

## FOREWORD

Brazilian agribusiness is one of the most competitive in the world. According to the Confederation of Agriculture and Livestock of Brazil (CNA), it currently accounts for more than one fifth of our GDP and about 43% of the country's exports. At the same time, we are living in a period of great technological transformation, called by many the Fourth Industrial Revolution and characterised by the convergence of various digital enabling technologies, such as the internet, which allows for connectivity between sensors and increasingly cheaper equipment, the robotisation of production, cloud computing, and the use of artificial intelligence with its ability to process an ever greater volume of data, as well as biotechnology, nanotechnology and advanced materials, among others.

Brazil has seen the gradual intersection of these two worlds, with the development of processes, products, solutions and platforms that incorporate Industry 4.0 technologies into domestic agroindustry. There is great potential for increasing productivity, reducing costs, improving the use of inputs, and a more rational use of our natural resources. Examples of the use of these technologies range from the georeferenced precision of the application of fertilisers and inputs of the required quality and quantity using data collected in real time in the field, to the virtualisation and automation of the plants that produce the agricultural goods.

If it depends on the Brazilian entrepreneur, we shall take great strides towards Agro 4.0. This year, 2020, the Funding Authority for Studies and Projects - Finep, the Brazilian innovation agency, linked to the Ministry of Science, Technology and Innovations, announced subsidies for Industry 4.0 technologies to the total amount of BRL 50 million from the Scientific and Technological Development National Fund - FNDCT. What we saw was a record demand. There were more than 1,190 proposals, of which 279 were specifically for use in agribusiness. More than BRL 1.7 billion in resources were requested, including BRL 428 million to be used for Agro 4.0, with the significant participation of micro and small companies.

There are, therefore, many Brazilian companies and entrepreneurs able and willing to contribute to the agricultural technological revolution that we need to promote in order to overcome the challenges of the 21st century, namely, demographic pressure and a greater demand for food, the scarcity of natural resources, and climate change.

The article written by the coordinators of this call at Finep details the profile of this demand, and includes reflections on the application of Industry 4.0 technologies to Brazilian agribusiness. I congratulate the authors for their initiative in sharing their knowledge of the topic, which will certainly be of use to readers.

Enjoy your reading!

**General Waldemar Barroso Magno Neto** - President of Finep