Regenerative agriculture – pure false labelling?

On the origin, content and use of a widely used term by Andrea Beste

There are many reputable networks and many committed farmers who want to do good for the soil and agriculture and call it "regenerative agriculture". Many projects that use this label certainly do not aim to engage in greenwashing. In Germany and Europe, however, the term and the methods used are neither defined nor protected. This means that anyone can claim to practise regenerative agriculture – even large global players *in the agricultural industry. And indeed, behind the current hype surrounding the term is often an attempt to continue and even promote agriculture that is anything but sustainable under the guise of "green" practices. This is now leading to more and more greenwashing and the promotion of sometimes questionable projects by corporations, researchers and practitioners. Reason enough to take a closer look.*

The roots of the term "regenerative agriculture" come from the organic farming scene in the USA. This is also where the only scientific and commercial definition and certification of the concept exists: the Rodale Institute's registered and protected label is based on organic farming and is called "*Regenerative Organic*".

Political scientist Kenneth A. Dahlberg refers to the so-called "regeneration project" of the ecological Rodale Research Institute, which was intended to encourage farmers and communities in the USA to pursue this approach in the early 1980s. According to Dahlberg in an article from 1993, Rodale chose the term "regenerative"
1993,[1] because it seemed less easy to hijack than the term "sustainable". Even back then, greenwashing was clearly a problem.

A description of what is meant by "regenerative agriculture" was provided in 2010 by Olaf Christen et al.: "Regenerative agriculture is an approach to agriculture that rejects pesticides and artificial fertilisers and aims to improve the regeneration of topsoil, biodiversity and the water cycle
."[2] This is almost identical to the principles of IFOAM,[3] the global umbrella organisation for organic farming. Australian soil ecologist Christine Jones went even further. In 2003, she defined it as follows: "Agriculture is regenerative when soils, water cycles, vegetation and productivity continuously improve rather than just remaining the same. At the same time, the diversity, quality, vitality and health of soils, plants, animals and humans increase together." [4]Jones' approach is often referred to in Germany as "building agriculture". [5]

Different organisations and authors have slightly different interpretations and emphases. However, the key principles of regenerative agriculture include:

- Improving soil biology and health,
- promoting biodiversity,
- Improving the water retention capacity of the soil,
- Minimising soil disturbance,
- integrated livestock farming.

From a scientific point of view, the use of synthetic fertilisers and pesticides contradicts these principles. However, their reduction is generally excluded from "regenerative" projects in German-speaking countries.

Measures often practised by reputable projects/farms include agroforestry, mixed cropping, the "evergreen" principle and mob grazing.

These go beyond the measures generally practised in organic farming and required by the EU Organic Regulation. Mob grazing, for example, involves short-term grazing at high density and a longer than usual regeneration period for the grass. Practitioners report improved soil, healthier livestock and lower veterinary costs.

Takeover by corporations – old farming, new framing

At the climate summit in New York in September 2019, 19 global corporations founded a coalition for "alternative farming practices" and named it OP2B ("One Planet Business for Biodiversity"). Members include Danone, Kellogg's, L'Oreal, Mars, Nestlé, Unilever and the fertiliser company Yara, among others. The term "organic farming" does not appear once in OP2B. Instead, "regenerative agriculture" is introduced as a basic concept. This term is now appearing in more and more corporate promises. PepsiCo, for example, has committed to introducing regenerative practices on seven million hectares,(7)while Cargill wants to implement this on ten million hectares by 2030.8 And Nestlé has promised to invest 1.2 billion Swiss francs by 2025 "to boost regenerative agriculture along our supply chain".9 The CEO of Syngenta, one of the world's largest manufacturers of pesticides, said that "the truly sustainable future of agriculture – I call it regenerative agriculture – is now taking shape".10 Unsurprisingly, there is no mention of organic farming or reduced pesticide use in this statement, as promoting farming methods that do not use synthetic pesticides is contrary to the core business of this company.

From the perspective of multinational corporations, "regenerative agriculture" has the advantage that the term is neither protected nor defined. Many proponents of the regenerative approach also see this as an advantage. They argue that this could encourage conventional farms to operate more sustainably. However, this overlooks two things: firstly, it has been scientifically proven that the use of synthetic chemical fertilisers and pesticides damages the soil life that we are trying to build up. Secondly, this vagueness in the definition invites economically or politically motivated greenwashing.

Regenerative instead of organic?

In Germany and Austria, there has long been the impression that the three terms organic farming, agroecology and regenerative agriculture are competing to be the best method. However, the term "organic" is legally protected in Europe (and "organic" worldwide). The cultivation method
"organic farming (bio, eco, organic)" is therefore the *only* one for which there are internationally clear rules that are independently monitored. It is the only
"eco" farming system that is protected by legal foundations. In terms of sustainability, hundreds of international, national and regional scientific comparative studies prove the superiority of organic farming in all areas that represent measurably sustainable agriculture.11

Fig. 1: Ecological agriculture compared to conventional agriculture in the 40-year study by Reganold and Wachter 201612

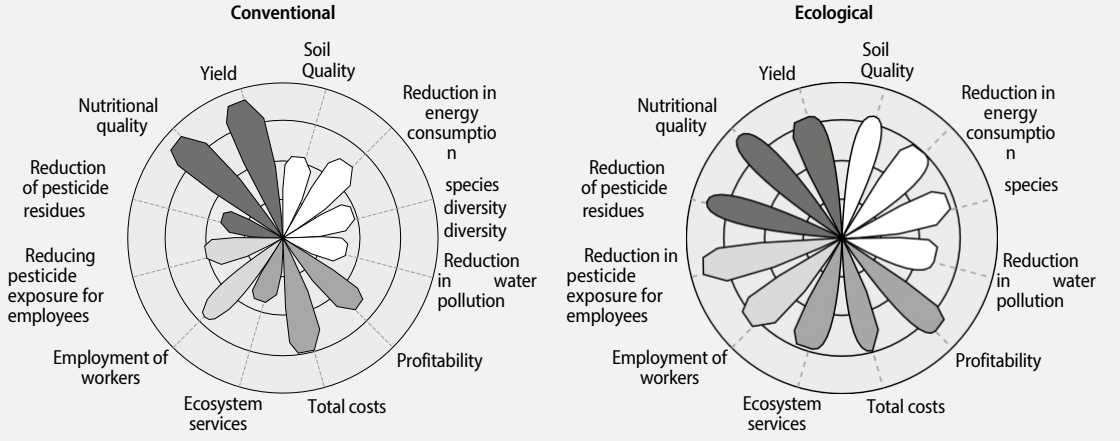

Table 1: Regulations in organic farming and "regenerative agriculture"

Measure	Organic farming	Regenerative agriculture
Chemical synthetic pesticides	Prohibited	Unregulated
Soil cultivation	As required, soil-conserving	frequent Mulch and direct sowing, also with glyphosate
Crop rotation	Wide crop rotation according to crop rotation rules with catch crops mandatory	Unregulated, often with catch crops, but not mandatory
Fertilisation	Organic only	Unregulated
Feeding	GMO-free, high proportion of own feed	Unregulated
Livestock density	2 GV	Unregulated
Inspections	Annual	irregular

Own compilation

At European and global level, it can be observed that not only corporations but also political decision-makers repeatedly resort to terms such as "regenerative" when they want to avoid *verifiable* changes to the system and thus the explicit mention of organic farming, even though the latter clearly has scientifically proven advantages. This "new framing" poses a major threat to the honest and effective transformation of agriculture towards greater sustainability. Most corporations understand "regenerative agriculture" to mean nothing more than conservative soil cultivation with the use of pesticides and mineral fertilisers, garnished with a few catch crops and flower strips. The danger of greenwashing is highlighted in a study conducted by the investor network FAIRR in autumn 2023. According to the study, 50 of the 79 large agrifood companies surveyed emphasised that "regenerative agriculture"was a solution to climate change and species extinction. However, two-thirds of these 50 companies had not specified any quantifiable targets, and only four companies mentioned results-oriented targets or specific sums they intended to invest.13

Playground and innovation idea

On the other hand, it is of course to be welcomed that more and more conventional farms are looking into management methods that can contribute to soil improvement and are coming together under a common banner to try them out and exchange experiences. As long as this does not simply result in ideological plough abandonment, which continues to be achieved in conventional farms through high glyphosate use and can also be harmful to the climate due to denser soils and nitrous oxide production,(14) this is a thoroughly welcome development. What is also clear is that there is still considerable room for improvement in the development and dissemination of regenerative techniques such as permaculture, mixed cropping, agroforestry and mob grazing within organic farming, there is still considerable room for improvement.15 It would therefore make sense to incorporate more of the serious "regenerative" principles into consulting, training and research.

Conclusions & Demands

- Projects that use the term "regenerative agriculture" Those who work or advertise in the field of "economy" should describe very precisely what the underlying (binding) criteria are.
  criteria are.
- For credibility, independent monitoring/control is required.
- A clear, independent scientific definition of the principles would be desirable and could at least work with reduction targets for synthetic fertilisers and pesticides.
- A product label would be in direct competition with the organic label, would confuse consumers and require a
  parallel processing chain, which does not make much sense.
- Some measures go beyond the current principles of organic farming (agroforestry, mob grazing, mixed cropping and even permaculture) and are definitely also useful for its further development .
- The goal of not only maintaining ecological stability but also consistently improving it goes beyond the approach of the EU Organic Regulation and is probably even necessary in the context of climate change.
- Significantly more research funding must be channelled into agroecological and regenerative approaches.
- Study programmes, training and official advice must finally be brought up to date with regard to the long-established scientific advantages of agroecological approaches.

Consulting, training and research

However, there is a lack of future-oriented content in advisory services, training and research: resilience, sustainability, animal welfare, biodiversity and climate adaptation are often given too little attention in training frameworks. Some of the plans are very outdated. For example, the regulation on vocational training for farmers dates back to 1995. None of the federal states achieved the 80 teaching hours on "alternative agriculture" stipulated in the framework curriculum.16 In Germany, for example, only two per cent of agricultural research funding is still allocated to agroecological research fields, and the contribution at European level is similarly low.17 There is therefore still much room for improvement if the term "regenerative agriculture" is to spark innovation, whether in conventional or organic practice.

Notes

1 K. A. Dahlberg: Regenerative food systems: Broadening the scope and agenda of sustainability. In: P. Allen (Ed.): Food for the future: Conditions and contradictions of sustainability. New York 1993, pp. 75-102. – See also: Rodale Institute: Regenerative organic agriculture and climate change – A down-to-earth solution to global warming. Kutztown 2014 (https://rodaleinstitute.org/wp-content/uploads/Regenerative-Organic-Agriculture-White-Paper.pdf).

2 O. Christen et al. (Eds.): Interdisciplinary and sustainability issues in food and agriculture, Vol. II, 2010 [Translation by the author] (https://regenerationinternational.org/2021/09/27/regenerative-food-and-farming-survival-and-revival/).

3 IFOAM: International Federation of Organic Agriculture Movements (www.ifoam.bio/sites/default/files/poa_english_web.pdf).

4 C. Jones: Recognise, Relate, Innovate. Ed. by Department of Land & Water Conservation, New South Wales Government. Armidale 2003 here: p. 2 ff. [Translation by the author] (www.amazingcarbon.com/PDF/JONES-RecogniseRelateInnovate.pdf).

5 See: https://aufbauende-landwirtschaft.de/.

6 Soil Association: What is mob grazing? Livestock farmer and Nuffield scholar Tom Chapman explains what mob grazing is, how it works and what benefits the grazing system brings to his farm (www.soilassociation.org/our-work-in-scotland/scotland-farming-programmes/mob-grazing/what-is-mob-grazing/).

7 "PepsiCo announces 2030 goal to scale regenerative farming practices across 7 million acres, equivalent to entire agricultural footprint." Press release PepsiCo, dated 20 April 2021 (www.pepsico.com/our-stories/press-release/pepsico-announces-2030-goal-to-scale-regenerative-farming-practices-across-7-mil04202021).

8 L. Manning: Cargill wants to help farmers turn over 10 million acres to regenerative ag by 2030. In: AgFunderNews, September 2020. (https://agfundernews.com/cargill-wants-to-help-far-mers-turn-over-10-miilion-acres-to-regenerative-ag-by-2030).

9 See also: www.nestle.de/verantwortung/nachhaltigkeit-weiterdenken.

10 E. Fyrwald: Op-ed: Biden administration should look to regenerative agriculture to help advance climate action. CNBC 28 January 2021 (www.cnbc.com/2021/01/28/op-ed-biden-administration-sregenerative-agriculture-can-help-advance-new-climate-action.html) [Translation by the author].

11 J. Sanders and J. Hess provide a current overview of the state of research in this area
J. Sanders and J. Heß: Social benefits of organic farming. Interdisciplinary
compares organic and conventional farming systems. In: The Critical Agricultural Report 2020,
pp. 134-139 (https://kritischer-agrarbericht.de/fileadmin/Daten-KAB/KAB-2020/KAB2020_134_139_Sanders_Hess.pdf). – The This article is based on a broad-based study by the Thünen Institute:
J. Sanders and J. Heß: Benefits of organic farming for the environment and society. Thünen Report 65.
Braunschweig 2019 (DOI:10.3220/REP1547040572000).

12 J. P. Reganold and J. M. Wachter: Organic agriculture in the twenty-first century. In: Nature Plants 2 (2016), 15221. – Graphic in German translation taken from: Foundations instead of pillars. Proposals for a reorientation of European agricultural policy. An analysis and position by Reinhild Benning and Tobias Reichert, Germanwatch. On behalf of Martin Häusling, MEP. Wiesbaden 2016, p. 72 (https:// martin-haeusling.eu/images/attachments/GAP_Webund-Mail_end.pdf).

13 M. Boucher, S. Mohankumar and M. Montosa: The four labours of regenerative agriculture – Paving the way towards meaningful commitments. September 2023 (www.fairr.org/resources/reports/regenerative-agriculture-four-labours).

14 A. Beste and N. Lorentz: Ecosystem soil – Bringing nature-based solutions on climate change and biodiversity conservation down to earth. Ed. by giz/BMUV. Berlin 2022. – A. Beste: Carbon Farming – Climate Protection or Greenwashing? An Analysis of the European Commission's Carbon Farming Initiative. In: The Critical Agricultural Report 2023, pp. 12-16 (www.gesunde-erde.net/media/beste_carbon_farming_klimaschutz_oder_greenwashing_1.pdf).

15 See J. Heß and C. R. Vogl: Beyond Organic? In: Ecology & Agriculture 2 (2024), pp. 12-14 (www.oekom.de/_files_media/zeitschriften/artikel/OEL_2024_02_12.pdf).

16 Status quo analysis and development of options for action to strengthen the integration of organic farming into vocational training for farmers, gardeners and winegrowers. February 2020 (https://orgprints.org/id/eprint/30634/).

17 Federal budget: deficit in organic research remains. In: agrar presseportal, 25 November 2022 (www.agrar-presseportal.de/landwirtschaft/bio/bundeshaushalt-defizit-bei-der-oeko-forschung-bleibt-bestehen-34726.html).

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