



Joint News Release

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BASF and arc-net collaborate to use blockchain technology for livestock sustainability

FLORHAM PARK, NEW JERSEY, and BELFAST, NORTHERN IRELAND, April 17, 2018 – BASF Corporation and arc-net, are collaborating to use blockchain technology to capture and analyze sustainability parameters in livestock production along the value chain. arc-net is a technology company utilizing blockchain technology to provide transparency in the agrifood industry. As part of this collaboration, BASF will use its tailored calculation tool, AgBalanceTM Livestock to provide science-based information on environmental impacts along the animal production value chain.

With global pressure to reduce emissions from the agricultural and livestock sectors, consumers and regulators worldwide are becoming more focused on setting defined sustainability criteria. BASF and arc-net are collaborating to support the animal production value chain in meeting these demands. BASF's calculation tool AgBalance Livestock considers the life cycle impact of all inputs and outputs of animal protein production, i.e. from feedstuffs and feed production, to animal farming and manure management, to the slaughter. By combining this tool with arc-net's blockchain technology, valuable sustainability information and verifiable data on provenance of meat, milk and egg can be generated.

The preliminary phase of the pilot project will focus on collecting data for evaluating sustainability measures within a controlled setting at the farm level. In parallel, automated farm-level data capture and environmental output calculation will be combined via blockchain technology. This information will provide environmental footprint along with full transparency and traceability along the entire value chain. In the future, this project will enable consumers

to make informed choices about the meat they eat via an on-pack unique scannable code, providing information on the product's provenance and environmental footprint.

"Venturing into this collaboration with arc-net is a key milestone in our efforts to enable our customers to grow sustainably," said Alexa Beaver, Digital Innovation, BASF. "We never stop thinking about what more we can do to create valuable sustainable measures, and this project is a great step forward."

"The pilot aims to show how this application of the arc-net Blockchain and AgBalance Livestock tool can support a connected community to increase collaboration and provide valuable insights on how environmental impacts can be mitigated across the livestock sector," said Kieran Kelly, CEO of arc-net. "Working with BASF to promote sustainability and innovation to deliver better outcomes is extremely exciting and arc-net is looking forward to helping BASF and its customers achieve their goals and objectives worldwide."

About BASF

BASF Corporation, headquartered in Florham Park, New Jersey, is the North American affiliate of BASF SE, Ludwigshafen, Germany. BASF has nearly 17,500 employees in North America, and had sales of \$16.2 billion in 2016. For more information about BASF's North American operations, visit www.basf.com.

At BASF, we create chemistry for a sustainable future. We combine economic success with environmental protection and social responsibility. The more than 115,000 employees in the BASF Group work on contributing to the success of our customers in nearly all sectors and almost every country in the world. Our portfolio is organized into five segments: Chemicals, Performance Products, Functional Materials & Solutions, Agricultural Solutions and Oil & Gas. BASF generated sales of €64.5 billion in 2017. BASF shares are traded on the stock exchanges in Frankfurt (BAS), London (BFA) and Zurich (BAS). Further information at www.basf.com.

About arc-net

arc-net are a technology company head quartered in Belfast, Northern Ireland. Focusing on the use of blockchain technology, arc-net works with industry stakeholders to help leverage value from transparency and traceability in their supply systems and networks. arc-net believe that industry stakeholders, as well as consumers, have a right and need to understand where their product comes from, while helping companies assess risks, quality and the value of the information provided via a transparent blockchain solution.