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Review Article

REGENERATIVE AGRICULTURE IS NEW TOMORROW

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Abstract: Regenerative agriculture has the potential to have a powerful beneficial impact on a number of these global concerns. Regenerative agriculture, on the other hand, has the potential to strengthen supply chains, restore biodiversity, equitably distribute land value and access, and enable farmers, businesses, and communities to prosper. In this review article we focus on how Regenerative agriculture works as fixing degraded land by zero tillage, less chemical application and strengthen agriculture by the means of nature based resources.

Keywords: *Regenerative agriculture, Zero tillage, Natural resources*

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Introduction

Pesticides, synthetic fertilizer, continuous irrigating, modified seed, and chemical weedicides are all used heavily in modern agriculture. Their employment in agriculture boosts output, but their inefficient use has a negative influence on quality environmental and productivity of soil, that can cause concern for [1]. Synthetic fertilizer use has degraded agricultural soil quality, resulting in a decrease in soil's organic matter (SOM) contents, as well which increases in soil acidity and pollution [2, 3]. It has turned into a major worry [4-8].

Synthetic fertilizers were problematic for soil health which of their main ingredients is salt, which is toxic for both agriculture and environment. Synthetic fertilizers deplete essential minerals and nutrients in the soil. They are ineffective at restoring soil fertility and nutrients.

Increase in food production to fulfill the demand of each consumer as well as to enhance the income of farm families is the major and primary objective of growth and development of agriculture sector. In the present days, farmers are using indiscriminate quantity of agrochemicals, pesticide, synthetic fertilizers and weedicide in the fields for production of high quantity of produce but not qualitative which are hazards to the human health as well as for the soil fertility and ecosystem. These negative impacts of agrochemical and fertilizers on our ecosystem and their increasing cost emphasize the need to adopt eco-friendly agricultural practices and sustainable agriculture for food production [9].

Regenerative agriculture is the synonyms of sustainable agriculture or precision farming where we take high food production with accurate use of agricultural resources. Regenerative agriculture rejuvenates the agricultural lands. It is a systems approach where farmers work with nature, not against it. It is a biological model based on principles of ecology. Regenerative agriculture is also our best criteria for a quick drawdown of atmospheric carbon dioxide [10].

Storm Cunningham in 2002 In his first book, The Restoration Economy, he traced the beginnings of what he dubbed "restorative agriculture". Restorative agriculture, according to Cunningham, is a strategy that rebuilds topsoil quantity and quality while simultaneously restoring watershed function and local biodiversity (particularly native natural enemies).

In The Restoration Economy, one of the eight sectors of restorative development industries/disciplines was agricultural restoration. Most of the studied studies indicated activities to define RA in addition to aims. Minimizing external inputs, for example, is an activity that has shown convergence in the literature [11, 12], limiting tillage [13, 14] mixed cropping should be used [15] rotations of crops are being enhanced [16,17] using of organic compost and manure [18].

General Discussion

Insect variety is being reduced, and insecticides are being used, as our forefathers noted, exclusivity generates a setting in which re-emergence and persistence of pests as a result of adaptability [19, 20]. Cover crops for the winter season [21] crop rotations are being lengthened [22], Use of Conservation combinations to diversify field margins [23], as well as permitting or encouraging different crop plants to grow between main crop rows [24] those are other which sound agronomic ally strategies that farmers employ regenerative farming to strengthen their systems' resistance to insect growth. The majority of Regenerative Agriculture practices are centered on management of soil health, with focusing on improving carbon level in soil, in hopes of enhancing agricultural yields and mitigating climate change. (SOM) stands for Soil organic matter is a key indication fertility of soil [25]. It performs a variety of tasks in the soil, including nutrient supply, improved structure of soil, adequate water holding capacity, soil life should be maintained [26, 27].

Regenerative Agriculture forbid the use of agrochemicals although majority of them do, all suggest that their usage should be reduced and minimized. Alternative pest and disease control methods receive surprisingly little attention in Regenerative Agriculture texts, Despite the fact that this comes as one of the most significant roadblocks which problems faced by farmers in their efforts to minimize or synthetic pesticides and fertilizers.

Despite the fact that genetic engineering has the ability to confer resistance of plant and reduce the using of synthetic fertilizers, certain interpretations are passionately anti-GMO in Regenerative Agriculture [28] [29]. Regenerative agriculture is considered to carry the potential of achieving " farming with zero carbon" or even decreasing emissions of GHG from other industries [30].
In recent report of The Rodale Institute's documented that “adoption of regenerative globally taps in both grasslands arable and grasslands areas more than 100% may be captured of current emission of man produced CO_2” [31] Other proponents of Regenerative Agriculture quickly shattered this assertion, concluding that the figure was 10-15 percent. Crop residue burning is damaging to human health as well as greenhouse gases emitting toxic that results to change in climate and raising soil temperatures. The loss of nutrients (nitrogen, phosphorus, potassium, sulphur, and organic carbon) as well as helpful microorganisms impairs the health of the soil as soil temperature rises in an already water-stressed regions.

Conclusion

This review article covers all the facts from various article related to regenerative farming and how to cure the degraded environment which was damaged by human races for their benefit. Now the cycle repeating itself and environment paying back what we gave to it.

Application of research: Regenerative farming focuses on less disturbance by zero tillage, using nature substances for pests and covers Zero Carbon Emission, Use of cover crops and leguminous in improving soil health. According to me this practice should be adopted by farmers which will improve their farming practices and make farmers aware of these technologies for a better or sustainable tomorrow.

Research Category: Regenerative agriculture

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