

Trends, challenges and opportunities of Digital Agriculture in Brazil

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Abstract: Brazilian agriculture is undergoing major technological, economic, and socio-environmental transformations. The projected increase in world population to 9 billion people by 2050 will require an increase in food, fiber, and energy production, imposing improvements in agricultural productivity, reduction in production costs and sustainable use of natural resources. This short paper presents some results of a survey carried out with Brazilian farmers, companies and service providers about the digital technologies in use, as well as current and future applications, perceived benefits, and challenges. The questionnaire was prepared, organized, and made available to the public through the online platform was available in 2020. The results indicate that 84% of the interviewed farmers use at least one digital technology in their production system that differs according to technological

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complexity level. The main perceived benefit refers to the perception of increased productivity and the main challenges are the acquisition costs of machines, equipment, software, and connectivity. In this context, in order for Brazil to guarantee and maintain its productive capacity, it is essential to consider the digital transformation process, especially for small and medium-sized rural producers.

Keywords: Agriculture 4.0. Digital Technology. Rural Development.