

Restore Africa Funds on the importance of regenerative agriculture

 By [Robin Fredericks](#)

25 May 2023

We chat with Nic van Schalkwyk, director of Restore Africa Funds as he discusses the importance of regenerative agriculture and how Restore Africa Funds is working to make a difference. He also shares his insights on the future of the industry and what it will take to achieve widespread adoption.



Nic van Schalkwyk, director, Restore Africa Funds

■ ***How do you define regenerative agriculture?***

A sustainable form of agriculture in which one farms with nature, rather than against it. Regenerative agriculture is about improving soil health, which in turn will provide a whole host of ecosystem goods and services. All of this will cause a much-reduced dependence on chemicals and other external inputs and has the potential to sustain, and even increase, yields in a sustainable manner while improving the farm's resilience to climate extremes.

It involves the following practical applications; minimum soil disturbance (both mechanical and chemical), species diversity, keeping the soil covered, having a living root in the soil year-round and appropriately integrating livestock.

■ ***Can you share some tips for transitioning to regenerative agriculture?***

Be pragmatic and patient. Years of unsustainable practices and damage cannot be fixed overnight. One needs to slowly wean the agricultural system off excessive chemical support and be prepared for a potential transition period where some yields, and even profits, may be lower while the system heals and the natural ecosystem in the soil regenerates. Each farm is also unique, the transition process should be guided by the farm's current state, context and abilities.

Agriculture, however, is from time past to time future the one sector that knows it is here for the long haul – it is an inter-generation industry. That is why family farms also often transition from father to son/daughter through natural succession. A farmer that would like to offer his children the opportunity to farm the same land parcel has to farm with soil, and soil

carbon, and invest in that to reap the upside in future.

▣ ***How does Restore Africa Funds support smallholder farmers looking to adopt this sort of practice?***

In the broader Restore Africa Funds ("RAFFs") ecosystem, there are many smallholder and family farming projects that have been very successfully implementing conservation and regenerative agriculture ("CA/RA") for many years. Working primarily in a study group environment where the lessons learned are shared amongst smallholder farmers from the same contexts.

Training also takes place at the study groups with relevant experts providing input, especially at the start, to help the community of smallholder and family farmers start on the road of regeneration. RAFFs aim to bring more of these farmer projects off the ground in the future.

▣ ***Can you provide examples of successful regenerative agriculture projects supported by Restore Africa Funds?***

To mention some examples, a regenerative almond orchard in the Overberg where the rows are wider than usual and animals can be appropriately integrated with the orchard once the trees are mature enough. For instance, sheep in mobile pens can be moved through the orchard to graze on the available fodder in between the rows and help improve soil health by spreading manure and contributing to ecosystem regeneration.

Similarly, chickens can also be added to the rotation. All of this improves the soil health, reduces the need for chemical input, strengthens the ecosystem and creates additional income streams for the farm.

Another project example is a dual land-use solar PV plant outside Montagu, for renewable energy generation and sheep grazing on the same piece of land. The solar panels' layout is optimally configured to allow the integration of sheep/lambs grazing in small portable camps for high-density, non-selective and time-controlled grazing. The solar panels also provide shade to the sheep/lambs, having a solar panel structure per grazing camp.



Source: [Freepik](#)

■ ***What are the economic benefits of regenerative agriculture and how can they be maximised?***

- Reduced chemical inputs (fertiliser, pesticides, herbicides, etc.) required on the same hectares that reduces the stress on the environment and which reduce costs significantly. This is just a win-win scenario on all fronts.
- Sustained, and most often, increased yields due to ecosystem goods and services contributing to successful yields, once the soil health is restored.
- Since one of the basic principles of regenerative agriculture is the diversification of the farm (such as crop diversity and rotations and the integration of animals) there is naturally a stacking of income streams and an optimal utilisation of the farm, within the bounds of what is environmentally sustainable. By layering or stacking, the income streams through the introduction of a suite of cash-generating opportunities, the biodiversity in both the social and the natural system is enhanced.
- Regenerative agriculture also requires fewer kW's on-farm, so smaller tractors can be bought, less fuel is consumed, and less wear-and-tear experienced (this prolongs useful lives of farming equipment)

Maximising these economic benefits will require completing the regeneration process in full. Not partially implementing the mentioned practices, but gradually adopting all the various practices for an optimal farming enterprise.

■ ***What are some of the common challenges faced when transitioning to regenerative agriculture practices and how does Restore Africa Fund help?***

Some of the common challenges faced are:

- **Adopting the mind shift of CA/RA.** Many farmers find the initial introduction to CA/RA as "too different" to what they have been implementing for years, often generations. Fundamentally changing the principles on which you farm is not a light decision. The pioneering CA/RA farmers, the ones who took the risk themselves and transitioned over the years, have been a great help in that regard. We all know seeing is believing. For hesitant farmers, the practical implementation and resultant outcomes of CA/RA on successful pioneer farms, have been significant.

- Once the mind-shift gap mentioned above has been breached, then **access to capital** is the next challenge. Many farmers want to make the transition to CA/RA but they do not have the financial means to do so. Although CA/RA is more profitable and sustainable in the long run, it requires most often a change in equipment (e.g. no-till planter required), infrastructure upgrades (e.g. water reticulation system on-farm for optimal integration of livestock), the purchase of livestock and to fund any possible shortfall during the transition process.
- **A lack of sustainable and objective advice** sought. Farmers often have so many advisors, but each one drives its own mandate and pockets. The result is that strategic planning towards a sustainable farm, that will still be operational for future generations, is unfortunately not often a consideration for the different advisors and therefore takes a back seat when it comes to decision making and proposed plans.



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Robin Fredericks 28 Apr 2023



RAFFs assist in all of the above challenges. RAFFs provide patient, equity capital to approved applicants, to fund the adoption of CA/RA. RAFFs and our broader ecosystem are involved in hosting/sponsoring farmer days/conferences where the benefits, challenges and practicalities of CA/RA are discussed to raise awareness and drive the narrative of CA/RA in South Africa. Many demonstrative trips and discussions on the pioneering CA/RA farms are also held to help interested farmers in seeing what CA/RA practically looks like.

Part of the RAFFs ecosystem is Integra Link. An advisory company specifically focussed on CA/RA. Not only do they provide input to RAFFs to be used in the financial modelling and practical application aspects of our projects; they also assist farmers in designing a tailor-made CA/RA implementation plan specific to a farm. The idea is to have access to mentors of CA/RA during a process that new adopters of CA/RA may find daunting.

🔴 ***Tell us more about the role of regenerative agriculture in climate change mitigation***

With respect to mitigation, the regenerative farm's carbon footprint is significantly lower than that of its conventional counterpart due to the reduction of chemical inputs as well as energy requirements. The regenerative farm also sinks carbon into the soil. It has a clear focus on "planting the water and carbon in the soil where it matters". However, regenerative agriculture not only plays a role in climate change mitigation, but also climate change adaptation.

Regenerative agriculture increases the farm's resilience to climate extremes making it more easily adaptable to dry spells and extreme heat days, for example. As soil health improves and a functioning ecosystem is restored on farmland, the soil's ability to sequester carbon also increases. Large regenerative farms can be carbon sinks if the principles of regenerative agriculture are adhered to and very importantly, no tilling is applied.

By tilling the soil, aside from all the various other detrimental effects it creates, also causes the release of all the stored carbon in the soil back into the atmosphere.

🔴 ***How can companies in the food industry incorporate regenerative agriculture practices into their supply chains?***

The food value chains have a critical role to play as an intermediary between the farmer and the consumer. Driving the narrative for healthier food that is produced in a more sustainable manner should be a part of everyone's mandate along the supply chain. The supply chain can support regenerative agriculture by sourcing food produced regeneratively and positioning it as healthier food produced in a sustainable manner, which it is.

Consumers ultimately determine the demand, but the time is right for introducing more sustainable products. Consumers are becoming ever more aware of what they eat and where it comes from. Now, more than ever before, can one build on the slow momentum that is already being seen in the market.

▣ ***What resources or training does Restore Africa Funds provide to help farmers and companies transition to regenerative agriculture?***

In terms of resources, as mentioned before, RAFFs provide equity capital to approved farming applicants to assist in the process of converting to regenerative agriculture. During the entire project period, RAFFs also stay on board to assist with financial management and technically through providing the advisory services of Integra Link on implementing regenerative agriculture on-farm.

Training will therefore take place on-farm through the guidance from Integra Link. The RAFFs ecosystem is also involved and responsible for various farmer days, conferences and demonstrations across South Africa to promote CA/RA awareness and transfer knowledge.

▣ ***What are some common misconceptions about regenerative agriculture, and how can they be addressed?***

1. That regenerative agriculture is not commercially viable or as lucrative as conventional agriculture. This could not be further from the truth. Regenerative agriculture is sometimes the only means of survival for farms. Many of the farms that we model financially, become economically unviable in the next 5 to 15 years – if they continue on their current business as usual. This is due to the enormous cost pressures that farms are under, especially in terms of chemical inputs and a lack of diversification.

When we model these same farms with the application of regenerative agriculture, we see thriving farms over a couple of years. This is due to the significant decrease in chemical inputs, stacking of income streams, improved diversity, increased farm resilience and optimisation of the entire farming operation. Then there is also the fact that most regenerative agriculture operations see increased yields, be that in crop production or carrying capacity of their grasslands. If one can afford the transition, regenerative agriculture is by far the more sustainable option, environmentally and financially.

2. That regenerative agriculture means zero application of chemicals. Regenerative agriculture refers to a broad spectrum of more sustainable agricultural practices. Organic farming sits on one end of the sustainable agriculture spectrum when it comes to chemical application, as organic farming uses no chemicals – it is thus a very specific niche on the mentioned spectrum.

This, however, is not always possible, especially during the transition years. Being pragmatic is very important. Certain farms are able to gradually decrease their chemical input of fertiliser by 50% for instance. This already has a significant environmental and financial impact. The healthier your system becomes, the more ecosystem goods and services you will receive and the less you will depend on chemical inputs.

3. It is a process that can happen overnight. This precise thinking has been the downfall of some farmers attempting to transition to more regenerative practices without the correct advice and implementation plan. Old practices should be gradually phased out as new and improved regenerative practices take place.

For instance, if your farming operation is chemically dependent as it has been for years, one cannot withhold all chemicals during the next planting season and expect positive results. The natural health and resilience of the underground ecosystem first needs to be restored, which takes time. One should follow a phased approach.

4. That regenerative agriculture is pseudo-science. This cannot be further from the truth. There are many examples of how regenerative agriculture principles have been applied with immense success. Both in South Africa and across the globe. Many peer-reviewed academic papers have been published on various regenerative agriculture trials and commercial applications.

▣ ***What does the future of regenerative agriculture look like?***

For us, it is instead a case of believing regenerative agriculture is the future of agriculture. It has to be. The agricultural sector desperately needs regeneration to ensure a sustainable future. It is crucial for food security in these tumultuous

times that we assist agriculture as far as possible to start the transition to sustainable, regenerative agriculture.

ABOUT ROBIN FREDERICKS

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