

Impact of Digital Organization on Agricultural land: A Geographical

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Abstract

Digital technologies are increasingly transforming the organization, management, and utilization of agricultural land, creating significant changes in rural landscapes and agricultural geography. This study examines the geographical impact of digital organization on agricultural land, with particular emphasis on the role of digital mapping, Geographic Information Systems (GIS), remote sensing, satellite imagery, GPS, agricultural databases, and precision farming technologies. Digital tools enable farmers, planners, and policymakers to collect, analyse, and visualize spatial information related to soil characteristics, land use, crop patterns, irrigation, weather conditions, and agricultural productivity. Such technologies can support more efficient land-use planning, resource allocation, crop monitoring, and identification of areas vulnerable to drought, soil degradation, flooding, and other environmental risks. Precision agriculture can further facilitate site-specific application of water, fertilizers, and pesticides, potentially improve resource efficiency and reduce unnecessary environmental impacts. From a geographical perspective, digital organization also contributes to the creation of detailed spatial databases and improves understanding of changing agricultural landscapes. However, the benefits of digital agriculture are not distributed equally. Differences in digital literacy, internet connectivity, access to technology, financial capacity, and institutional support may create disparities between regions and farming communities. The study therefore emphasizes the need to combine digital innovation with local geographical knowledge and inclusive agricultural policies. Effective integration of digital technologies can contribute to sustainable land management, improved agricultural decision-making, and better understanding of spatial patterns and processes shaping contemporary agricultural landscapes.

Keywords: Digital Organization, Agricultural Land, Agricultural Geography, GIS, Remote Sensing, Precision Agriculture, Digital Agriculture, Land Use, Spatial Analysis, Sustainable Agriculture.

