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GEOGRAPHICAL INFORMATION SYSTEMS 360 FOR AGRICULTURE

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Abstract: The agricultural industry is undergoing a transformative shift, recognizing the indispensable role of Geographic Information Systems (GIS) in optimizing farming operations. The demand for accurate GIS data and tools has escalated, driven by the imperative to enhance resource management, ensure sustainability, and elevate overall data quality. However, the absence of a cost-effective, integrated GIS solution tailored to agricultural needs remains a significant challenge. This paper delves into the prevailing issues stemming from the lack of GIS systems in agriculture and proposes GIS 360 as a comprehensive solution to empower farmers with real-time insights and streamlined data management.

I. INTRODUCTION

The agricultural industry is undergoing a transformative shift, recognizing the indispensable role of Geographic Information Systems (GIS) in optimizing farming operations. The demand for accurate GIS data and tools has escalated, driven by the imperative to enhance resource management, ensure sustainability, and elevate overall data quality. However, the absence of a cost-effective, integrated GIS solution tailored to agricultural needs remains a significant challenge. This paper delves into the prevailing issues stemming from the lack of GIS systems in agriculture and proposes GIS 360 as a comprehensive solution to empower farmers with real-time insights and streamlined data management.

II. UNDERSTANDING THE PROBLEM:

In the realm of agriculture, the absence of a robust GIS strategy poses multifaceted challenges. Without a cohesive GIS framework, farmers are at risk of operating in the dark, lacking vital insights into land suitability, optimal crop selection, and seasonal variations. Moreover, the inability to harness GIS capabilities hampers the analysis of vast datasets generated by sensors, hindering informed decision-making processes. Consequently, the absence of GIS impedes efficient resource utilization and may lead to suboptimal crop cultivation, resulting in wastage and reduced yields.

III. PROPOSED SOLUTION:

GIS 360 emerges as a transformative solution tailored to address the intricate needs of modern agriculture. By leveraging real-time data captured from the field, GIS 360 offers farmers a comprehensive suite of tools and insights. From land suitability assessments to crop selection recommendations, and weather forecasting, GIS 360 equips farmers with the knowledge needed to optimize their operations and enhance productivity. Furthermore, the platform facilitates historical analysis, empowering farmers to glean valuable insights from past plantations and refine their cultivation strategies.

IV. REALIZING THE IMPACT:

The adoption of GIS 360 heralds a paradigm shift in agricultural practices, empowering farmers to make data-driven decisions with confidence. By streamlining access to critical information regarding land, weather, and crop suitability, GIS 360 enables farmers to enhance resource allocation and minimize risks. Moreover, the platform fosters sustainability by promoting the cultivation of crops aligned with market demand and environmental considerations. As a result, farmers leveraging GIS 360 experience improved efficiency, reduced waste, and heightened profitability, underscoring the transformative potential of GIS in agriculture.

V. CONCLUSION:

In conclusion, GIS 360 represents a pivotal advancement in the agricultural landscape, bridging the gap between technology and farming practices. By harnessing the power of GIS, farmers can embark on a journey towards sustainable, data-driven agriculture, poised to meet the challenges of tomorrow. As the agricultural sector continues to evolve, GIS 360 stands as a beacon of innovation, empowering farmers with the tools and insights needed to thrive in an ever-changing world.

