SUSTAINABLE FOOD PRODUCTION MODEL: REGENERATIVE AGRICULTURE AND HEALTHY FOOD

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1. INTRODUCTION

In recent years, food production models have been questioned. Conventional agriculture has a significant environmental footprint. This causes the progressive destruction of the microbial flora of the soil and sterile land.

In addition, the current agri-food model is based on a way of producing, distributing, and consuming that is closely related to the environmental crisis we are suffering. Therefore, an alternative to conventional agriculture is regenerative agriculture, which tries to minimize the problems described above.

2. AIMS

The main objective is to know if the production process of regenerative agriculture is more sustainable, and if it produces healthier food compared to conventional agriculture.

- To research the general aspects of regenerative agriculture, as well as its objectives and techniques.
- To research soil biodiversity conservation.
- To investigate what effect this sustainable model has on climate change.
- To study how regenerative agriculture affects food sovereignty.
- To clarify possible negative aspects of this regenerative model.

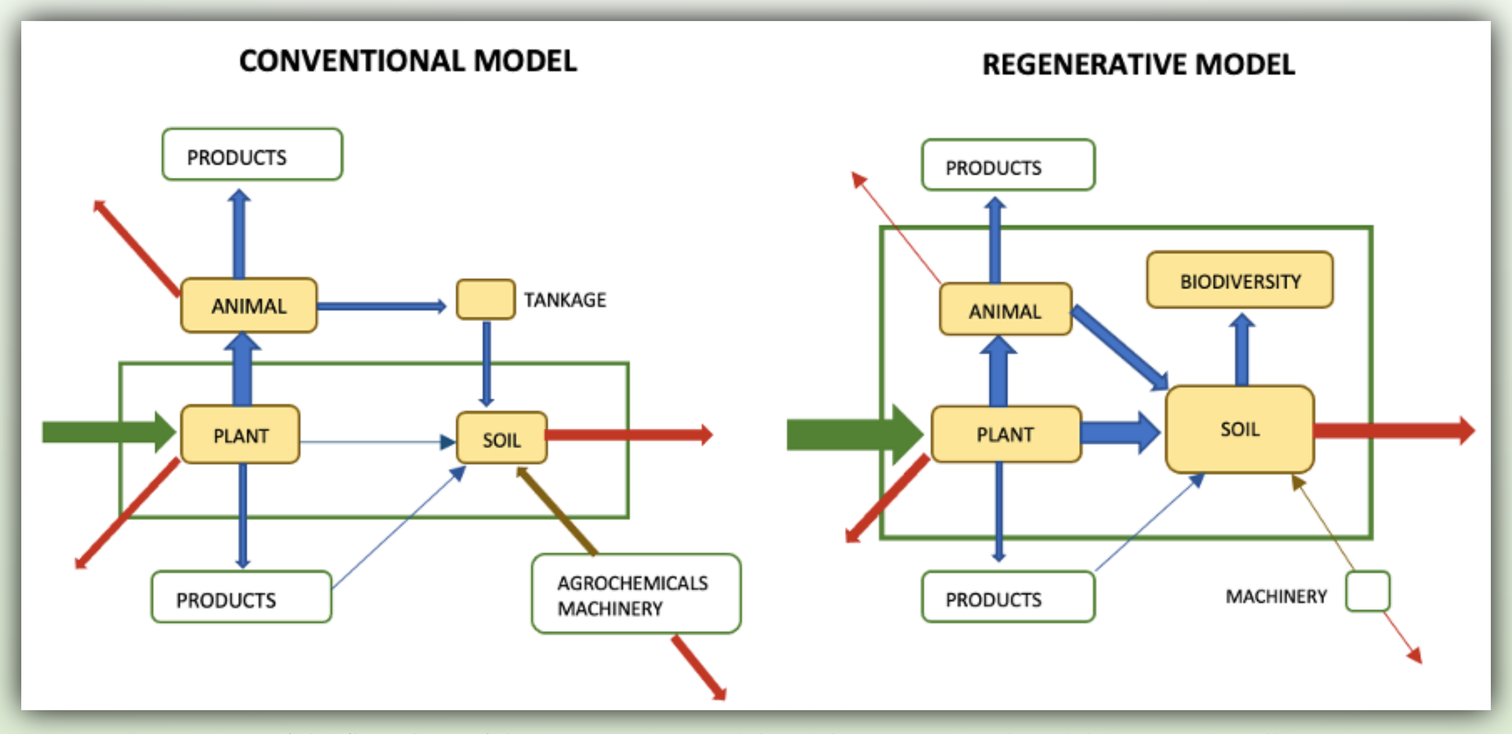

Figure 1. Comparison of the flow chart of the regenerative model and the conventional model. Source: Own illustration modified from Gracia et al. (2021).

3. REGENERATIVE AGRICULTURE

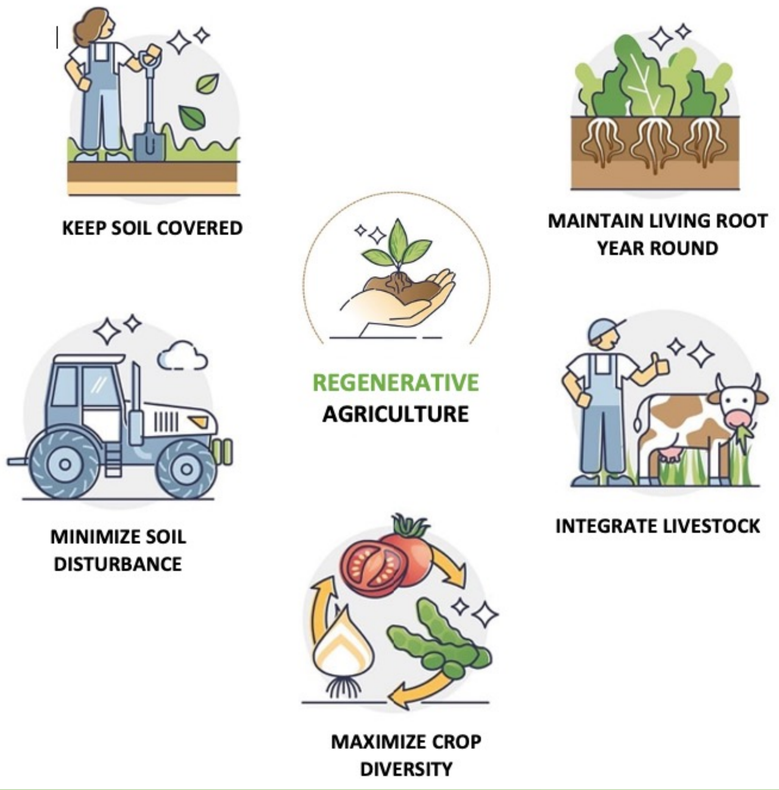

Figure 2. Principles of regenerative agriculture. Source: Own illustration.

Soil biodiversity ↑

Climate change ↓

Food sovereignty ↑

4. REGENERATIVE AGRICULTURE ACCREDITATION

Ecological Outcome Verification (EOV) from Savory Institute.

5. HEALTHY FOODS AND REGENERATIVE AGRICULTURE

- Foods have a healthier nutritional profile than that grown with conventional agriculture.
- Crops with regenerative agriculture contained, on average, more magnesium, calcium, potassium and zinc. Also, more vitamins as well as B1, B12, C, E and K.
- They contain anti-inflammatory and antioxidant compounds that improve human health.
- Compounds harmful to health, as well as sodium, cadmium and nickel, were found to be lower with regenerative agriculture.

6. CONCLUSIONS

Regenerative agriculture is based on the improvement and care of the soil.

- Improvement in fertility and biodiversity of the soil.
- Crops rich in nutrients
- It is possible to sequester carbon in the soil
- Less erosion
- Greater protection of plants against possible diseases and pests, without using agrochemicals.

Regenerative agriculture is more sustainable and can produce healthier food compared to conventional agriculture.