RECENSIONES DE LIBROS

JOYCE D'SILVA AND CAROL MCKENNA (EDS.) REGENERATIVE FARMING AND SUSTAINABLE DIETS. HUMAN, ANIMAL AND PLANETARY HEALTH

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ABSTRACT

This is a review of the book "Regenerative Agriculture and Sustainable Diets. Human, Animal and Planetary Health", edited by Joyce D'Silva and Carol McKenna and published by Routledge, Abingdon (UK) and New York (USA), 2025. In this volume, the authors discuss the potential impact on current food systems of a shift to regenerative agriculture and the adoption of plant-based diets.

KEYWORDS

Agroecology; animal welfare; environment; nutrition; food security.

RESUMEN

Se presenta una recensión del libro *"Regenerative Agriculture and Sustainable Diets, Human, Animal and Planetary Health"*, coordinado por Joyce D'Silva y Carol McKenna y publicado por Routledge, Abingdon (Reino Unido) y Nueva York (Estados Unidos), 2025. En este volumen, se examina la posible repercusión en los sistemas alimentarios actuales de una transición hacia prácticas agrícolas regenerativas y la adopción de dietas basadas en plantas.

PALABRAS CLAVE

Agroecología; bienestar animal; medioambiente; nutrición; seguridad alimentaria.

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For over than half a century, industrial agriculture has enabled the growth of food production and distribution. What are the impacts of industrially produced food on human health, animal welfare and the environment? Is it feasible to continue to produce in this way? A new book argues that a paradigm shift is needed. Based on presentations at a conference organised by Compassion in World Farming in 2023,[1] this collective work provides an analysis of the potential impact of regenerative agriculture[2] and the development of plant-based diets on the current food sector. Edited by Joyce D'Silva and Carol McKenna, this book is divided into six parts and includes contributions from fifty experts.

The world produces a substantial amount of food, yet a considerable proportion of it is wasted. Despite this abundance, millions of people suffer from malnutrition. The way food is produced today has deleterious effects on the environment, owing to the use of chemicals, the generation of waste and the destruction of forests. It also harms animals by destroying their habitats and neglecting their welfare. Moreover, it has a negative impact on climate change.[3]

The lack of regenerative options could be catastrophic.[4] The biggest challenge is soil depletion, which will make food production impossible unless it is addressed.[5] It is

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1 COMPASSION IN WORLD FARMING, Extinction or Regeneration: Transforming Food Systems for Uman, Animal and Planetary Health: https://www.ciwf.org/resources/extinction-or-regeneration-conference/ (Last consulted: 15 March 2025)

2 There is still no clear definition of regenerative agriculture [EASAC, Regenerative Agriculture in Europe. A critical analysis of contributions to European Union Farm to Fork and Biodiversity Strategies (2022) 21, https://easac.eu/fileadmin/PDF_s/reports_statements/Regenerative_Agriculture/EASAC_RegAgri_Web_290422.pdf (Last consulted: 15 March 2025)]. This type of agriculture aims to regenerate not only soils but also the relationships between people, animals and the environment through scientific innovation and new techniques. However, it faces problems such as pest, weed and disease control, as well as the costs associated with these radical changes. See generally, DENT, D., BOINCEAN, B., Regenerative Agriculture (Springer 2021).

3 D'SILVA, J., MCKENNA, C. Introduction, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Human, Animal and Planetary Health (Abingdon / New York 2025) 1-2.

4 LIMBERY, P. Why our children's future depends on a Global Agreement on food, climate and animal welfare, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit., 5.

5 *Ibid,* at 6.

important to go beyond the concept of sustainability and focus instead on regenerating soils, water and biodiversity, producing nutritious food and ensuring the welfare of farm animals.[6] The implementation of these changes can be facilitated by institutions, businesses and society. The United Nations should develop a global agreement that recognises the importance of regenerative agriculture and promotes animal welfare.[7]

The contemporary food system has its origins in the 19th century and developed after the Second World War.[8] The sector has seen a concentration of power in the hands of a few agribusiness and financial groups. This has reduced competition, raised prices, harmed small farmers and increased inequalities.[9] In contrast, agroecology is based on different principles. It gives space to local knowledge and techniques, environmental protection, farmers, cooperative distribution and communities. It could provide people with nutritious food and protect them from market fluctuations and international crises.[10] We should not only think about economic growth, but also about the earth and its inhabitants. Over the last fifty years, biodiversity has declined, especially in poor countries.[11] For there to be sustainable development, the current paradigms must be changed to create agri-food systems that ensure food for all and achieve the Sustainable Development Goals (SDGs) of the UN 2030 Agenda.[12]

Food production has increased as the world's population has grown. Much land has been cleared for agriculture and livestock, causing environmental damage. Despite this, millions of people cannot afford nutritious food.[13] Many diets are high in calories and unhealthy. The market structure should be changed to reduce meat consumption and empower farmers to produce healthy food in a sustainable way. Consumers can also contribute to change by electing political representatives who will voice these demands.[14]

Transforming the food system is also about preventing the risk of pandemics and coping with them should they occur. Shifting to a more equitable and resilient system goes against entrenched policies. It requires a broad, interdisciplinary understanding of the issues, including local experience. Above all, it requires a shift in values that places

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6 *Ibid.*, at 10.

7 *Ibid.,* at 11.

8 DE SCHUTTER, O., WEIYING CLÉMENT, C., JACOBS, N., Addressing power and poverty in a crisis-prone food system, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit., 13.

9 *Ibid.*, at 14-17.

10 *Ibid,* at 17-19.

11 FOTIOU, S., PEOU NORBERT-MUNNS, R. Accelerating the SDGs — The opportunity of agrifood systems, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit., 22.

12 *Ibid.,* at 23-27.

13 BENTON, T. Food systems futures and how to achieve them, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit., 29-33.

14 *Ibid,* at 34.

an ethic of care, fairness and respect for animals and nature at the heart of protecting the lives and health of all.[15]

The UN's 2030 Agenda highlights the interconnectedness of the challenges that need to be addressed to achieve the Sustainable Development Goals (SDGs). Resources must be used efficiently and emissions to the environment must be reduced. The 'polluter pays' principle can also be applied in this context.[16] Civilisation in the 21st century cannot survive the degradation and pollution of soils caused by human activities.[17] There are innovative strategies, tools and practices to meet the world's food needs by regenerating the system to produce more by reducing land, water and energy use, improving soil quality and efficiency, restoring degraded soils and biodiversity.[18]

It is time to address the issue of changing diets. The production of poor-quality food poses a significant threat to human health, including problems such as obesity. The annual slaughter of over 80 billion land animals and 2,000 billion fish for food production raises ethical concerns.[19] The promotion of plant-based diets is a recommended course of action. Of course, restrictive diets, such as vegan, must be of high quality and provide the necessary nutrients.[20] Another problem is the antibiotic resistance.[21] As it is challenging to discover new antibiotics, their use should be further reduced, particularly in the field of animal husbandry. Europe has taken steps in this direction, but further action is necessary. A fundamental rethink of the way animals are reared is required.[22]

The promotion of healthy and sustainable diets is a matter of particular concern in China, where traditional meals were based on plant-based foods. This country should develop guidelines, propose programmes for the adoption of healthy diets, regulate international exchanges and educate the population by involving local communities.[23] Reducing the consumption of animal products not only affects humans, but also other

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15 LEACH, M. Preventing and preparing for pandemics. Why food systems must transform, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit., 36-41.

16 RICHARDSON, K., FRITZBØGER CHRISTIANSEN, J. The global food system can and must be transformed to respect planetary boundaries, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 45-48.

17 LAL, R. Regenerative management of agroecosystem soils to minimise extinction risks and for climate and food security, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 51-54.

18 *Ibid.* at 57-59

19 KASSAM, S. Eating plant-based for better health, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 69.

20 *Ibid.* at 72-73.

21 NUNAN, C. Intensive farming and the antibiotic resistance crisis, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 76.

22 *Ibid.* at 81-83.

23 FAN, S., FENG, X., Transforming Chinese agrifood systems to achieve sustainable healthy diets, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 86-89

animals. There are studies investigating the possibility of introducing plant-based food into the diets of dogs and cats.[24]

Consumer awareness of farm animal welfare is growing. Therefore, labels that certify animal welfare can help. Semi-intensive silvopastoral agroforestry systems, which have proven to be more sustainable, should be promoted, while intensive systems should be made more efficient. The number of breeding chickens and pigs should be reduced. Processed leftovers, fodder and protein crops should be integrated into livestock diets, while the use of cereals that can be fed to humans should be reduced.[25]

Animals and plants have a relationship that underpins a stable ecosystem. Farmers can make a significant contribution to the physical and mental well-being of both animals and the environment. However, it is essential that their efforts are properly rewarded. Consumers should also be prepared to pay for food produced to high standards.[26] It is important to recognise that animals are not just a product of genetics and behaviour, but also a consequence of culture, which is made up of knowledge and experience that is passed on. Culture explains their spatial and behavioural patterns. It facilitates the process of self-awareness within a group and drives evolutionary change. The preservation of culture is therefore of paramount importance.[27]

The future of agriculture depends on many factors. A commitment to caring for the land, plants and animals with love and compassion promotes biodiversity, which benefits food production.[28] The use of organic fertilisers has been shown to be effective in regenerating soils. It is also essential to reappropriate seeds and prevent them from being patented by a few multinational companies. It is essential to create a virtuous circle between the interrelated elements of nature.[29]

In the context of environmental degradation, the concept of sustainability is being transcended, and the discourse becomes one of regeneration.[30] There is an urgent need to move from the current model of industrial agriculture, which is damaging

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24 KNIGHT, A. The environmental benefits of vegan pet food, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 93-101.

25 M. BROOM, D.M., One biology, sustainable and regenerative farming A role for pig and poultry production? in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit.107.

26 WEBSTER, J. Understanding sentient minds, Darwin, Humpty Dumpty and the Buddha, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 120-121.

27 SAFINA, C., Culture in sentient beings. Purpose, evolution, conservation, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 122-126.

28 SHIVA, V. Compassion The foundation of regenerative farming, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets). Cit. 136

29 *Ibid.* at 131-135

30 LEU, A. Regenerating agriculture, ecosystems and climate, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 138.

agroecosystems on a global scale, to an alternative that enhances them. This shift is necessary to turn challenges into opportunities.[31] Regenerative agriculture has the potential to surpass the efficiency of current food production methods, which are characterised by significant energy consumption. Agriculture should be seen as both an art and a science. This approach could improve the system's fairness, inclusiveness and respect for rural communities, animals and natural resources, which are recognised as the true sources of wealth.[32]

In Tanzania, a project was initiated with the objective of providing support to local farmers and pastoralists. In 2024, a national strategy for ecological and organic agriculture was developed. This strategy is predicated on the adoption of resilient farming methods and practices that have the potential to meet the growing need for food in a sustainable manner.[33]

The possibility of change is illustrated by two case studies. The first is a small dairy farm whose cows are fed a forage-based diet, an example of ethical and ecological farming that does not deprive people of food.[34] Secondly, that of a chicken farm that has created a regenerative system that can be adopted globally. This system is ecologically, economically and socially beneficial and can also ensure food security.[35]

In the future, it will be necessary to focus on whole grains and vegetables, to restore land used for livestock farming, including grazing land, to consider small farmers and movements that support local production, that fight for the availability of seeds and for food sovereignty.[36]

As well as thinking about farming on land, it is very important to also think about farming in water. In recent decades, there has been a notable increase in the cultivation of aquatic flora and fauna. However, the sustainability of intensive aquaculture is a subject that is often overlooked. This practice entails substantial expenses with regard to animal welfare, human health, and the integrity of the aquatic ecosystem.[37] A paradigm shift in aquaculture is imperative, encompassing the selective breeding of specific species,

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31 *Ibid.* at 142.

32 WATKINS, S. Achieving a peaceful and verdant future. A farmer's perspective, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit.148-149.

33 MARO, J. How agroecology is mitigating the worst effects of climate change in Tanzania, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 156.

34 FINLAY, D. Can dairy farming be part of the solution? in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 157-161

35 HASLETT-MARROQUIN, R. Poultry-centres regenerative agriculture. TreeRange® chicken farming, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 162-166

36 KASSAM, A. KASSAM, L. Regenerative farming without farmed animals, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 173

37 BOYLAND, N., LARA, E. Aquaculture must be part of the shift towards regenerative farming, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 175.

the phase-out of feed derived from food that could be used by humans, the reduction of antibiotic usage, the assurance of aquatic animal welfare, and the modification of consumer habits.[38]

How to change? The global food supply chain is controlled by a small number of industrial groups and financial investors. These actors have the power to decide on seeds, fertilisers, product processing and distribution, markets and governance. This has resulted in significant inequality, price volatility and environmental degradation.[39] The transformation of food systems also requires policies that limit the concentration of these groups.[40]

The prevailing dietary patterns are incompatible with the pursuit of sustainable development. A successful transition to a new dietary regime has the potential to engender economic benefits on a global scale, if it is managed in a judicious manner. A concerted effort is required from politicians, producers, retailers and consumers to ensure this transition. Research is needed to ascertain the most efficacious methods for managing this transition, including the associated costs.[41]

Financial institutions allocate considerable sums to industrial livestock farms. This practice is perpetuated by multilateral public development banks, which should instead be allocating their financial resources to the promotion of more animal — and environment — friendly forms of animal husbandry.[42] The introduction of new legislation is imperative to elevate the welfare standards of farmed animals and to guarantee that imported meat conforms to these elevated standards.[43]

Food companies have the capacity to proactively promote regenerative agriculture and animal welfare, while concomitantly reducing meat consumption and diversifying protein sources, without compromising their revenue. A significant number of companies are already implementing these practices.[44] Supermarkets have also been identified as a key agent of change in this regard. Innovation in this sector is imperative, and collaboration between industry bodies is essential for progress. Furthermore, it is crucial to ensure

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38 *Ibid.* at 180-181.

39 CLAPP, J. Countering corporate and financial concentration in the global food system, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 187

40 *Ibid.* at 192.

41 LORD, S., BODIRSKY, B.L., LEIP, D., LOTZE-CAMPEN, H., CRAWFORD, M.S., Global economic benefits of eating better, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 200

42 STEVENSON, P. Shifting bank funding away from factory farming, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 210

43 DIMBLEBY, H. Putting sentience into food policy, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 220

44 STRANGEWAY, L., JONES, T., The role of business in a food system fit for the future, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 224-226.

that customers are supported in their understanding of food labels, thereby facilitating informed decision-making.[45]

In addition to the restoration of soils, ecosystems and biodiversity, the concept of regeneration must consider the interests of those who produce the food, allowing them to live in decent conditions. A holistic approach to these transformations should allow both food production and consumption to be sustainable.[46] It is imperative to analyse the current food system, envision future scenarios, and surmount the obstacles hindering transition.[47] There are communities that conceptualise food as a collective asset, and there is an expanding body of knowledge in the field of agroecology. The notion that social and environmental well-being supersedes profit is gaining traction. To amplify their influence, the food, animal welfare, and environmental movements must collaborate more effectively.[48]

A food agreement that promotes plant-based food options is recommended. Approximately half of the available agricultural land is currently used for animal production, resulting in competition between humans and animals for food resources, particularly in areas where food insecurity is prevalent.[49] In an effort to promote the consumption of plant-based foods, the Danish government has established dietary guidelines, provided support to farmers, and allocated financial resources to the development of the agricultural sector through the creation of a dedicated fund.[50] The Conscious Food Systems Alliance, convened by the United Nations Development Programme, emphasised the potential for awareness and inner capacities, when combined with a structured plan of action, to contribute to the transformation of the food system.[51] The adoption of regenerative systems by Native Americans demonstrates the existence of diverse and innovative methods of food production. The creation of conditions that allow animals to be fed on farms without the use of cages or fences is

45 BAILEY, J., Food as the problem, food as the solution, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 230-232.

46 MITCHELL, L., BROMOVSKY, F., KIPLING, R., LEWIS-BROWN, E. Holistic frameworks for sustainability in food and farming, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 239

47 ANDERSON, A. What is needed for transformation?, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 244-245

48 *Ibid.* at 246-247.

49 ZANDERS, R. The Earth will tell us, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 251-253

50 DRAGSDAHL, R-C., How to achieve national plant-based policies. The case of Denmark, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 257

51 LEGRAND, T., ALTOBELLI, N., The Conscious Food Systems Alliance. Inner capacities for regenerative food systems, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 262

a testament to the effectiveness of such approaches. We should learn from indigenous cultures to develop effective and sustainable farming methods.[52]

The editors conclude that to avoid extinction, it is imperative to regenerate the food economy, produce nutritious food that is accessible to all, adopt plant-based diets, ensure the welfare of land and sea animals, support farmers, protect the environment and put pressure on politicians and agribusiness.[53]

This book is an engaging text that offers a variety of perspectives from different fields. The authors have managed to write in a way that is accessible to everyone, often getting straight to the point. Regenerative agriculture is clearly a challenge that needs to be taken up, but there is still a long way to go. Critical issues such as farmer remuneration, supply chain insurance and control, market responses and the unpredictability of natural events need to be further explored.

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https://easac.eu/fileadmin/PDF_s/reports_statements/Regenerative_Agriculture/EASAC_RegAgri_Web_290422.pdf (Last consulted: 15 March 2025)

52 JOHNSTON, L.J., Native American regenerative food and land management systems, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 274.

53 D'SILVA, J., MCKENNA, K., Moving from extinction to securing regeneration: The mission of a movement, in D'SILVA, J., MCKENNA, C. (eds.), Regenerative Farming and Sustainable Diets. Cit. 276