



Farming for a better future

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FOR PROFESSIONAL INVESTORS ONLY

The agricultural sector has a central role to play in helping to solve many of the problems currently facing our society: sufficient and healthy food production, deteriorating soil quality, biodiversity loss and global warming. Intensive modern farming practices have played a big part in this.

Regenerative farming can offer comprehensive solutions to the issues that agriculture faces. We believe that investors must become active in the transition to a more sustainable food and agricultural system and that farmland should play a more important role in institutional investment portfolios. This can generate attractive long-term revenues and capital growth.

Below, we examine how regenerative agriculture takes a conservation and rehabilitation approach to farming, the contrast with conventional farming, how regenerative farming works in practice and why it is imperative to act now.

Regenerative vs conventional farming

Over the past decades, modern agricultural practices have brought huge gains in crop yields and this 'green revolution' has been successful in combatting hunger. But soil health and fertility have strongly deteriorated and biodiversity loss has reached a critical stage. Concerns about how to produce healthy food for the world population with finite resources are growing.

In its 2022 Global Risks Report, the World Economic Forum (WEF) ranks biodiversity loss as the third most critical threat to the planet over a 10-year horizon. WEF's estimate is that 50% of the global economy is under threat from biodiversity loss.

Conventional farming plays a crucial role here. Agriculture is responsible for about a quarter of global greenhouse gas emission. And 50% of biodiversity loss in freshwater is caused by food systems, while food production is responsible for 70% of freshwater withdrawals.

Conventional farming practice typically works 'against' nature: killing weeds, killing fungi, thereby ignoring nature's tendency to self-heal.

In contrast, regenerative farming helps restore nature by taking advantage of the natural tendencies of ecosystems to regenerate when disturbed. Regenerative farming seeks to improve soil fertility, water management and biodiversity, thereby increasing yields while reducing environmental impacts. An approach that also contributes to the social and economic wellbeing of farmers and the wider rural community.

Importantly, regenerative farming practices can also help mitigate global warming by increasing the capacity of soil to store carbon. In a healthy soil, plants can efficiently draw carbon from the atmosphere and sequester it. In addition regenerative techniques help to restore biodiversity and reduce water use.





Measurable impact

Regenerative farming is unique among other sustainable and organic farming systems in that it focuses on quantitative, measurable outcomes, without dogmatically prescribing how those outcomes should be achieved. As a result, regenerative farmers are more outcome or result-oriented. A regenerative approach creates evidence whether our sustainability goals –such as healthier, more nutrient dense food, soil or nature recovery or clean water – are being met.

The goal is to close the ‘natural cycle’ as much as possible: whatever you use from the ecosystem (soil, water, biodiversity), you must give back. The final objective is to realise an eco-sustainable, healthy, happy and resilient food system. Regeneration goes further than the E of the ESG. It is also about regenerating a generation of farmers with a healthier and rewarding perspective.

Modern technology can help. Crops can be managed by observing and measuring variability through satellite navigation, geographical data systems and sensors located on machines or on the land. The data gathered about the condition of the soil, climate and crops is used to improve decision-making, optimise resource use, and thereby to contribute to a more efficient and sustainable farming system. The main objective is to achieve greater yields with fewer resources.

Regenerative farming in practice

There are six key principles:

1 Advance circular farming

The goal is to close the ‘natural cycle’ as much as possible: whatever you use from the ecosystem (soil, water, biodiversity), you must give back. Opting for natural fertilisers, such as compost and plant residues, and reducing the use of pesticides help enrich the soil. They keep the soils ecosystem healthy, enabling it to support plant and microbial life. In contrast, prolonged chemical fertiliser use acidifies the soil, reducing humus levels and the capacity for filtration and water retention. An over-fertilised field can quickly become unusable for agriculture.

2 Apply crop diversion

By rotating the crops in the different fields, farmers can reduce the loss of nutrients that occurs when the same crop is planted repeatedly. Some plants take certain nutrients out of the soil, while others add them back, naturally. Rotation also has the added benefits that while microbial activity increases, more soil organic matter is converted into humus, which also results in carbon sequestration. In addition, crop rotation allows for better weed control.

3 Promote biodiversity

Biodiversity strips, such as hedges, wetlands and wildlife corridors, play a significant role in regenerative farming by enhancing ecosystem health and preventing erosion. They provide a refuge for insects, bees, birds, and other organisms that play crucial roles in pollination, pest control and soil health. By attracting these organisms, farmers can reduce their reliance on pesticides and promote natural pest control.

4 Use cover crops

Regardless of land use, soil should always be covered by growing plants and/or residues, so to allow land to accumulate biomass carbon and avoid erosion and salination. Cover crops also improve the physical characteristics of the soil. Think of healthy soil as a sponge that holds air and can absorb water.

5 Protect the soil from erosion or compaction

The opposite of a sponge is a hard flat surface where no water or air can infiltrate. Compaction can be avoided by using light machines, terracing, drainage systems and cover crops.

6 No tilling

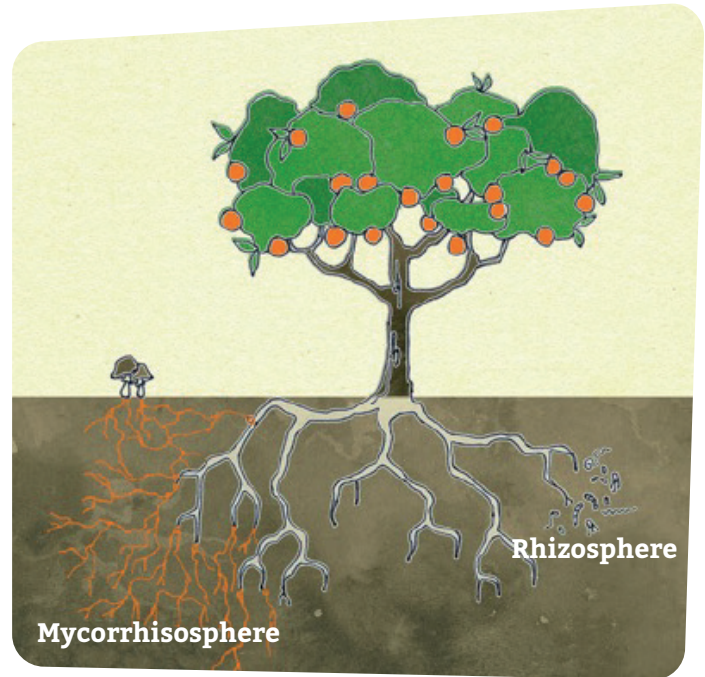
Tillage may open up hard, compact soils, but it’s only a short term gain. The practice of tilling is not healthy in the long term: it exposes the soil to more oxygen, promotes further degradation of organic matter and allows formerly stable soil carbon to be released as greenhouse gas

Symbiosis is key

These key practices all amount to the overall goal of protecting and regenerating the soil. Because just one foot below the ground (30 centimeters) there is a complex, symbiotic, efficient but also very fragile system of microbial life and fungal filaments that can nurture plants and produce food in a sophisticated way.

This 'factory', working free of charge, not only produces food, but also absorbs nitrogen from the air, making it available for plants in exchange for sugars (nitrification). It collects minerals and micronutrients from sand, clay, rock. It transforms CO₂ into organic matter, which again feeds the plant.

It is upon this zone (the equivalent of five cows in weight of microbial life per hectare), that humanity depends. It is also this zone that is ignored in traditional agriculture. Once a 50cm deep plough drills through the web of fungi that are crucial to the health of the plants with which they grow, this symbiosis between plant roots and fungi that we are reliant on is gone.



Once ignored and disturbed, it only slowly comes back and regenerates. It takes time and effort to restore soil balance and re-establish the symbiosis between plants, insects, earthworms, bacteria and fungi. This is what regenerative farming is about: embracing natural capital solutions, adding tools that help the natural system to thrive. It is also about finding a balance between chemistry, physics and biology in a way that we are not taking more from the soil than we give back.

Making strides

Van Lanschot Kempen contracts with farmers around the world, ranging from potato growers in the US, organic vegetable farmers in Denmark to tree nut growers in Australia on detailed SDG goals. All these farmers align on these goals and moreover demonstrate that regenerative practices can offer significant benefits whether they be financial, ecological or in terms of local welfare.

While farmers are making strides, the ball can't be solely in their court. Change must come from customers as well, playing a more active role, demanding healthier food and a healthier environment.

A bright spot is that retailers and food producers are already responding to the customers requests. A large number of big producers have created elaborate regenerative food programs, with clear targets, where farmers are being well compensated for signing up to them. Regenerative is slowly becoming the norm for many food producers, and for retailers who are creating their own brands and standards.

In addition, the web around the farmers, that facilitates the transition to regenerative practices – ranging from universities, practical schools, advisors to machine & equipment

providers and manufacturers of seed and plant materials – is growing. Investments in the necessary technology and know-how is increasing heavily. Finally, accountants and auditors are also contributing strongly by training audit staff to certify regenerative systems and outcomes to combat green washing and make it stick.

It requires an entire new ecosystem to be successful. At Van Lanschot Kempen we engage actively not only with farmers but very much also with the most relevant parties and partners up and down the value chain.

Potential for attractive returns

Institutional capital can play a significant role in expediting the transformation of agriculture to a regenerative system. This is not philanthropy, where returns are secondary. Investing in regenerative farms and practices is a long term real asset activity, where financial returns and sustainable returns go hand in hand. For instance, successful farmers can demonstrate how regenerative farming can have a positive impact on bottom-line profitability. Increasing soil organic matter, as an example, can lead to a reduction in synthetic inputs, causing costs of operation to go down and margins to increase.

Thus for investors, there is a long term potential for attractive revenue returns and capital growth from a healthier, more durable agricultural system serving generations to come.

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