THE BUSINESS CASE FOR REGENERATIVE AGRICUTLURE

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Agriculture is one of the most chemical- and resource-intensive industries in the world. Responsible management of land and resources is imperative for farms of every size and scale in order to minimize the impact to natural environments.

Agricultural stewardship is also critical to ensuring the viability of global farmland in the future. The Intergovernmental Panel on Climate Change (IPCC) estimates that agriculture using conventional tillage can erode soil 100 times faster than it forms. In 2017, the United Nations and the Food and Agriculture Organization reported that roughly one-third of the world's topsoil – the topmost layer of soil in which all plants grow – had already been degraded, and that if soil continues to be destroyed at the current rate the world may have only 60 years of productive harvests remaining.[1]

Compounding the loss of topsoil is the fact that many current farming practices cause carbon dioxide to be released from soil storage reservoirs into the atmosphere, further accelerating climate change. The IPCC estimates that agriculture and land use contribute about 23% of total anthropogenic (caused by human activities) greenhouse gas emissions annually.[2]

The effects of climate change – extreme weather, heat and drought pressure, migrating pests and shortening growing seasons, among others -- pose serious risks to the global food supply. Smallholder farmers, who provide up to 80% of the food supply in Asia and Sub-Saharan Africa, are especially vulnerable, being likely to be both more affected by and less equipped to adapt to these changes.[3]

WHY REGENERATIVE?

At the intersection of sustainability, conservationism and climate action, regenerative agriculture presents a solution that can help mitigate climate change, create more productive soil and support a more resilient food system. With core tenets emphasizing building soil, minimizing inputs and enhancing biodiversity, regenerative agriculture presents an opportunity for farmers to shift to a mindset of working with instead of against nature to support the health and productivity of their farm.

Regenerative agriculture encourages farmers to invest their time and resources into restoring their most valuable asset: their land. While transitioning a farm to regenerative practices takes considerable planning and deep local knowledge, it provides farmers with the tools to plan for long-term success and mitigate future threats to their livelihoods.[4]

Regenerative practices can also help farmers maintain or increase crop yields using considerably fewer inputs and drastically improve the farm's overall profitability. In a recent study, researchers found that regenerative farming systems yielded 78% higher profits than conventional ones.[5]

In light of the challenges facing the global agriculture industry, and the solutions regenerative agriculture can offer, it seems natural that the recent surge of enthusiasm and support for regenerative agriculture is making its way from the fringes of the food industry onto the main stage.[6] Along with food giants like General Mills and Wal-Mart, who have committed significant resources to focus on healthy soil in their supply chains, other brands are pushing their suppliers to adopt more regenerative practices to both build resilience to climate change impacts and to reduce emissions by enabling soil to capture and store – rather than release – carbon dioxide.

Consumers, too, are paying attention to the practices that go into their purchases. Two out of every three consumers in the United States, UK and China said that companies should invest in sustainability, including accountability in the supply chain.[7] While regenerative remains a relatively new term in the marketplace, a 2019 survey showed that 55% of overall consumers are interested in learning more, and that young people – tomorrow's buying force – were two to three times as likely as older generations to be aware of regenerative.[8]

TRENDS THAT TURN INTO MOVEMENTS

Over the past several decades, the food industry – specifically in the U.S. market – has seen many trends evolve into movements, some of which have had serious staying power with consumers.

From organic to non-GMO to transitional organic, these trends are becoming staples in not only consumers' vernacular but also in their market baskets. American consumers are filling their grocery carts with more organic items than ever before, according to the Organic Trade Association's 2019 Organic Industry Survey. Organic sales in the U.S. reached a new record of $52.5 billion in 2018, up 6.3% from the previous year.[9] Organic food now represents nearly 6% of the market share in the U.S. – with organic produce at 15% of all fruits and vegetables sold -- and has seen solid growth above the conventional industry for the last decade.[10]

Today's consumers continue to back up their values with their dollars – about 90% of millennials are willing to pay more for organic products.[11] And as organic shifts from niche to mainstream, consumers are pushing the industry to tackle other responsible sourcing challenges such as transparency and animal welfare.[12]

Regenerative practices offer consumers a new opportunity to play an active role in tackling climate change through their everyday purchases. As individuals' concern about climate change deepens, regenerative products are well poised to become the next big thing to take over grocery store shelves.

For brands, regenerative sourcing presents an opportunity to define themselves as leaders in the space and to address the ever-increasing consumer demand for sustainable products. The companies that commit to regenerative early on will undoubtedly find success in their business as demand continues to grow.

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THE REGENERATIVE MOVEMENT

Activity in the regenerative space continues to accelerate, with NGOs, service providers and brands coming together to build a global movement and make regenerative the new norm.

A need to add credibility to claims of regenerative practices by farmers and brands is inspiring the creation of new standards and certification programs to fit different approaches to regenerative. For example, NSF International has worked with regenerative pioneers such as Patagonia, the Rodale Institute and Dr. Bronner's to launch the practice-based Regenerative Organic Certification standard, which defines regenerative farming as incorporating not only soil health but also animal welfare and social fairness into farming practices.[13]

Verifiable outcomes-based standards are also gaining traction. NSF worked with leading NGOs Green America and The Carbon Underground, along with over 150 committed stakeholders, to develop the Soil Carbon Index, which measures critical indicators of soil health in order to drive adoption of soil-building regenerative practices and mitigate climate change.[14]

Other third-party programs and internal brand standards are gaining popularity as regenerative principles are adapted to fit the wide variation of farms, supply chains, geographies and cultural contexts involved in the global agricultural network.

As the regenerative movement continues to gain hold, the opportunities – and expectations – for farmers and brands to get involved will grow exponentially.

THE FUTURE IS REGENERATIVE

The continuous rise of global emissions coupled with the loss of one-third of the world's topsoil warrants a much-needed shift away from conventional farming practices to ones that focus on building soil health.[15]

Regenerative agriculture is a necessary next step in global efforts to reverse climate change in addition to safeguarding global food security. It offers a solution for farmers and companies to grow their business and provides consumers with a new tool to voice their values through purchasing power.

Companies, farmers and consumers alike can contribute to the creation of a more resilient and sustainable future by re-thinking our current food system and supporting a regenerative one.

REFERENCES

1 https://www.scientificamerican.com/article/only-60-years-of-farming-left-if-soil-degradation-continues/

2 https://www.ipcc.ch/srccl/chapter/summary-for-policymakers/

3 http://www.fao.org/fileadmin/templates/nr/sustainability_pathways/docs/Factsheet_SMALLHOLDERS.pdf

4 https://www.johnson.cornell.edu/article/emerging-markets-institute/research/emi-at-work/47081/patagonia-case-competition-how-regenerative-agriculture-can-build-climate-resilience-in-emerging-and-frontier-economies/

5 https://www.ncbi.nlm.nih.gov/pmc/articles/PMC5831153/

6 https://www.npr.org/sections/thesalt/2018/04/09/597617822/a-grass-roots-movement-for-healthy-soil-spreads-among-farmers

7 https://www.foodbusinessnews.net/articles/13554-top-trends-driving-the-global-food-industry

8 https://www.world-grain.com/articles/12098-consumers-show-interest-in-regenerative-agriculture

9 https://ota.com/resources/organic-industry-survey

10 https://ota.com/news/press-releases/20699

11 https://www.nielsen.com/us/en/insights/article/2018/was-2018-the-year-of-the-influential-sustainable-consumer/

12 https://www.foodbusinessnews.net/articles/13554-top-trends-driving-the-global-food-industry

13 https://regenorganic.org/

14 https://www.soilcarboninitiative.org/

15 https://www.theguardian.com/us-news/2019/may/30/topsoil-farming-agriculture-food-toxic-america

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