## ICAR 2023 – Summary and main conclusions of the round table "On data ownership and data sharing"

During ICAR 2023 a round table was organised to discuss data ownership and data sharing. It was moderated by Fernando Estellés and Reinhard Reents, two reputed professionals from academia and industry. The invited members of the round table included representatives from all stakeholders engaged in agricultural data including research institutions, industry, and farmers. More than 80 participants actively engaged in discussions regarding data utilization, barriers to data sharing, expectations from farmers, and considerations of standardization and interoperability. The main takehome messages from the round table are summarised.

It is important to recognise the farmer as the rightful owner of the data generated in their farms. To provide clarity on ownership, there is a collective call for formal agreements between farmers (as data originators) and the entities responsible for data collection. It is also necessary to establish a comprehensive code of conduct for the sharing of agricultural data.

In terms of data utilization, it is imperative to inform farmers about the broader potential uses of data, especially when applied to commercial farms. This broader application aims to enhance the understanding of end-user needs within the agricultural sector. The expectations from farmers concerning data usage are currently at the forefront of the discussion. Emphasis should be on the need for data to be profitable for farmers, and there is an ongoing dialogue about achieving clarity regarding the type of data (raw or processed) being referred to in these discussions. Companies emphasized the relevant economic investments made by them to transform row data in a useful tool for farmers.

Participants identified some barriers to data sharing. Namely, there is an acknowledgement of limited awareness surrounding the existing code of conduct. Additionally, considerations are being made for national guidelines and the ownership of data insights and the progresses made by companies on data analysis and algorithm development. The importance of data security is underscored, and suggestions for implementing data hubs to ensure secure storage are and should be actively explored.

Several queries arose from the audience inquiring about the use and control of data generated in farms. Clarifications from experts were provided, affirming that farmers must give consent for any use of their data. Challenges related to data flow are currently being addressed, with an emphasis on establishing reciprocal benefits and fostering a win-win situation for both companies and farmers. Suggestions for data anonymization and considerations about farmers' understanding of agreements are actively being discussed. There is an ongoing exploration of the possibility of allowing farmers to opt-out of sharing data for algorithm improvement.

For effective data sharing, standardization and interoperability were identified as a crucial aspect. Participants favour collaboration over mandatory standardization and efforts should be made towards data interoperability to facilitate seamless collaboration among various stakeholders.

Steps to enhance data sharing are currently under consideration, including the formation of data unions or cooperatives. Participants are emphasizing the importance of data integration and standardization processes to facilitate collaboration effectively.

A paradigm shift is evident in the perception of data, transitioning from capital to a public good. Suggestions are being considered for agreements between companies, farmers, farmer's organizations and researchers to address societal needs such as animal welfare, environmental impact, and food security.

The meeting evidenced the need for follow-up discussions involving relevant stakeholders to progress on the issues addressed. This follow-up aims to build upon the current dialogue and address the multifaceted issues raised during the meeting, fostering continued collaboration in the dynamic landscape of agricultural data.

In conclusion, stakeholders are exploring collaborative approaches to enhance data sharing while acknowledging the challenges and complexities inherent in the agricultural sector. This round table sought to foster a shared understanding among diverse stakeholders and lay the foundation for continued collaboration in agricultural data management.