

News Release

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BASF strengthens innovation pipeline for sustainable agriculture

- **Farmers, environment and society to benefit from continuous research and development**
- **Seeds, crop protection products and digital services for ever more sustainable agricultural solutions**
- **Projected peak sales potential of more than €7.5 billion confirmed**

BASF strengthens its activities in research and development (R&D) for sustainable agricultural innovations, helping farmers to overcome environmental and economic challenges as well as meeting consumers' demand for more sustainably produced food. With solutions launching throughout the next decade, the pipeline supports the company's aim to annually increase its sales share of [agricultural solutions with substantial contribution to sustainability by 7%](#). By 2030, more than 30 major R&D projects will complement BASF's connected offer of seeds and seed treatment products, chemical and biological solutions, as well as digital services. This brings the pipeline to an estimated peak sales potential of more than €7.5 billion. In 2020, BASF spent €840 million in R&D in the Agricultural Solutions segment; representing around 11% of the segment's sales. In 2021, the company will continue to invest in R&D of agricultural innovations at a high level.

“BASF leads in solutions for sustainable agriculture. In addition to developing innovations, we also provide a connected offer, combining effective products as well as new technologies and services, tailored to customers' needs and their different crop systems around the world,” said Vincent Gros, President of BASF's Agricultural Solutions division. BASF has committed to [ambitious sustainability targets for its](#)

[agriculture business by 2030](#): Besides increasing the annual sales share of sustainable agricultural solutions, farmers will be supported in reducing their CO₂ emissions by 30% per ton of crop produced. Further, the company strives to apply digital technologies on more than 400 million hectares of farmland cumulatively by 2030, while continuing to ensure the safe use of its products. BASF remains committed to developing solutions that drive the transformation of the agricultural food system for the better. “Sustainability is engrained in our entire R&D process. It leads the way in how we develop our innovations, which support farmers produce more and better while preserving natural resources,” Gros emphasized.

Connected offer for productive and environmentally friendly farming

By 2050, farmers will have to feed an estimated 9.7 billion people, requiring an increase in productivity of 50%. Digitalization has the potential to make an important contribution to this. The company is therefore advancing its digital technologies together with other innovations across its whole portfolio. This combination allows farmers to achieve better yield on existing arable land, while supporting biodiversity preservation.

In November 2020, [BASF and Bosch signed a joint venture agreement](#) to globally market and sell smart farming solutions from a single source in the future. Through the joint venture, which is subject to the approval of the relevant antitrust authorities, the companies plan to launch the [Smart Spraying solution](#) this year. The new technology recognizes weeds and allows a precise application of herbicides, which maximizes productive land-use and reduces the environmental impact by lowering the volume of herbicides applied. In addition, the new outcome-based business model xarvio® HEALTHY FIELDS provides farmers a tailored, optimized field- and season-specific crop protection strategy, enabling them to achieve agreed yield forecasts. This way, the company answers modern farming challenges, requirements by society and political action plans, contributing to more sustainable farming. BASF’s connected offer further extends the development of herbicide-tolerant traits and chemical crop protection tailored to these traits. Combined with solutions to control weeds before they emerge, these enable no-till farming, which leads to less CO₂ released from the soil, reduces soil erosion and promotes humus buildup.

Meeting growing demand for sustainably produced food

To continuously steer the product portfolio towards even more sustainable solutions, BASF applies the [Sustainable Solution Steering](#) method, which is unique in the industry and third-party audited, in the early stages of research and development. “The R&D approach to agricultural solutions has fundamentally changed in the past two decades. We are successfully driving sustainable innovations by focusing equally on the future needs of farmers, society, and the environment,” said Peter Eckes, President Bioscience Research at BASF.

The company’s advanced insecticides portfolio is one example of successful Sustainable Solution Steering. It offers solutions that increase agricultural productivity and reduce environmental impact, creating added value for society. Axalion™ active ingredient developed by BASF, pending regulatory approval, is the company’s latest insecticide innovation in this context. With its novel mode of action, it helps farmers safeguard their yield without negatively impacting soil and water organisms or birds. When applied according to the respective label instructions, Axalion based products will not impact beneficial insects. The new compound is also an essential tool in preventing insecticide resistance. Other examples from the company’s portfolio include recently launched, regionally tailored products based on Inscalis® for North and South America and Asia as well as first registrations globally of Broflanilide in South America and Asia.

New seed varieties from BASF help farmers produce enough healthy and affordable food in an environmentally friendly way. For example, the company’s latest spinach seeds varieties are resistant to downy mildew, one of the most destructive fungal diseases. They prevent complete crop loss, cover all growing seasons and have a significant market share in fresh organic spinach. These features offer added value for growers, processors, retailers and consumers. BASF also invests in research on indoor growing systems, such as growing lettuce in hydroponic systems. These require less land, save water compared to traditional open-field cultivation and reduce the need for conventional crop protection. The indoor technology allows lettuce to be grown regardless of geographic location, so it can be produced closer to the consumer. This avoids long transport distances and reduces the associated emissions.

To find out more about BASF’s innovation pipeline in agriculture, please visit our

innovation website www.AgInnovation.basf.com.

Sustainable Solution Steering

BASF has developed the Sustainable Solution Steering method to enhance the sustainability of its portfolio. This voluntary assessment is unique in the chemical industry and independently audited by third parties. By the end of the 2020 business year, the company has conducted sustainability analyses and assessments for 98.4% of its relevant portfolio of more than 57,000 specific product applications. The transparent classification of products enables BASF to systematically improve them and make its whole portfolio more sustainable. Products that make a substantial contribution to sustainability in the value chain are Accelerators, which will amount to €22 billion in BASF Group sales by 2025. BASF's Agricultural Solutions division also transparently assesses its entire product portfolio against clearly defined sustainability criteria. By integrating industry leading and third-party audited sustainability criteria at an early stage of its R&D process, the division continuously steers research and development towards an ever more sustainable portfolio. More information on BASF's Sustainable Solution Steering can be found [here](#).

About BASF's Agricultural Solutions division

With a rapidly growing population, the world is increasingly dependent on our ability to develop and maintain sustainable agriculture and healthy environments. Working with farmers, agricultural professionals, pest management experts and others, it is our role to help make this possible. That's why we invest in a strong R&D pipeline and broad portfolio, including seeds and traits, chemical and biological crop protection, soil management, plant health, pest control and digital farming. With expert teams in the lab, field, office and in production, we connect innovative thinking and down-to-earth action to create real world ideas that work – for farmers, society and the planet. In 2020, our division generated sales of €7.7 billion. For more information, please visit www.agriculture.basf.com or any of our social media channels.

About BASF

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. More than 110,000 employees in the BASF Group contribute to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into six segments: Chemicals, Materials, Industrial Solutions, Surface Technologies, Nutrition & Care and Agricultural Solutions. BASF generated sales of €59 billion in 2020. BASF shares are traded on the stock exchange in Frankfurt (BAS) and as American Depositary Receipts (BASFY) in the U.S. Further information at www.basf.com.