



The Earth Has Not Stopped Working

A Production-Agriculture Response to Environmental Fatalism, and What PQNK Restores

A PQNK Knowledge Paper

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Abstract

A message shared widely on social media, drawing on James Lovelock's Gaia Hypothesis, argues that the Earth regulates itself like a living body, that it has survived five mass extinctions and will survive us, and that the real question is whether we can survive the corrections a stressed planet will impose. Its closing conviction is that humanity is not separate from nature, that a war on the planet is a war on ourselves, and that what remains is to await nature's revenge. This paper accepts the first part and takes issue with the last. Drawing on more than fifty years of work in production agriculture, it argues that our central error was not simply that we consumed too much, but that we began redesigning natural systems before we understood how they function, and that agriculture is the clearest example. A natural ecosystem captures solar energy and atmospheric carbon continuously, keeps living roots in the soil, recycles its own biomass, maintains biodiversity, manages water through a biologically structured soil, and feeds one generation of

life from the last. Industrial agriculture interrupted every step of that cycle and replaced the lost functions with purchased inputs. PQNK, the Natural Ecosystem Science of Production Agriculture, was built by asking not how to make that system slightly less damaging but how nature produces without tillage, fertiliser factories, pesticides or flood irrigation, and what happens when those operating principles are restored inside a working farm. The field results have been substantial and quick to appear. The position here is therefore not fatalism but its opposite: nature has not stopped working, we have repeatedly prevented it from working, and when the obstructions are removed the recovery begins surprisingly fast. The paper closes on a broader measure of the goal, that agriculture should produce abundant, nutritionally dense and diverse food with far less pressure on water and other resources while leaving behind a biologically stronger system, and on a single correction to the forwarded message: the answer is not to fear nature's revenge, but to stop fighting nature and learn again to produce with it.

1. The message, and where it is right

A message has been circulating widely, and a friend passed it to me. It is built on the Gaia Hypothesis that James Lovelock proposed in 1970 and developed with Lynn Margulis: that the Earth is not a dead rock carrying life on its surface, but a self-regulating system in which the atmosphere, the oceans, the soil and the temperature are held within the range life requires by life itself, the way a body holds its own temperature without being told to. The message recounts, correctly, that the planet has run this regulation for billions of years without a manual, that it has recovered from events that vaporised oceans and from the Great Oxygenation Event in which the pollutant flooding the atmosphere was the oxygen we now breathe, and that it will outlast us. Its conclusion is stark: the Earth does not need saving, we do; the planet does not negotiate; when a system is pushed too far it corrects, and it corrects with ice ages, floods and extinction events rather than warning letters.

The closing conviction of that message is one I share without reservation. We are not separate from nature. We are nature. You cannot poison the water and keep your blood clean, or burn the forest and keep your lungs clear, or strip the soil and keep your food alive. Everything done to the Earth is done to the body that depends on it.

Where I would look at it from a different angle is its final mood. The message ends in resignation, that all that is left is to await the correction, and that we deserve it. I do not think that is where the evidence points, at least not from the part of the system I have spent my working life inside.

2. A different reading of the mistake

For more than fifty years I have worked in production agriculture, first learning to run the industrial system at national scale and then spending decades understanding why it fails. That journey has convinced me that our largest error was not, in the first instance, that we used too many resources. It was that we began redesigning natural systems without first understanding how they function.

Nature does not leave soil bare. It does not invert and pulverise the soil profile every season. It does not stand water on the land until the air is driven out of it. It does not strip away the living cover and then, when the ground stops producing, restore the lost fertility from a bag. A natural ecosystem does something entirely different, and it does it continuously.

3. What a natural ecosystem does that agriculture stopped doing

Reduced to its working parts, a natural terrestrial ecosystem performs a small number of operations, all the time, in combination. It captures solar energy and atmospheric carbon through green plants, every day there is light. It keeps living roots in the soil across the year, so the soil biology is fed

continuously rather than in pulses. It recycles its own biomass: leaves, stems, roots and the bodies of animals and microbes are decomposed in place and become the raw material of the next cycle. It maintains biodiversity, so that pest regulation, pollination, decomposition and nutrient transfer are carried out by the community rather than purchased. It manages water through the soil itself, an open, aggregated, biologically structured soil that absorbs rain, holds it, and releases it to roots and to the air on a schedule the ecosystem sets. And it feeds one generation of life from the last, without an external supplier.

Industrial agriculture interrupted each of these in turn. Tillage broke the soil structure and exposed its carbon. Bare fallow ended the year-round capture of light and carbon. Residue removal and burning ended the recycling of biomass. Chemical pest control replaced the biological community that regulated pests. Flood irrigation substituted for the water-holding capacity that the soil had lost. And synthetic fertiliser was brought in to supply, from a factory, the fertility the biology used to generate. Every substitution looked like progress. Together they replaced a system that funded itself with one that has to be re-supplied every season.

4. The question PQNK asked

PQNK, the Natural Ecosystem Science of Production Agriculture, did not begin by asking how to make conventional agriculture slightly less damaging. It began with a different question: how does nature produce continuously, in quantity, without tillage, without fertiliser factories, without pesticides and without flood irrigation, and what happens if those operating principles are restored inside a managed farm that still has to feed people and pay its way?

The answer, worked out over decades of field trials across Pakistan's growing regions, is a defined set of practices: stop disturbing the soil, stop standing water on it, keep it permanently covered with living plants and their residues, encourage biodiversity above and below ground, manage the soil's water and air together rather than flooding and drying it in turn, and leave every root system in the ground after every harvest. The field results, crop by crop, have been substantial, and they appear faster than the conventional expectation that soil takes generations to rebuild.

5. Agricultural land as the interface

There is a reason agriculture is the right place to act, and not only because it is my field. Farmed land occupies an enormous surface, the largest managed interface there is between the atmosphere, the soil, the water cycle and living systems. What happens on that surface is not marginal to the planetary balance the forwarded message describes; it is a large part of it.

On that interface, the same functions the natural ecosystem performs are available to a farmer who stops blocking them. Every living crop captures atmospheric carbon. Every covered soil surface conserves water and moderates its own temperature. Every living root can take part in rebuilding the soil community around it. Crop residues, treated as biological capital rather than waste, become next season's fertility. Biodiversity performs the pest regulation for which agriculture made itself chemically dependent. Even the morning dew that most farmers never think about becomes useful when it settles on a permanently mulched field: the mulch intercepts that atmospheric moisture, cuts daytime evaporation, holds the soil temperature in the range soil life needs, and feeds the organisms beneath it.

6. Nature did not stop working; we prevented it from working

This is the heart of the disagreement with the message's fatalism. The problem is not that the natural system has stopped functioning and is now beyond reach. The problem is that we have repeatedly obstructed it, in the same few ways, for a long time. Obstruction is reversible. When the disturbance stops, the cover goes back on, the roots stay in, and the water and air are managed together, the biological community re-establishes itself, and it does so surprisingly quickly. A degraded field is a suppressed system, not an extinguished one. That is a very different situation from waiting for an ice age.

7. One system, several crises, and we eat the result

Soil degradation, water scarcity, climate instability and declining food quality are usually treated as separate emergencies with separate departments. They are not separate. They are the connected consequences of disrupting one system in the same way across most of the world's farmland. And the consequence reaches the body directly, because in the end we eat what that system produces. A production model that mines its soil, over-draws its water and dilutes the nutritional content of its harvest is not a farming problem alone; it is a public-health and national-security problem that happens to begin in a field.

8. A broader measure of the goal

This is why our recent work has led to a wider definition of agricultural productivity. The objective is not more tonnes from an acre. It is abundant, nutritionally dense and diverse food, produced with far less pressure on water and other resources, and leaving behind a biologically stronger production system, one that is more capable of producing the next crop than it was before this one. In the phrase we have started using for it: we do not grow kilograms, we grow nutrition. Kilograms remain a necessary measurement. They are no longer the final one.

9. Conclusion

The forwarded message is right that we are not separate from nature, and right that a system pushed too far will correct itself without asking permission. I would add one sentence to it. The answer is not to fear nature's revenge. It is to stop fighting nature and learn again how to produce with it. The natural system that regulates the planet also runs the soil beneath every farm, and it has not gone anywhere. It is waiting for the obstructions to be removed. Demonstrating that, field by field and crop by crop, is what PQNK is for.

References

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- Lovelock, J. E., and Margulis, L. (1974). Atmospheric homeostasis by and for the biosphere: the Gaia hypothesis. *Tellus*, 26(1-2), 2-10. doi:10.1111/j.2153-3490.1974.tb01946.x
- Companion Pedaver Knowledge Paper: The Plant Does Not Produce for Humans Alone: Carbon, Biological Production, Harvest and the Real Meaning of Agricultural Productivity.
- The PQNK practices and field results referred to here are documented across the Pedaver Knowledge Papers and in PQNK: The Natural Ecosystem Science of Production Agriculture.

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This paper is a written response to a message forwarded to the author on social media. The forwarded text is summarised, not reproduced; its author is unknown to Pedaver.

PQNK (pronounced “picnic”), the regenerative and sustainable Pristine Organic Farming System, is grounded in Natural Ecosystem Science. It employs perennial biodiversity, protects soil with organic mulch, and avoids practices such as water inundation, tillage disturbance and leaving soil bare.

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