Memorandum of Understanding (MoU) was signed between ICAR- Indian Agricultural Research Institute and the Steel Industries of India

On 6th July 2021, a Memorandum of Understanding (MoU) was signed between ICAR- Indian Agricultural Research Institute and Steel Industries of India represented by Tata Steel Limited, JSW Steel Limited and Steel Authority of India Limited (SAIL), under the guidance of the Ministry of Steel to facilitate research on a project "Development of Steel Slag Based Cost Effective Eco-Friendly Fertilizers for Sustainable Agriculture and Inclusive Growth", jointly funded by the Steel Industry partners and the Ministry of Steel. The signing ceremony organized was organized at the Conference Hall of Prof M S Swaminathan Library. The delegation comprising of MrsRasikaChoube, Additional Secretary, Ministry of Steel, MrParmjeet Singh, Industrial Advisor, Ministry of Steel, DrMukesh Kumar, Director, Steel Research and Technology Mission of India, Mr S K Das, Executive Director, SAIL, MrGajendraPratap Singh, Vice President and Head-Corporate and Regulatory Affair, JSW Steel Limited, MrSateesh Singh, Chief Resident Executive, Tata Steel Limited and their team members joined for signing the MoU. During the ceremony, Dr A K Singh, Director, ICAR-IARI, briefed about the lead technologies developed by ICAR- IARI and highlighted the vital contribution made by IARI for the progress of Indian agriculture. Dr Singh mentioned that this project is an excellent beginning in terms of public-private partnership. The innovative research outcomes of this project will help reduce the cost of fertilizer, thus reducing the cost of production and that to succeed in this innovative venture, we need to work with a scientific approach to solve the problem systematically. MrParmjeet Singh, Industrial Advisor, Ministry of Steel, talked about the genesis of the proposal and importance of the steel slag as a source of mineral nutrients. He also mentioned about the initiatives and successes in research in this area at the global level.

Through this MoU, the major Steel Industries of the Country and the Ministry of Steel joined hands with the ICAR-IARI to launch the project on "Development of steel slag based cost-effective eco-friendly, fertilizer for sustainable agriculture and inclusive growth". The project aims to produce low-cost fertilizers from the steel slag, a by-product of steel manufacturing.A multidisciplinary and multi-institutional team of ICAR-IARI will work on this project under the leadership of Dr Bhupinder Singh, Head, Centre for Environment Science and Climate Resilient Agriculture. Dr Bhupinder Singh, PI, made a brief presentation on the project's inception and work plan. According to him transformation of slag into fertilizer is acommercially viable, innovative and eco-friendly technology and that this green technology will be beneficial for both the steel and agriculture sector. MrsRasikaChoube, thanked all the Industrial partners and the ICAR-IARI scientists for this innovative project. Such projects are for the benefit of society at large as we are converting waste into a useful product while preserving the environment. Nevertheless, she also emphasized that detailed phytotoxicity and risk assessment studies need to be conducted before making the final recommendation.

At the end of the meeting the Director, IARI made concluding remarks. Dr Singh thanked the delegates for giving this opportunity to ICAR-IARI. He added that the project puts forward a big challenge and a responsibility on the shoulders of the involved scientists to come out with significant findings, and that they must give their best to succeed in this task.Steel slag research will be able to find good progress in agriculture. The presence of heavy metals in steel slag has to considered carefully during the research, and we have to also think about the build-up of heavy metals in soil

over a long term use of slag, he added. At the end of ceremony Dr Pramod Kumar presented a vote of thanks.