

# REGENERATIVE AGRICULTURE

A Solution to Climate Change Lying Beneath Our Feet



Emmanuel Mwesige

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## Dedication

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**This book is dedicated to you!**

## Acknowledgments

I am forever grateful for the generosity of the gardeners who have shared their knowledge with me, either in presentations, videos, books, forums, or formal research. I am particularly grateful to those whose examples and photos are contained in the book. They have been overwhelmingly generous in sharing their wisdom so you can better understand this amazing concept. Finally, I must acknowledge the love, kindness, and patience my wife and sons showed me throughout this process.

## About the Author

### REGENERATIVE AGRICULTURE

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**Emmanuel Mwesige** is a very passionate farmer and because of his passion for agriculture, he chose to start putting in black and white all issues concerning agriculture for future generations to refer to in the event that those that have the knowledge have all passed on.

He has practiced farming right from the age of 10 years and has never looked back. Implying that he is knowledgeable about whatever he chooses to write about. He is also a business administrator majoring in accounting.

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# INTRODUCTION TO REGENERATIVE AGRICULTURE



In this section, we shall explore the following:

- Introduction to Regenerative Agriculture
- Evolution of Regenerative Agriculture
- Meaning of Regenerative Agriculture
- Understanding Regeneration
- Rationale of Regenerative Farming
- Barriers to Regenerative Agriculture
- Regenerative Agriculture and Climate Change

## INTRODUCTION TO REGENERATIVE AGRICULTURE



Regenerative agriculture is all about re-imagining man's relationship with land. Let us start at the bottom-***with soil***. Soil itself is truly a living entity. Among the clay, sand, and silt particles are the living roots of plants, threads of mycelium, animals like worms and nematodes, and tons and tons of microbes. This dynamic, inter-connected community of living things is known as the soil food web. Soil is responsible for providing us with

95% of the food we eat, either directly or, indirectly, according to the United Nations Food and Agriculture Organization (UNFAO). Healthy soil is defined as having the capacity to function as a living system. Soil also provides us with other services such as climate change mitigation/adaptation, water purification, and microbes that help diversify our microbiome and provide us with nutrients as well as microbes that we use to make medicines and technologies.



Worth noting, however, is that our soils are getting worn-out. Multiple issues with industrial agriculture

are leading many to turn towards a nature-based solution. Regenerative agriculture is a principle in which food (or textiles, or forestry products) is grown in a way that instead of simply extracting nutrients and life from the soil, actually builds matter and life in the soil. Its benefits are seemingly endless, including improving bio-diversity, resilience, and environmental health.



Regenerative agriculture benefits soil, revitalizing and maintaining its fertility with the future and the next generations, in mind. The techniques of



regenerative agriculture largely focus at mitigating negative consequences of farming activities, among which include erosion, depletion, pest invasions, desertification, salinization, decarbonization, and chemical contamination.



## Evolution of Regenerative Agriculture

Regenerative agriculture draws from millennia of traditional practices from around the world, as well as, over a century of applied research and development within the fields of soil health, organic farming, agro-ecology, agro-forestry, permaculture, bio-dynamic agriculture, natural farming, keyline design, restoration ecology, and holistic management.



Some of the regenerative agriculture components, such as cover crops and composting, have been

part of organic, bio-dynamic, and other sustainable farming systems for generations. Indigenous cultures made invaluable contributions to many practices, currently used in regenerative agriculture.



The term regenerative agriculture was first introduced to the world by renown researcher Medard Gabel in 1979, and further developed by Robert Rodale in 1983 and Charles Francis, et al, in 1985. However, the term was used only sporadically, re-emerging with the Rodale Institute



White Paper about regenerative organic agriculture in 2014. Gabe Brown published “*Dirt to Soil: One Family’s Journey into Regenerative Agriculture*” in 2018, and several other publications also came out around the same time.



### **Meaning of Regenerative Agriculture**

As the name suggests, regenerative agriculture is a farming concept that focuses at rehabilitating soil and keep it productive so as to avoid expansion to

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