## "Enhancing Collaboration Quotient in Crop Protection Research and Education—Mutli-Disciplinary Cross-Learning"

Mr. Mayank Singhal, Managing Director & Vice Chairman PI Industries Ltd.

"After a decade of consolidation with focus on top market players, global crop protection research is undergoing a paradigm transition by integrating new cutting-edge technologies originating from established and new research organizations. Both development & distribution organizations are working together to make these innovations available to the global farming community.

For this, excellent crop protection products are demanded, creating value to famers and the society, with superior biological performance and at the same time very high product safety profiles.

However, the enormous constraints researchers are exposed to, require the discovery and development of innovative solutions in the shortest possible time frame, while embracing ESG objectives as the new norm across the whole industry.

Today, fully integrated R&D companies are addressing the whole plethora of agrochemistry, biologicals and plant health products, organic farming, seeds & traits, new application technologies, digital farming, improved diagnostics, AI and ML based approaches. However, there is still strong need for further innovations from a wide range of sources.

Targeted collaboration across various market players is key to combine required activities. This mandates a high level of discipline to frame the proprietary and knowledge environment across the industry.

Furthermore, the cooperation of industry and academia will enable a further push for innovation in the crop protection landscape. Examples are given on how collaborations need to be framed within the industry as well as within the public sector".