

Chemical Week

Year in review

Trends that have shaped
the sector in 2020



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Oxitenno's Crop Solutions division believes that sustainability is the driver for innovation in a changing world

Crop Solutions, Oxitenno's Agrochemicals division, is focused on developing sustainable solutions to feed the world, reducing environmental and social impacts with the efficient use of natural resources.

Oxitenno is one of the world's leading surfactant companies, headquartered in Sao Paulo, Brazil. It has a global reach and is focused on developing new molecules and technologies to serve demands and major trends in the markets it operates in.

Oxitenno's Crop Solutions division has more than 40 years of experience in the agrochemical market. It develops custom solutions for the industry which, until five years ago, focused on helping customers develop more robust pesticides and adjuvant tank mix

solutions to increase yield for active ingredients, or helping develop adjuvants that would support compatibility for different products.

However, the world now needs better solutions not only in terms of efficiency, but in products that have a better ecotoxicological profile, using resources efficiently - such as reduced water and energy consumption, with fewer emissions. Agro 4.0 provides the technology and innovation to make the agrochemical industry sustainable, using precision agriculture aided by drones, satellites, novel nozzles, and fewer chemical products in the field.



A new world, a new focus on developments



Crop Solutions has defined four major innovation platforms based on its in-depth knowledge of market needs and trends.

The **Crop Protection** platform is focused on developing solutions to enable active ingredients to meet their targets.

The **Adjuvant Tank Mix** platform enhances bioefficacy in applications.

The **Biosolutions** platform uses technologies that unlock the potential of biological products to tackle pests and disease in crops, and the use of bio stimulants in crops. Biologicals are gaining scale as a sustainable solution in agriculture, and Oxitenno will deliver solutions to enhance formulation stability, features, and performance in the field of microorganisms through chemistry.

The **Crop Enhancement** platform enhances soil and plant health through special surfactant-based solutions. Some examples are soil adjuvants, formulants and adjuvants for fertilizers, and biostimulants that boost plant resistance to abiotic stress.



Promoting Sustainable and Innovative Development

The answers to society's challenges involve chemistry as a provider of innovative and sustainable solutions.

Oxiteno believes that it is possible to balance social, environmental, and economic pillars, contributing to people's wellbeing through chemistry and it has developed a Strategic Sustainable Plan.

This plan is based on eight pillars, which are the critical to Oxiteno's businesses throughout its production value chain and end customers. Each one of these pillars has its own ambitions and goals for 2030. The Product Portfolio pillar is where Oxiteno's market segments have developed their own positioning for the industry they are focused, and Crop Solutions identified three Key Enablers, described below:



Delivering food for the world

Oxiteno is focused on improving crop yields and nutrient availability through new technologies, using fewer natural resources (water and land). In one of its research lines, scientists explore surfactant-based technologies that enhance water retention in soil and trigger resistance mechanisms in plants against abiotic stress. This leads to the use of less water to produce the same amount of fruit in harsh environments, such as sandy soil in regions with extended dry seasons. In another line of research, our R&D



Reduced Environmental and Social Impact

The innovation roadmap develops custom solutions with improved ecotoxicological and phytotoxicity profiles that contribute to biodiversity and human health. To achieve these goals, lifecycle assessment is applied to all the innovation projects with this target for sustainable solutions. This tool helps measure the impacts and benefits of Oxiteno's solutions both qualitatively and quantitatively.

Sustainable and responsible raw material suppliers focused on improving the whole value chain in terms of social impact for are priorities.



Efficient use of resources in the field

The last pillar helps reduce the impact of an application by improving compatibility and active ingredient efficacy.

It reduces packaging and waste by developing smart formulations with lower dosages of concentrated solutions.

Oxiteno believes it must evaluate its portfolio and address whatever needs to be done to get to the next level in sustainability. The company is, therefore, engaged in ongoing portfolio assessment, based on the World Business Council for Sustainability framework to mitigate impacts, improving production and taking the next steps on the innovation roadmap.

These Key Enablers and Portfolio Assessment are the foundation of a new and better sustainable solution for the agrochemical industry.

For Oxiteno, sustainability is a strategic pillar that continually improves our business and provides a social legacy for the world.