

Viewpoint: Regenerative agriculture has many different definitions. Here are 5 main principles — and whether they stand up to scrutiny

What is regenerative agriculture? Why is it different from [sustainable agriculture](#)? And how do I reconcile what practitioners of this system are claiming with the scientific evidence?

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In my past explorations of regenerative ag, I had found that there are multiple versions of these principles, each with a different flavor. Rodale [Institute] and partners offer their strictly [organic version](#) with a new certification program attached. [Project Drawdown](#) includes regenerative ag in its plan to reverse global warming, and California State University at Chico has their [regenerative ag initiative](#). Table 1 shows [regenerative agriculture farmer and spokesperson Gabe] Brown's principles/practices compared to these other versions, and to [conservation agriculture](#).

Table 1. Principles, Practices, and Restrictions of Regenerative Agriculture

Principles/Practices	Gabe Brown
Limit tillage	✓
Protect the soil	
Plants or crop residues on soil surface	✓
Controlled traffic	
Maintain living roots in the soil	✓
Increase biodiversity	
Diverse crop rotations	✓
Multi-species cover crops	✓
Cover crops	
Inoculation of soils	
Integrate livestock	✓
Restrictions	

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We are to believe that biodiversity-powered microbes free up large amounts of phosphorus, fix large amounts of nitrogen from the air, while plants produce 31 tons of biomass in a short North Dakota season, while also producing harvested crops and livestock?

I cannot say that this scenario is impossible, but I find it highly improbable, because if this is true, then it means that science has missed an astounding, extraordinary process.

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However, there is another principle here: extraordinary claims require extraordinary evidence. What counts as evidence are peer-reviewed publications in scientific journals – I have looked for the evidence to support the claims of regenerative agriculture. What I have found are lots of YouTube videos, testimonials, articles and interviews. None of these sources are extraordinary evidence.

[\*\*This is an excerpt. Read the original post here\*\*](#)