ISAA
SYMPOSIUM 2022  BORDEAUX
24TH-29TH  APRIL  FRANCE

PROGRAMME

WWW.ISAA2022.ORG
ISAA is committed to a long-term plan to build our society upon more engagement, learning opportunities on new trends, and much-improved content on our website in non-symposium years.

Beginning with the launch of our website and continuing through the 2022 conference, the newly constituted ISAA Agrochemical Network will continue to deliver the experience and expertise our community has come to rely on. In addition, on behalf of the ISAA Agrochemical Network, we would like to formally thank all of our members for their support and commitment to the organization.

Please visit our website and sign up to become a member and receive information and updates about the ISAA Agrochemical Network and future industry events. https://www.isaanetwork.org
ISAA is committed to a long-term plan to build our society upon more engagement, learning opportunities on new trends, and much-improved content on our website in non-symposium years. Beginning with the launch of our website and continuing through the 2022 conference, the newly constituted ISAA Agrochemical Network will continue to deliver the experience and expertise our community has come to rely on. In addition, on behalf of the ISAA Agrochemical Network, we would like to formally thank all of our members for their support and commitment to the organization.

Please visit our website and sign up to become a member and receive information and updates about the ISAA Agrochemical Network and future industry events.

https://www.isaanetwork.org

INDEX

<table>
<thead>
<tr>
<th>TIME SCHEDULE</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sunday 24th of April</td>
<td>4</td>
</tr>
<tr>
<td>Monday 25th of April</td>
<td>4</td>
</tr>
<tr>
<td>Tuesday 26th of April</td>
<td>5</td>
</tr>
<tr>
<td>Wednesday 27th of April</td>
<td>7</td>
</tr>
<tr>
<td>Thursday 28th of April</td>
<td>9</td>
</tr>
<tr>
<td>Friday 29th of April</td>
<td>10</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SPONSOR PROFILES</th>
<th></th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>SYMPOSIUM MAP</th>
<th></th>
</tr>
</thead>
</table>
TIME SCHEDULE

Sunday 24th of April

Registrations
15.00 - 18.00 ISAA Trade Show Area

Trade show setup
13.00 - 16.00 ISAA Trade Show Area

Monday 25th of April

Registrations
09.00 - 18.00 ISAA Trade Show Area

Trade show
12.00 - 18.00 ISAA Trade Show Area

Lunch
12.00 - 13.30 ISAA Trade Show Area

General Oral Session: Opening Session
Speaker presentation in Auditorium A
Session chair: David Cameron
13.30-14.00 Opening Remarks, Solito Sumulong, Peter Westbye, ISAA Chief Scientific Officer, David Cameron ISAA Vice President and 2022 Chair
14.00-14.40 Keynote- Welcome to the New normal -Key trends in the Global Market Place, Paul Hodges, New normal consulting
14.40- 15.10 On agriculture in France
Jean-Marc Saurell, De Sangosse
15.10-15.30 Novel Polymeric Dispersant as an Alternative to Latex Polymers
Jennifer Peterson, Stepan

Coffee Break
15.30-16.00 ISAA Trade Show Area
**General Oral Session: Adjuvants & Sustainability**

Speaker presentation in **Auditorium A**

Session Chair: **Karine Framesqui**

16.00-16.40 **Keynote- Regulation of co-formulants in the agrochemical industry**
Mike Carroll, Eden Research

16.40-17.00 **#5 Microplastics ban, biologicals…: How new trends in seed treatment create opportunities for the development of novel binders**
Antoine Vielliard

17.00-17.20 **Working towards sustainability for AgChem raw materials**
Ingo Fleute-Schlachter, BASF

**Networking cocktail sponsored by**
17.30-19.00 **ISAA Trade Show Area**

---

**Tuesday 26th of April**

**Trade show**
10.00-20.00 **ISAA Trade Show Area**

**General Oral Session: Modeling and Methods: Spray Drift**

Speaker presentation in **Auditorium A**

Session chair: **Per Kudsk**

09.00-09.40 **Keynote- How Modern Agronomic Procedures may Affect Drift Control,**
Ronald Vermeer, Bayer

09.40-10.00 **Maximizing biological efficacy by exploiting both, adjuvant and nozzle technology – AXIALTM case example,**
Simona Staiger, Syngenta

10.00-10.20 **Effects of agricultural adjuvants on drop size and spray drift**
Daniel Bonn, University of Amsterdam

10.20-10.40 **Spray Application Characterizations of Insecticide Formulation and Adjuvant Tank Mixtures,**
Jean-Pierre Huby, Corteva

**Coffee Break sponsored by**
10.40-11.10 **ISAA Trade Show Area**
General Oral Session: Biological Performance, Use and Application, Mode of Action
Speaker presentation in Auditorium A
Session chair: Bruna Mendoca

11.10-11.40 Probing adjuvant mechanism and efficacy of different surfactants with a QCM-D methodology, Fredrik Andersson, Nouryon

11.40-12.00 Alcohol ethoxylates efficiently enhancing diffusion of epoxiconazole in isolated cherry laurel (Prunus laurocerasus L.) cuticles do not increase rates of cuticular transpiration, Lukas Schreiber, Bonn University

12.00-12.20 Probing the Interactions of Surfactant Micelles with Alfs and Plant Waxes Xuzhi Hu, University of Manchester

12.20-12.40 Outsmarting Metabolomics Through Adjuvant Selection Laura Weatherhead, Croda

Lunch
12.40-14.00 ISAA Trade Show Area

General Oral Session: New applications, and technologies
Speaker presentation in Auditorium A
Session chair: Ronald Vermeer

14.00-14.30 The Impact of Adjuvants on UAV Application and Efficacy Jason Wall, Croda

14.30-14.50 High Performance Adjuvants for Drone Spray Applications, Jeferson A. Naue, Momentive

14.50-15.10 Adjuvant Selection for Drone Application of Tank Mix Solutions Shrikant Aherkar, Stepan

15.10-15.30 A New Thixotropic Suspo-emulsion Adjuvant and its effects on Fungicide Efficacy, Brett Symonds & Antoine Porte, De Sangosse

Coffee Break
15.30-16.00 ISAA Trade Show Area
General Oral Session: Formulation and Adjuvant technology
Speaker presentation in Auditorium A
Session chair: Sarah Wolek
16.00-16.30 Interaction of adjuvants and spray volume in the fungicide application in rice
Iuri Dario, Clariant
16.30-16.50 Microbial (nano)formulations for biocontrol applications in maize and wheat,
Claudia Preininger, Austrian Institute of Technology
16.50-17.10 Performance booster for microbial agrosolutions
Rene Haensel, Evonik
17.10-17.30 Improved Rainfastness and UV Resistance of Microbial Pesticides
Caroline Woelfle-Gupta, DOW

Wednesday 27th of April

Trade show
10.00-18.30 ISAA Trade Show Area

General Oral Session: Modeling and Methods: Retention and Rainfastness
Speaker presentation in Auditorium A
Session chair: Peter Westbye
09.00-09.40 Keynote-Improvement of droplet retention on water repellent plant surfaces in agriculture spray application,
Kerstin Koch, Rhein Waal University
09.40-10.00 Importance of Leaf surface and formulation properties in predicting wettability,
Justin Nairn, PPCNZ, (Currently Scion)
10.00-10.20 Physiochemical Characterization of rainfastness properties of N-vinyl Pyrrolidone Polymers in agrochemical formulations,
Apostolos Sevastos, Syngenta
10.20-10.40 Novel Organosilicone Deposition Aid for Oil-Based Formulations
George Policello, Momentive
10.40-11.00 Adhesion properties of the droplets herbicidal emulsions of fenoxaprop-P-ethyl with different kind of adjuvants,
Danil Dzardanov, Avgust Crop Protection
Coffee Break
11.00-11.30 ISAA Trade Show Area

General Oral Session: Modeling & High-throughput methodologies
Speaker presentation in Auditorium A
Session chair: George Policello
11.30-11.50 Versatile Solvents for Agrochemicals – A Molecular Modeling Approach
Nedko Drebov, BASF
11.50-12.10 High-Throughput Methodologies to design and select solvents and adjuvants for crop protection formulations, Monique Adamy - monique.adamy@solvay.com
12.10-12.30 Physical Chemical Models for Solvent Selection in Agricultural Formulation Development, Bernd Lüssem, Sasol
12.30-12.50 Hydrophilic-Lipophilic Deviation (HLD) and PIT-Slope as Formulation Tools for Surfactant Selection and Optimization of Emulsion, Gregory Dado, Stepan

Lunch
12.50-14.30 ISAA Trade Show Area

General Oral Session: Biological Performance, Use and Application, Mode of Action
Speaker presentation in Auditorium A
Session chair: Ingo Fleute Schlachter
14.30-15.00 Assessing early changes in leaf physiology as a tool for the selection and development of tailored adjuvants, Bruna Mendonca, Oxiteno
15.00-15.20 Influence of formulation on seed treatment quality
Olga Ulybina, Avgust Crop protection
15.20-15.40 Methyl oleate Diffusion and its effect on the mobility of 4-cyanophenol in waxes studied by Attenuated Total Reflection – Fourier Transform Infrared Spectroscopy (ATR-FTIR), Marcel Kunz, University of Würzburg
15.40-16.00 Novel & New: “Active Inerts” Alter the Chemistry of Water, Have Activity in the Soil, and Stimulate the Plant, Chris Jordan, JRX Biotech
16.00-16.20 Innovative silicone co-formulants: grow more with less, Eliane Emond, Elkem Silicones

Coffee Break
16.20-17.00 ISAA Trade Show Area

Poster session
17.00-19.00 ISAA Trade Show Area
Thursday 28th of April

Trade show
09.30-16.00 ISAA Trade Show Area
09.00-10.00 (Auditorium A) ISAA Meeting

Coffee Break sponsored by Dow
10.00-10.30 ISAA Trade Show Area

General Oral Session: Adjuvants & Sustainability
Speaker presentation in Auditorium A
Session chair: Han Rieffe
10.30-11.10 Keynote - Light and Shadow in the Amazon Rain Forest and Learning for Sustainable Agriculture, Peter Baur, CropPromotion
11.10-11.30 Sophorolipid based biosurfactant as novel adjuvant technology
Lesley Schmid, Evonik
11.30-11.50 Best Practices to Improve Resource Efficiency Using Adjuvants for Bio Pesticides, Caroline Woelfle-Gupta, DOW
11.50-12.10 Sustainable Approaches to Formulation Development at Corteva™ Agriscience, Mei Li, Corteva

Lunch
12.10-14.00 ISAA Trade Show Area

David Stock Award, Wine Yard Tour and Conference Banquet
Starting in Auditorium A
13.30 David Stock Award
14.00-15.30 Conference Activity
15.35 Departs by coaches Vineyard Tour and Wine Tasting
19:00 Conference Banquet at Chateau Giscours. Dressed in smart casual clothes
Friday 29th of April

Trade show
09.30-13.00 ISAA Trade Show Area

General Oral Session: New Applications and Technologies
Speaker presentation in Auditorium A
Session chair: Solito Sumulong
09.00-09.40 Keynote- Technologies used in Agricultural Pesticide Application
Jorgen Audenaert, John Deere
09.40-10.00 Challenges in drone spraying and vantaged Auxiliaries for applicability and Efficiency, Iuri Dario, Clariant
10.00-10.20 Increasing the formulator’s toolbox of Biocides, Ling Qi - ling.qi2@solvay.com
10.20-10.40 Microfibrilated cellulose for structuring of high electrolyte liquid agricultural Solutions, Rebecca Blell, Borregaard

Coffee Break
10.40-11.10 ISAA Trade Show Area

General Oral Session: Formulation and Adjuvant technology
Speaker presentation in Auditorium A
Session chair: Florence Lambert
11.10-11.40 Suspension Concentrate formulation design and performance for low spray volume and UAS spray application, Malcolm Faers, Bayer
11.40-12.00 Formulating living microbes in liquid and solid preparations – study cases as SC and WDG formulations, Bruna Mendonca, Oxiteno
12.00-12.20 Crystal Nucleation Inhibition of Poorly Water-Soluble Actives Using Novel Alkoxylated Polymers, Michael Tate, DOW
12.20-12.40 Spray coverage of novelty anti-drift nozzles and the need for adjuvants Maarten Klein, Green A B.V
12.40-13.00 Final Remarks, David Cameron
Meet us at
ISAA Symposium 2022
BORDEAUX, FRANCE
APRIL 24-29, 2022
BOOTH 14

Innovation & Development
PARTNERING TO OFFER SPECIALTY INGREDIENTS AND FORMULATION EXPERTISE IN:
- Eco-Friendly Co-Formulants
- Organic Farming
- Soil Health
- Precision Farming
- Alternatives to Microplastics

VISIT US BOOTH 14 AND ATTEND OUR ORAL PRESENTATIONS:
- HLD for Surfactant Selection & Emulsion Optimization by Greg Dado, Technical Director
- Polymeric Dispersant Alternatives to Latex Polymers for Seeds by Jennifer Peterson, Senior Formulation Chemist
- Naturally Derived Adjuvants for Drones by Aherkar Shrikant, Lead Scientist Ag

Visit us at
stepan.com/agriculture

GROWING THROUGH SCIENCE
Stepan Agricultural Solutions is cultivating excellence. Our in-house formulation experts and global manufacturing network are dedicated to helping you address your agrochemical needs. We are committed to providing innovative products that have outstanding performance and unique sustainability benefits. We have a broad portfolio of dispersants, green solvents, adjuvants, emulsifiers and specialty blends. The Stepan Agricultural Innovation Center, opened March 2021, demonstrates our commitment to liquid and dry formulation design, strategic partnerships, education and sustainable agriculture. Visit stand 14 to learn more about our latest technologies and R&D efforts for organic farming, biologicals and microplastics alternatives.
Synergen® DRT—always a »drop« ahead

More control and better performance: introducing Synergen® DRT. The first solution to come out of Clariant’s new DropForward™ »flight program« takes precision farming with drones to new heights. The new adjuvant is suitable for ultra-low tank volumes, provides superior control of spray drift, boosts the leaf penetration of active ingredients and much more. Find out more in our lecture:

Friday, 29th April, 9.40 am to 10.00 am, Auditorium A.

Want to learn more?
Scan this code
Gold Sponsors:

Clariant is a focused, sustainable and innovative specialty chemical company based in Muttenz, near Basel/Switzerland. The company reports in three business areas: Care Chemicals, Catalysis and Natural Resources. Clariant’s corporate strategy is led by the overarching purpose of ‘Greater chemistry – between people and planet’ and reflects the importance of connecting customer focus, innovation, sustainability, and people. Clariant recently launched two new concepts in Crop Solutions: DropForward™ with Synergen DRT, the drift control agent and biological activator specifically for drones and ADJUWEX™ for glufosinate formulations. Find out more here: https://www.clariant.com/Agrochemicals

Momentive is a global leader and trusted solutions provider with a 35+ year heritage in organosilicone adjuvants. Through our brands Silwet™, SAG™, and AgroSpred™ we are helping farmers everywhere maximize their performance and their productivity in the field with science-based solutions backed by industry experts, linking custom innovative technology platforms to opportunities for our customers. Let’s talk and, together, shape the future of agriculture – now.

Oxiteno is a leader in the production of surfactants and specialty chemicals in the Americas. The company started its operations in 1973, in São Paulo, and its purpose is to contribute to the well-being of people through chemistry. It invests in research and development to offer innovative solutions in line with its customers’ business objectives. The company is present in eight countries in the Americas, Europe and Asia and has 11 industrial units in Brazil, the United States, Mexico and Uruguay, in addition to five R&D centers and eight commercial offices in Argentina, Belgium, China and Colombia. In Brazil, it has factories in the cities of Suzano (SP), Tremembé (SP), Triunfo (RS) and in the Mauá Petrochemical Complex (SP) and Camaçari Industrial Complex (BA). Since April 2022, it is part of Indorama Ventures.

DE SANGOSSE is an international player in the supply of adjuvants, bio-pesticides, plant nutrition and pest control products.

With a strong presence in Europe, Brazil, Australia, New Zealand and some African countries, De Sangosse is a great regulatory and marketing partner for R&D companies. We create value for our customers by innovating and by offering product solutions with a high level of expertise.

Our mission is to promote a more competitive agriculture, environmentally friendly, safe for users and use less water and energy with a view to addressing food issues, climate risks and environmental challenges.
DE SANGOSSE

EXPERTS IN TANK-MIX ADJUVANTS

- Unique formulations
- Dedicated teams in Europe, Brazil, Australia/New-Zealand
- Partnerships around the world from New Zealand to Finland
- Development and training activities
- Regulatory know-how
**Solvay** is a science company whose technologies bring benefits to many aspects of daily life and whose purpose is to create sustainable shared value for society. As the 40+ years industry leader in the development of formulation technologies for crop protection products, our portfolio contains new lines of green solvents and blends for complex formulations, innovative additives and adjuvants giving formulators a broad selection of powerful ingredients, and ready to use drift-reducing adjuvant for tank mix applications. Our commitment to seed care science is demonstrated by our investment in future technology to develop innovative coatings, treatment solutions and biological formulations.

**Innospec** mission is to help our customers respond to the sustainability challenges with environmentally friendly technology and improved product performance. Our adjuvants, emulsifiers, specialty solvents, wetting and chelating agents are used widely in agrochemical formulations. We develop the technology that optimizes formulations for crop protection, plant nutrition, soil improvers, tank mix adjuvants, wood preservatives, and animal health. These are time tested, high quality components that ensure active ingredients can be formulated in stable products that will spread on, stick to, wet, penetrate and protect in the most efficacious way. Our established brand names include NANSA®, DEHSCOFIX®, EMPILAN®, EMPIPHOS®, EMPIGEN® and the ENVIOMET® range.

**Dow** combines global breadth; asset integration and scale; focused innovation and materials science expertise; leading business positions; and environmental, social and governance (ESG) leadership to achieve profitable growth and deliver a sustainable future. The Company’s ambition is to become the most innovative, customer centric, inclusive and sustainable materials science company in the world. Dow’s portfolio of plastics, industrial intermediates, coatings and silicones businesses delivers a broad range of differentiated, science-based products and solutions for its customers in high-growth market segments, such as packaging, infrastructure, mobility and consumer applications. Dow operates 104 manufacturing sites in 31 countries and employs approximately 35,700 people. Dow delivered sales of approximately $55 billion in 2021. For more information, please visit [www.dow.com](http://www.dow.com) or follow @DowNewsroom on Twitter.

**Nouryon** is a global, specialty chemicals leader. Markets and consumers worldwide rely on our essential solutions to manufacture everyday products, such as personal care, cleaning goods, paints and coatings, agriculture and food, pharmaceuticals, and building products. Furthermore, the dedication of approximately 7,800 employees with a shared commitment to our customers, business growth, safety, sustainability and innovation has resulted in a consistently strong financial performance. We operate in over 80 countries around the world with a portfolio of industry-leading brands.

Partner with us to gain access to a wide range of adjuvants, dispersants, emulsifiers, wetting agents and solvents to help take your crop protection portfolio to the next level.

A LEGACY OF TRUSTED PERFORMANCE SHAPING THE FUTURE OF AGRICULTURE

Adjuvants & Antifoams

GET TO KNOW MORE
VISIT US AT BOOTH #6
BASF’s Industrial Formulators is a leading single component raw material and additive supplier for chemical processing and chemical formulations. By providing sustainable products, we enable our customers to reduce GHG emissions and enable fulfilling the EU Green Deal targets.

Agrochemicals is our focus industry in which we offer a wide range of additives for crop protection formulations and micronutrients. With our strong R&D base, in-depth market, and application expertise we work in close cooperation with our customers aiming at efficient, eco-friendly, and safe-to-use agrochemical solutions. Our broad product portfolio includes solvents, adjuvants, emulsifiers, dispersants, and formulated blends.

CRODA

Croda Crop Protection are leaders in sustainable delivery platforms for the agrochemical industry. We deliver sustainable solutions via green chemistry, sustainable technology platforms and expertise in complex formulation systems.

With our extensive range of formulation aids and adjuvants and unique formulation expertise, we are ideally placed to help our customers get the best performance from their products, enabling farmers to increase yields and improve resilience to pests and diseases.

Sustainable solutions are at the core of our innovation. Across the Croda business, 69% of our raw materials come from bio-based sources and we are the third major chemical company to have a 1.5°C science-based target validated and committed to net zero by 2050.

We are a diverse and global team that connects our unique chemistry with our customers and partners to create value and develop innovative solutions for a better and more sustainable world. Our business is sized for global leadership with large-scale integrated value chains, global footprint and market focus. Our Agro Solutions portfolio of additives is tailored to meet new market trends and regulatory requirements while creating high-performance products for our customers. Our broad range of natural & synthetic alcohols, surfactants, waxes, solvents and intermediates enable performance optimisation and safer application of crop protection, soil and plant nutrition, and tank-mix adjuvant formulations.

Bronze Sponsors:

Elkem Silicones has more than 4 200 employees dedicated to delivering your potential by providing you innovative silicone solutions with a personal touch.

Elkem Silicones, a division of Elkem, is a global leader in fully integrated silicone manufacturing, operating 14 manufacturing sites and 13 Research & Innovation centers worldwide.

Elkem Silicones offers a full range of silicone technologies for diverse specialty markets including silicone solutions in Crop Care for more than 60 years. Our customers are able to benefit from Elkem’s long term commitment to Crop Protection & Crop Nutrition with continuous innovation through our SILCOLAPSE™ & BLUESIL™ brands.
We work side by side with our customers and partners by investing in the development of innovative solutions that meet their challenges and improve the productivity in all fields.

Let’s meet at the 2022 ISAA SYMPOSIUM

April 24 - 29
Bordeaux Congress Centre
Bordeaux - France
Exacto develops innovative technologies that promote agronomic and horticultural operational success. For more than 40 years, Exacto has built up a wealth of knowledge about adjuvant formulations, building blocks, manufacturing, and applications. As a result, we understand the challenges of the ever-changing pesticide and crop attributes, such as new traits, new active ingredients, and new regulations - which require constant innovation to provide the solutions needed to spray with confidence.

Our experienced team of scientists, technical, marketing, operational, and sales professionals deliver successful products and services ranging from private label manufacturing, contract product research, and inert ingredients to emulsifier packages.

About MagrowTec
Established in 2013, MagrowTec is a science-based technology company that is pioneering innovation in precision agriculture spraying technology to produce more and waste less. The company’s vision is to create a more sustainable and efficient food production system that meets global demand, while positively impacting the environment. MagrowTec’s patented, proprietary technology delivers important plant protection products where they matter the most, significantly reducing waste associated with conventional pesticide spray applications. Based in Dublin, Ireland, with offices in the U.S., Canada, Australasia and Europe, MagrowTec is a global leader in promoting sustainability and won the THRIVE | Bayer Sustainability Challenge “Sustainable Scaleup Award” in 2021. For more information, visit www.maggrow.com.

Ingevity delivers bio-based specialty inerts for crop health and crop protection to meet the industry’s challenges. We consistently provide answers to our customers’ needs by combining high-performing products with unsurpassed technical expertise. Ingevity delivers products to meet the agrochemical industry’s biggest challenges and offers a suite of co-formulants including dispersants, adjuvants, solvents, oil for oil dispersions, micronutrient complexing agents and fertilizer coatings. Learn more at www.ingevity.com.
Sustainable & Innovative Solutions for Safer and More Productive Agriculture

- An Innovation Powerhouse in Crop Protection Formulations
- Pioneer in Ready-to-Use Drift Reducing Adjuvants
- Leader in High Performance Green Solvents
- Expertise in Biological Pest Control Formulations
- Development of Ready-to-Use Formulations for Tank Mix, Seed Care & Fertilizer Protection

Learn more at solvay.com
Since 1995, **Adjuvants Unlimited** has been developing and producing state-of-the-art tank mix adjuvants, surfactant blends, and inert ingredient systems for the post-patent pesticide market. We work together with customers to create dynamic chemistry solutions which lead to positive agricultural outcomes for both our partners and the environment. We strive to make life easier for our customers by providing value through the art of formulation chemistry. Learn more at [adjuvantsunlimited.com](http://www.adjuvantsunlimited.com).

**Ascend Performance Materials** is a global, fully integrated producer of high-performance and durable materials. Our portfolio includes unique chemistries that fuel innovation in battery technology, coatings, agriculture and healthcare. We are focused on improving the quality of life today and inspiring a better tomorrow through innovation.

**Borregaard** operates one of the world’s most advanced and sustainable biorefineries. As a world leader for lignin-based biopolymers and cellulose fibrils, we take great pride in offering the crop protection and the fertilizer industries environmentally friendly alternatives to oil- and synthetic-based chemicals. Our wide range of high-performance ingredients and dispersants can greatly help to produce and stabilize high quality dry and water-based formulations. Our biopolymers contribute to longer shelf-life, high active ingredients loading, excellent suspensibility and better efficacy in the final formulation, as well as improving your environmental footprint. Our cellulose fibrils are a problem solver for crop protection, biocontrol, plant nutrition and seed treatments and coatings.

**IMCD** is a global market leader in the sales, marketing, and distribution of speciality chemicals and ingredients. Its result-driven employees provide market-focused solutions to suppliers and customers across EMEA, Asia-Pacific and Americas. IMCD partners with industry-leading suppliers that offer unique and innovative products into the agrochemical market. IMCD’s vast portfolio contains a complete range of inerts, seed coatings, polymers and bio-stimulants that allow for formulation of agrochemical products supporting modern, sustainable, integrated farming methods. IMCD’s portfolio of products help to achieve more targeted and ‘smart’ pesticide delivery, but also allow for replacement of non-biodegradable or hazardous inerts, in both plant nutrition and crop protection products.

**Oxford Lasers Ltd.**
As one of the most successful spin offs from Oxford University in 1977, Oxford Lasers have been at the forefront of laser technology for over 40 years.

Oxford Lasers Imaging Division offer laser systems, contract services, system rentals, R&D and technical support for: High speed imaging, using high speed cameras, lasers and software to offer complete imaging solutions.

Oxford Lasers have significant experience within the field of spray characterisation, providing information on droplet size, droplet velocity and droplet shape. The VisiSize instrument range provides a range of capability to suit the different measurement challenges present in the field.
As a global supplier of specialty chemicals to the agrochemical market, we provide and develop the additives that optimize crop protection, tank mix adjuvant, and plant nutrition formulations.

Our mission is to help our customers respond to the sustainability challenges with environmental friendly technology and improved product performance.

Innovative solutions for crop protection

Nouryon is one of the world’s leading specialty chemical manufacturers. Throughout the world, we provide innovative surface chemistry technologies for crop protection. We serve formulators and active ingredient producers with solutions that are environmentally safe, biodegradable and cost effective.

Based on our word-class nitrile technology, we develop, produce and supply amines, polymers, ethoxylates and sulphonates. We believe that partnering with our customers combined with a deep understanding of our chemistries are key parameters in delivering superior products.

Meeting your needs is our top priority.

Find out more at nouryon.com
Solutions for Agrochemical Formulations

Sasol Chemicals

Sasol offers high quality products for Agrochemical Formulations:

- Emulsifiers
- Wetting agents
- Adjuvants
- Solvents
- Compatibilizers

Our broad product portfolio includes:

- Linear and branched alcohols from C6-C24+
- Alcohol alkoxylates
- Ether sulfates
- Paraffinic oils
- Ethanolamines

Tween™ 24

Sustainable, carbon reducing, adjuvant, built on existing Tween 20 technology.

As a general purpose adjuvant, Tween 24 is recommended for systemic active ingredients, providing superior penetration and humectancy properties resulting in enhanced efficacy.

Part of ECO range
- 100% bio-based
- 100% renewable

Tween 24 reduces greenhouse gas emissions in end use application validated by Avieco

- ‘Clean label’ surfactant
- CAS match to Tween 20

www.crodacropcare.com

Smart science to improve lives™
<table>
<thead>
<tr>
<th>Booth #</th>
<th>COMPANY</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Croda</td>
</tr>
<tr>
<td>2</td>
<td>Oxiteno</td>
</tr>
<tr>
<td>4</td>
<td>Exacto</td>
</tr>
<tr>
<td>5</td>
<td>Ingevity</td>
</tr>
<tr>
<td>6</td>
<td>Momentive</td>
</tr>
<tr>
<td>7</td>
<td>Innospec</td>
</tr>
<tr>
<td>8</td>
<td>Solvay</td>
</tr>
<tr>
<td>10</td>
<td>Elkem Silicones</td>
</tr>
<tr>
<td>11</td>
<td>Nouryon</td>
</tr>
<tr>
<td>12</td>
<td>Clariant</td>
</tr>
<tr>
<td>14</td>
<td>Stepan</td>
</tr>
<tr>
<td>15</td>
<td>De Sangosse</td>
</tr>
<tr>
<td>16</td>
<td>Sasol</td>
</tr>
<tr>
<td>17</td>
<td>ISAA</td>
</tr>
</tbody>
</table>