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Farmers: Urgent Call to Action

Use Regenerative Software to Reduce Greenhouse Emissions

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Introduction

Why is transitioning to regenerative farming important?

Per experts, the global food system produces about 25% of greenhouse gases[1].

Conventional agricultural practices have led to poor soil health and increase release of greenhouses gases. Regenerative farming has been proven to decrease these emissions by trapping carbon in the soil and improving soil health for productivity. Per study by PepsiCo in Reuters, study showed 27% decrease in greenhouse emissions.[2] For global well-being and food sustainability, the transition to regenerative farming is a necessity.

There are several interrelated processes involved in this type of farming. (refer to chart)

Many farmers are reluctant to transition to regenerative farming due to initial cost, complex processes, and lack of confidence in digital software applications.

This article reviews regenerative farming process and benefit of digitalization.

[interrelated image of complexity][i]

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Farming comparison

Conventional farming uses chemicals, genetically modified organisms, and tillage. These practices have a negative impact on the environment, such as water pollution, chemical leaching, land degradation, and increase of gas emissions. By contrast, regenerative farming improves soil health with no tillage and no chemicals. The benefits of regenerative farming have been studied and evaluated by the USDA, and other professional agencies. Results prove this farming practice improves global well-being through sequestering carbon into the soil. Sophisticated digital software applications make the planning, managing, and transition more efficient. Per USDA report 2023, only 27% of farms and ranches are utilizing digital agriculture.[3] Barriers for this transition, identified by United States Government Accountability Office (GAO) from their January 2024 [4] report to Congress, shows:

- cost
- complexity of process
- privacy and security of information

are top issues in moving toward regenerative farming with digitalization.

[map of US showing percentage of precision agriculture][5]

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Cost

The initial cost is significant; the investment of new farm equipment, seed, fertilizer, and digital software can be overwhelming. Processes needed to increase soil health include lowering the number of pesticides in the soil, growing ground cover crops to promote deep healthy roots, and rotating crops for biodiversity. Experts have identified that it could take 3-5 years before the soil is healthy enough to plant viable crops. Many farmers do not have the ability to economically sustain their business for this duration without making a profit. However, in the long term, experts project decreased estimated cost of regenerative farming, around $599. 03/hectare vs. conventional farming at $943.57/hectare. [6]

Complexity

Managing land with implementation of digital software programs can be costly and complex. Available software programs have similar features. These applications range from basic to remote high -tech continual monitoring of soil. The initiation of this program is extensive due to required data input, ensuring connectivity to remote devices and equipment. Training is required, as well as on-going support and software updating. Precision agriculture technology manages information on soil, water, seed, and fertilizer to increase productivity, which farmers will need to be experts in interpreting. This includes remote machinery to maintain crops, such as drones, spray machines, and weeding machines. Software will require updating and clients will need on-going support. Farmers

are more willing to transition to precision agriculture if a consulting service implements their software, per GAO report from January 2024.

[complexity and interactive features of transition to digital farming]

Privacy and security

Data management is the highest priority for farmers considering digital software. Dr Jones, an expert in regenerative farming, identifies the primary reason farmers do not use digital agriculture software is concern for privacy and security of their information. Many farmers have their own process and proprietary products which need to remain protected and secure. Additional training and orientation of software applications is required to assuage client fears. Discussion of the benefits of data collection and sharing with colleagues for crop analysis and productivity would further assure them of the benefits of digital implementation.

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Conclusion

Conversion of more farms from conventional to regenerative farming is necessary to improve global soil health, increase productivity, and reduce greenhouse emissions. Precision agriculture software needs to assist with this process more easily and efficiently. Providing lower cost software and consultants to install and train all staff would be helpful in integrating farmers into the process. On-going education of updated, evidence -based practice for increased productivity, and management. As well as proven secure data in software programs, is necessary to increase farmer participation. These issues may increase the confidence, and willingness of more farmers to take steps toward regenerative farming.

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Pitch Page

Ag Gen Tech inc. is a professional agricultural software company that provides digital applications to assist with implementation of regenerative farming. Land planning and management provides more efficiency and ability for future planting. Data is secure, and the customer controls all sensitive data. Programs are available to analyze soil health data and share with other professionals to determine best practices.

For more services available

Please click on the link to get more information.

LINK: _____

ReGen Ag Tech Inc.

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Utilizing software to improve Regenerative Farming Quality And Reduce Emissions

Regenerative farming with precision software is achievable. There is an ever growing need to protect our planet from climate change. Part of the solution is transitioning from standard farming practices to regenerative farming guidelines. Understanding there are valid concerns from farmers of the benefit and safety of using software in this process. Knowing guidelines and obtaining resources for this transformation can be difficult. Here are some ways to overcome these barriers by using software:

- Focused land management plans to limit cost
- Techniques for monitoring soil health
- Security of data guaranteed
- Customized software to meet farmer needs and budget

The free white paper will provide information on how software can improve your farming productivity while saving the environment. Identifies resources to effectively move away from standard farming without putting your farm on the line.

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