounji, Charles Sturt University
 Min-Hui Tsai, University of Idaho
 Annelien Verbauwheide, KU Leuven
 Yujie Wang, University of Helsinki
 Yingxin Zhong, University of Minnesota