Green Markets[®] Specialty Fertilizer Global Summit 2017 December 7, 2017

Le Méridien Charlotte, NC



Platinum Sponsor



Silver Sponsors



















Environmental Technologie

Breakfast Sponsor

Wi-Fi Sponsor







TABLE OF CONTENTS

Welcome
Thank You to Our Sponsors
Agenda at a Glance 5
Exhibit Floor Plan
Program Faculty
Sam Wilson7
John Breen, Ph.D
Justin Stewart
Bradly Shaver, Ph.D
Peter Aleman
Dr. Srinivas Makam
Christine Lensing
Dale Edginton9
Josh McGill9
Chris Pearson9
Nick Young9
Neil Fleishman9
Sponsor Descriptions

To download presentation materials visit www.FertilizerPricing.com/SpecialtySummit/Presentations

Presented by:



24 Railroad Street Keene, NH 03431-3744 Tel: +1.603.357.8103 or 800.531.0140 Web: <u>FertilizerPricing.com</u>



To Our Customers:

Thank you for joining Green Markets for the third annual Specialty Fertilizer Global Summit.

Once again we are happy to see some long-standing Green Markets Clients, and to welcome many new Clients to our community of fertilizer industry professionals. We certainly appreciate your support of the Summit.

A big thanks as well to the expert faculty assembled for this year's Summit. You are sure to find their presentations highly valuable as they explore the business consideration of operating in the specialty and premium fertilizer space. Each has a vision and a story that is worth sharing. Summit attendees as well come from diverse roles within fertilizer and aligned companies, and we hope you make some new and valuable contacts.

In 2018 Green Markets will host two other events for fertilizer professionals: the third annual Nitrogen North America (Las Vegas, May) the inaugural Soil Amendments Summit (Phoenix, October) and back to Austin for the 2018 Summit in December. We hope you can join us, and please see any of our Green Markets staff members for details.

Speaking of which, my Green Markets colleagues in attendance today include Jonathan Wentworth-Ping, Sales Director, and Neil Fleishman, Research Director. Please let any of us know how we can make your Summit experience more valuable.

Sponsored by

Specialty Fertilizers

Enjoy the Specialty Fertilizer Global Summit 2018!

Sincerely,

Dan Houder Managing Director



Visit the Registration desk to signup to recieve your CEUs

Thank You To All Our Sponsors

Platinum Sponsor



Silver Sponsors















Cocktail Sponsor



Luncheon Sponsor

sulex Environmental Technologies

Breakfast Sponsor



Wi-Fi Sponsor



Flash Drive Sponsor



AGENDA

8:00 AM - 8:45 AM Continental Breakfast

Sponsored by:



8:45 AM - 8:50 AM Introduction and Welcome

8:50 AM - 9:20 AM Macro Nutrient Outlook, Value Added Uptake

Neil Fleishman, Senior Industry Analyst, Green Markets

9:20 AM - 10:05 AM

Rethinking What Sustainability Means in Fertilizer

Mike Zwingman, Technical Development Manager, **Verdesian Life Sciences**

10:00 AM - 10:40 AM A New Mode of Action for Nitrogen Management

John Breen, Ph.D., Director of Research Alliances and Regulatory Affairs, Actagro

10:40 AM - 11:05 AM Coffee Break Expo Hall

11:05 AM - 11:45 AM The Impact of Nitrogen Stabilizers

Justin Stewart, U.S. Marketing Leader, Nitrogen Stabilizers, **Dow AgroSciences, LLC**

11:45 AM - 12:25 PM Meeting the Demands of the Specialty Market: A Distributor's Perspective

Bradly Shaver, Ph.D., Specialty Division Agronomist, **Helena Chemical**

12:25 PM - 1:40 PM Networking Luncheon Expo Hall

Sponsored by:

1:40 PM - 2:20 PM

Humic Acid Market Overview and Outlook

Peter Aleman, Agronomist, Bio-Gro, Inc.

2:20 PM - 2:50 PM

Fulvic acid and Seaweed: Nature's Perspective for a Growing Fertilizer Market

Srinivas Makam, Molecular Microbiologist, Global Organics Group

2:50 PM - 3:30 PM

The Market Outlook for High-Value Crops

Christine Lensing, Economist - Specialty Crops, CoBank

3:30 PM - 3:55 PM Coffee Break Expo Hall

3:55 PM - 4:25 PM

Market Indicators for Manganese, Copper and Boron

Dale Edgington, Purchasing & Production Manager, **Cameron Chemicals, Inc.**

4:25 PM - 5:05 PM

Scale-up Strategies for Commercialization

Josh McGill, Process Engineer and Special Projects Manager, **Applied Chemical Technology**

5:05 PM - 5:45 PM

The Mission Behind a Cannabis Cultivation Company

Chris Pearson, Chief Revenue Officer, **Future Harvest Developments**

5:45 PM - 7:15 PM Networking Cocktail Reception

Sponsored by:





EXHIBIT HALL

Le Méridien Charlotte

Carolina Ballroom (C,D,E)



SUMMIT FACULTY

Sam Wilson, Chief Technology Development Officer, Verdesian Life Sciences



Sam Wilson, is Chief Technology Development Officer, Verdesian Life Sciences. He brings more than 30 years of experience to lead the development of new technologies in all product categories.

Prior to this position, Wilson served as the global field development

manager for FMC, where he managed new product development and led research for more than 250 trials around the world. While at FMC, he was presented with the North American Crop Innovation Award for product development, project leadership and teamwork.

Wilson also held product development and technical service positions with United Agri Products, Zeneca AG Products and Monsanto. Wilson earned bachelor's and master's degrees of science from North Carolina State University and received his doctorate from Virginia Polytechnic Institute and State University.

John Breen, Ph.D., Director of Research Alliances and Regulatory Affairs, **Actagro**



John Breen is Director of Research Alliances and Regulatory Affairs; he joined the company in 2014. In this role, he works with other members of the Actagro science and management team to make strategic decisions on Discovery research and Actagro's technology pipeline. He works externally to explain

Actagro's technology to our customers and industry groups. John also oversees regulatory strategy and approvals. Additionally, he leads the activities surrounding Actagro's development of purposeful intellectual property.

John joined Actagro from Dow AgroSciences LLC, where he worked for 18 years. He was Regulatory Leader for Japan and Korea for two years, then served as R&D Leader in that geography for seven more years, which included responsibility for all people leadership, field research, product development, regulatory science, and regulatory approvals, leading a team of 18 scientists. This included approvals for GM cotton, soybean and corn traits, and external technology matters. Previously, he was Customer Agronomist for rice herbicides and range & pasture herbicides in the US South, contributing to Reduced Risk regulatory approvals and product launch support in those markets. He also worked in field and greenhouse research on rice and turfgrass herbicides.

John's academic training is as a Systems Agronomist and Weed Scientist. He holds a Ph.D. in Ecology from the University of California, Davis, where he did field research and simulation modeling on weed competition in water-seeded rice in California and Japan. He served on the editorial board of the journal Weed Biology and Management for 13 years, eventually serving as Associate Editor-in-Chief. He has published research and review papers in various journals, and was an adjunct faculty at the Weed Science Center, Utsunomiya University in Japan.

He reads and speaks Japanese fluently. He has a 29 year-old son, and is an avid golfer.

Justin Stewart, U.S. Marketing Leader, Nitrogen Stabilizers, Dow AgroSciences, LLC



Justin Stewart is the U.S. Marketing Leader for Nitrogen Stabilizers for Dow AgroSciences. Justin joined Dow AgroSciences in 2007 and has experience in a wide range of markets and businesses including Turf and Ornamental, Structural and Post-Harvest Commodity Pest

Control, Small Grains, and Nitrogen Stabilization.

Since taking over as the Marketing Lead for Nitrogen Stabilizers, Justin has been responsible for the overall strategic direction of the business. Responsibilities include analysis of current and future market opportunities, business development, and strategy implementation.

Justin holds a BS degree in Agronomy and MS in Plant Pathology; both from Purdue University. He also holds a MS in Industrial Administration from Krannert School of Management at Purdue University.

Bradly Shaver, Ph.D., Specialty Division Agronomist, **Helena Chemical**

Brad Shaver received his Ph.D. in Plant and



Environmental Sciences from Clemson University in 2015 where he studied nematology and turfgrass pathology. Previously, Brad worked as a sales rep and branch manager for Helena Chemical Company in North and South Carolina. He returned to Helena in 2015 as an agronomist and covers the golf,

ornamental, lawn care, and industrial vegetation management markets across the entire US. Brad lives in Lyman, SC with his wife and two children.

Peter Aleman, Agronomist, Bio-Gro, Inc.

Peter Aleman is the originator and owner of Bio-Gro,



Inc. Peter has been involved in soil and plant nutrition since 1982. This includes working with growers and dealers in the USA, Canada, Australia and Europe. Peter's specialty is designing fertilizer programs and products that maximize production in yield and quality as well as improve cost per unit of production.

Dr. Srinivas Makam, Molecular Microbiologist, Global Organics Group



Dr. Makam has joined Global Organics to discover and guide the Integrated Life Science Research Center towards agricultural biology, ecology and genomics innovation. Dr. Makam is a seasoned scientist with over 22 years of research experience in Molecular Plant Physiology, Biochemistry,

Microbiology and Genomics. He has also been an author in over 10 scientific publications and published abstracts in peer reviewed scientific journals. Prior to joining Global Organics, in his leadership capabilities, Dr. Makam served as a Team Lead/Scientist for the Monsanto Company, Senator/Vice President representing the Horticulture Department at Purdue University and a Research and Technical Coordinator at Arizona State University. He also completed his Post-doctoral assignment from Arizona State University. In addition, he possesses multiple years of teaching and leadership experience at the undergraduate and graduate levels.

Dr. Makam received his Bachelor of Science in Agriculture/Horticulture from the University of Agricultural Sciences in Bangalore, India, his Master of Science in Plant Physiology working on Abscisic Acid Hormonal Signaling and Immunology applications from the University of Agricultural Sciences in Bangalore, India. He obtained his Doctorate in the field of Molecular Plant Physiology/ Microbiology/Biochemistry/Genomics from Purdue University researching on Plant Hormone Auxin Signaling.

Christine Lensing, Economist -Specialty Crops, **CoBank**



Christine holds a master's degree in agricultural and applied economics from Virginia Tech. She has several years of experience in the finance industry both in South Africa and the U.S. Prior to joining CoBank's Knowledge Exchange Division as a Senior Economist covering the specialty crops industries in 2015,

Christine worked for Rabobank in California.

Dale Edgington, Purchasing & Production Manager, Cameron Chemicals, Inc.



Dale Edgington gained his BS degree in Agricultural Economics from Michigan State University and began his career in the fertilizer industry in 1985. The first half of his career was spent in retail operations, marketing fertilizers, pesticides, seeds and related services to farmers in Michigan.

In 2003, Dale transitioned to the micronutrient fertilizer manufacturing business where he has been ever since. Responsibilities include purchasing and formulating various fertilizer products with the elements nitrogen, phosphorous, potassium, calcium, magnesium, manganese, copper, boron, iron and zinc. The business was owned by Agrium, U.S. Inc. until April of 2015 when it was sold to another long standing micronutrient manufacturer, Cameron Chemicals from the state of Virginia.

Josh McGill, Process Engineer and Special Projects Manager, Applied Chemical Technology



Josh McGill is a Special Projects Manager with Applied Chemical Technology (ACT), a processdevelopment engineering firm located in Florence, AL. ACT works with customers to design and develop new products and processes in multiple industries including biomass, fertilizer,

specialty chemical, mining, and others. In this role he leads teams of engineers, designers, technicians, and fabricators toward the successful implementation of projects. Some recent projects include multiple downdraft gasification facilities, waste mineral recovery process, modular liquid fertilizer production unit, and a polymer production system. His expertise is in project and fiscal management, project estimating, scope development, business development, and strategy implementation. Josh holds a degree in Chemical Engineering from Auburn University and a MBA from The University of Alabama.

Chris Pearson, Chief Revenue Officer, Future Harvest Developments

Chris is the Chief Revenue Officer for Future Harvest



Development bringing new and innovative solutions to both the hydroponic and indoor growing industries. Prior to that role, Chris was Canadian Commercial Director for Ducati North America, where he was responsible for positively affecting sales targets and performing research and analysis.

Nick Young, Supervising Special Investigator, California Department of Food & Agriculture's Fertilizing Materials Inspection Program



Nick Young is the Supervising Special Investigator for the California Department of Food & Agriculture's Fertilizing Materials Inspection Program. Nick has been with CDFA for ten years and was instrumental in the development of the inspection protocol for their Organic Input Material Program implemented

worldwide. His role involves education and outreach, as well as regulatory enforcement of fertilizing materials. Nick currently serves of the Board of Directors of Association of American Plant Food Control Officials. Nick has a degree in Plant Science from California State Polytechnic University Pomona, where he also taught as an adjunct professor, as well as a degree from the University of California, Santa Barbara. Nick lives in Orange County, California with his wife, seven year-old daughter, and two year-old son.

Neil Fleishman, Senior Industry Analyst, Green Markets



Neil Fleishman has analyzed global fertilizer markets and companies for over a decade.

His work with Green Markets includes the Global Fertilizer Quarterly series covering each of the N, P, and K markets in detail. Mr. Fleishman also produces fertilizer market research on a

variety of topics of import to the industry, and leads/ contributes to bespoke market research and advisory projects.

Previously, Mr. Fleishman worked at the Susquehanna International Group as a trading desk Sector Specialist. Neil holds a BS in Business Administration (Finance concentration) from Drexel University and is also a Chartered Financial Analyst.

PLATINUM SPONSOR



In 1954, K+S North America was established as the U.S. subsidiary of the German company K+S KALI GmbH. As part of the K+S Group, K+S North America shares the strength of the global enterprise with more than 14,000 employees and more than 4 billion dollars (U.S.) in annual revenues. Today, K+S is one of the world's leading producers of potassium and magnesium fertilizers and salt products with more than 125 years of experience.

K+S North America distributes natural mineral fertilizers, industrial salts, ice-melt and health-care product ingredients to agricultural and manufacturing customers throughout the United States, Canada, Central America and the Caribbean.

SILVER SPONSORS



Actagro[®] is a premier developer, manufacturer, and marketer of environmentally sustainable soil and plant health technology solutions that enhance value for our customers globally. As a science-based technology provider, we deliver a broad range of highly effective solutions via our proprietary Actagro Organic Acids[®] and Nutri-Guard[®] Technology Platforms[™]. For more information, please visit www.actagro.com or call us toll free at 877-843-2700.

SILVER SPONSORS



Eco Agro is a U.S.-based nutrient efficiency company dedicated to bringing technologies to farmers to help them be more productive. With a global network of customers, we are delivering innovative and quality products to the agricultural nutrient market, with focus on an economic, agronomic and responsible approach. Our PENXCEL Technology platform is a launching pad for a full line of innovative new products for improving the efficiency of nitrogen and phosphate fertilizers. It improves performance, blending and handling. Our fertilizer additive products, including N YIELD nitrogen stabilizer, N-BOUND™ nitrogen stabilizer and PHOS GAIN™ enhancer all utilize PENXCEL Technology. Our newest high concentration products are the NEON™ family of products which combine two proven stabilizers in one simple, easy-to-use formulation.

Learn more at www.ecoagroresources.com



Applied Chemical Technology is an engineering company specializing in process and product development, engineering, design and fabrication of plants and equipment. ACT has worked with the fertilizer industry to develop most of the Controlled Release Nitrogen Fertilizers on the market today and has had a role in many of the specialty products.



CRF TECH is a technology driven company that offers engineering, design, fabrication, toll manufacturing and research and development services. With our in-house research and development team leading the way, we continue to create new technologies such as our revolutionary MCCM (Modular Compact Coating Machine). We also offer toll and contract manufacturing of Controlled Release Fertilizers to promote growth for our customers with simple, efficient, and affordable solutions so that **Everyone Can Grow**.

SILVER SPONSORS



Throughout our history APF has produced and marketed ammonium sulfate based blended fertilizers. The company was founded in 1964 in Houston, TX and currently operates 11 dry blending locations in Texas and markets thousands of tons of ammonium sulfate annually in the United States, Canada, Central and South America.

Over the years, APF has been the leader in promoting the use of Sulfur in the sulfate form as an essential plant nutrient and has developed markets for ammonium sulfate to be used as a fertilizer, an herbicide adjuvant, municipal water treatment, fire inhibitor in insulation and animal feed supplement, among other industrial applications.



Evonik's agricultural products help fulfill basic human needs for the fertilizer, animal nutrition and health care industries. For over 50 years, our plant in Mobile, AL, as well as four additional global sites, has safely and sustainably manufactured these essential ingredients for both feed and fertilizer, including **blueSulfate**[®] (liquid ammonium sulfate), **blueSulfate Dry**[®] (crystallized ammonium sulfate) and **AgraLi**[®] (liquid NK fertilizer). One of the world's leading chemical manufacturing companies, Evonik employs over 35,000 employees in more than 120 countries. Visit us at AgraLi.com and blueSulfate.com for more information on our products.



Compass Minerals is a leading provider of innovative plant nutrition solutions. We are dedicated to providing farmers around the world with superior crop technology that delivers healthier plants and higher yields. Our specialty plant nutrition portfolio includes PROTASSIUM+®, Wolf Trax™ DDP® and ProAcqua™, a new water soluble formulation designed for all fertigation and foliar applications. For more information about our innovative solutions please visit www.compassminerals.com

SILVER SPONSORS



A.J. Sackett and Sons and Waconia Manufacturing, two companies with a combined 180 years of industry leading design and manufacturing experience in fertilizer equipment and systems design, combined forces earlier in 2017 by aligning their sales force and product lines. The new company will be branded as Sackett-Waconia.

Sackett-Waconia employs 200 people between their four U.S. locations in Baltimore, MD, Waconia, MN, Norwood Young America, MN and Wilson, NC, plus a fifth location in Araxá, Brazil. Sackett-Waconia has sold equipment to thousands of fertilizer plants and enjoys a worldwide reputation for quality and customer service. Combining the Companies has streamlined engineering, product design, customer service and support efficient equipment fabrication. Sackett-Waconia promotes environmentally friendly Precision Fertilizer Blending[®] technologies which focus on the 4R Nutrient Stewardship concept of getting the right nutrients to the right crops at the right time and rate.

For more information, please go to: www.sackettwaconia.com or call (410) 276-4466

NETWORKING COCKAIL SPONSOR



Bio-Gro Inc. is in its 30th year of producing quality products which promote soil fertility. We manufacture humic acids, biologicals and produce over 100 different nutrient products.

Our mission is to help agronomists and growers produce the highest quality yield per acre of soil and per acre foot of water. Through our Complete Fertility System we gather information, set targeted fertility programs and apply quality products.

Harnessing the power of biology and chemistry we can help you build sustainable, highly productive soils.

Find out more at www.biogro.com

LUNCHEON SPONSOR



Marsulex Environmental Technologies

Many utility and industrial combustion sources nationwide are being highly impacted by the Boiler MACT, Area Source MACT, NAAQS, GHG, Utility MATS, Effluent Guidelines, and other regulations, therefore many major emissions issues are requiring careful consideration and impactful decisions. Thus, there is a myriad of pollution control concerns met with the need to satisfy the increasingly stringent environmental control regulations with the most advanced emission control technologies. MET's patented and proprietary ammonium sulfate flue gas desulfurization (AS-FGD) process, a method for Zero Liquid Discharge, converts unwanted SO2 into a high-value fertilizer byproduct. The advanced technology is a unique solution, which provides guaranteed, long-term compliance, requires no chemical or by-product waste handling, and produces a high-value ammonium sulfate fertilizer by-product resulting in an ongoing source of revenue. While the AS-FGD system is the company's flagship technology, MET is a full-service air pollution control technology supplier, specializing in particulate and acid gas control.

BREAKFAST SPONSOR



The Andersons Plant Nutrient Group formulates, stores, and distributes nutrient, specialty, and industrial inputs through strategically located facilities and a widespread dealer network. The Andersons extensive portfolio of value-added products includes PureGrade low-salt liquid fertilizers, MicroSolutions micronutrients, humates, OMRI listed crop nutrients and soil amendments, and more to better serve the needs of growers.

The Andersons is a proud partner of 4R Nutrient Stewardship. The company is continually seeking how they may assist growers to increase production and profitability, while also building sustainable crop production systems. The company recently launched CropCoachTM, which is a web tool that delivers customized product recommendations based on nutrient deficiencies. The tool helps growers maximize their fertilizer inputs, in turn, improving their yield, profitability, and sustainability. Visit CropCoach.com today to create your own personalized cropping system.

Visit andersonsplantnutrient.com to learn more about the company's products and services.

WI-FI SPONSOR



ICL Specialty Fertilizers: one name, one company.

Everris, Fuentes, Nu3, Novapeak and F&C have combined to become ICL Specialty Fertilizers. The union of these companies creates a global leader in specialty fertilizers. Integrating our efforts in the area of research and product development has resulted in one organization that brings together the world's top experts, researchers and agronomists in this specialized field. This pays off in the form of continuous innovation, new products and technologies creating added value for growers worldwide. ICL Specialty Fertilizers' international presence makes it uniquely positioned to meet worldwide challenges and seize opportunities. But even though the reach is global, the approach is local. You can count on the same high-quality products and the services of our experts in the field who provide you with tailor-made advice to fulfil the evolving needs of growers and farmers in a constantly changing world. In the USA contact as at 1 800-492-8255 or by email at: EverrisUS.Info@everris.us.com

FLASH DRIVE SPONSOR



Cameron Chemicals (Cameron), Advanced Micronutrient Products, Inc. (AMP) and Ultra Yield Micronutrients, Inc. (UYM) produce high quality single element formulations including zinc sulfate and zinc oxy-sulfate as well as multi-element packages and customer proprietary mixes for all crops and geographies throughout the world. All three facilities have varying ranges of products including sulfates, oxy-sulfates, lignin's and chelates. While a leading supplier of zinc-based micronutrients, product lines also include boron, calcium, manganese, magnesium, iron and copper.

Advanced Micronutrient Products, Inc.: www.ampmicronutrients.com

Cameron Chemicals, Inc.: www.cameronmicronutrients.com

Ultra Yield Micronutrients, Inc.: www.ultrayieldmicros.com



K+S Speciality Fertilizers FEEDING THE CROPS THAT FEED THE WORLD



NK Fertilizer 13.5 (+46)

ESTA[®] Kieserit

Kieserite granular 25+50



Sulphate of potash 52 (+45)

KALISOP[®] Plus

Sulphate of potash 51 (+45)



Magnesium sulphate16+32.5

60. Kali[®]

Muriate of potash granular 60



For further information visit www.ks-northamerica.com K+S North America Corporation A K+S Group Company

