



LSP *Myth Buster* #61

An ongoing Land Stewardship Project series on ag myths and ways of deflating them.

Updated: May 2022

→ **Myth: Carbon Trading is Ag's Climate Change Silver Bullet**

→ **Fact:**

At first blush, it seems like a match made in heaven: just as we are learning more about the ability of certain farming practices to increase soil health, the government and industry are proposing paying farmers for building organic carbon, a key element in healthy soil. The idea is that the more carbon we capture and store under our farm fields, the less that will end up in the atmosphere contributing to climate change.

A “carbon market” sets a cap on allowable greenhouse gas emissions, and in order to stay below that cap, major polluters such as utilities, factories, and fuel producers can buy “credits” to offset their own emissions. The concept behind such an arrangement is that when a price is placed on pollution, polluters have an economic incentive to reduce emissions. There are only so many “Get Out of Jail Free” cards even the wealthiest polluter can afford to buy, goes this thinking.

Now enter farming and the buzz being generated by the ability of practices like no-till and cover cropping to build and store organic carbon. In 2021, the U.S. Senate passed the Growing Climate Solutions Act, which would help create a voluntary market in which polluters would offset their emissions by paying farmers to use practices that store carbon in their soils and/or reduce emissions in the first place. Backers of the bill, which hasn't been passed by the U.S. House, say it has the potential to make agriculture a major player in the fight against climate change.

This has some farmers excited. Of the 1,095 farmers who completed the 2021 Iowa Farm and Rural Life Poll, 53% said they would participate in “programs that pay farmers to capture carbon through soil health practices.”

Unfortunately, there are indications that, as they currently stand, carbon markets may not benefit farmers or the environment as much as hoped. It turns out emissions credit trading has had an extremely spotty record in terms of reducing greenhouse gases. For example, Carbon Market Watch has documented how the “Clean Development Mechanism,” which was set up under the 1997 Kyoto Protocol to allow developed

countries to buy emissions reductions from developing countries in the form of credits, has produced few environmental benefits since most of the credits were issued from projects that would have gone forward anyway. In addition, since polluting facilities are often located near low-income residents — many of which are communities of color — carbon trading can cause social justice problems. The polluter may still be emitting lots of pollutants close to home, even if they are buying credits to sequester greenhouse gases elsewhere.

The World Bank estimates that to meet the climate goals set out in the Paris Agreement, emissions credits need to be between \$40 and \$80 per credit (one credit permits the emission of one ton of carbon dioxide or the equivalent in other greenhouse gases). Compare that to the going price for credits in the Regional Greenhouse Gas Initiative, a carbon market encompassing nine states in the Northeast United States. Credits there sold for between \$5 and \$6 in 2019; most recently, emissions credits were valued at \$13.50 per ton by the Initiative, according to the Associated Press.

With credits trading at such low prices, it's clear who will benefit most from the carbon market: polluters who can afford to keep polluting, and large cropping operations that can make use of economies of scale to cash in on yet one more low-margin commodity.

And it's extremely difficult to consistently measure just how much carbon a farm is storing. It was only relatively recently that scientists were able to determine that some farms were building soil organic carbon at all, and now they're grappling with just how much is being created and stored using particular practices. Various measurement tools produce widely varying results. It turns out, for example, that because soil samples are often not taken deep enough, practices like no-till are given inflated credit for the amount of carbon they can sequester.

Finally, the kind of carbon sequestration taking place as a result of practices like cover cropping and no-till can be fleeting. These practices aren't creating

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the kind of deep, long-term carbon sink that perennial plant systems like grasses and trees can provide.

Part of the problem with the current excitement around carbon markets and farming is that it's centered on how specific practices can provide a specific amount of trapped carbon. This commodification of carbon ignores the overall benefits an integrated, regenerative system can provide — both to individual farmers and the environment.

Earlier this year, a paper in the *Proceedings of the National Academy of Sciences* reported that an ongoing 29-year-old field experiment in Wisconsin showed that perennial pastures managed with rotational grazing accumulated 18% to 29% more soil organic carbon than annual cropping systems, even when cover crops and minimum tillage were used in the annual

systems. Building such a consistent, reliable carbon sink requires supporting integrated systems over the long term, rather than rewarding farmers with low payments for isolated practices that may or may not be present on the land from season-to-season.

Soil health expert Ray Archuleta argues that utilizing carbon payments to promote soil health practices is too restrictive for a natural resource that is one of the most diverse on the planet. "Instead, we should do biodiversity payments," he says.

The Land Stewardship Project and its allies are pushing for a 2023 Farm Bill that supports proven conservation initiatives like the Conservation Stewardship Program and the Environmental Quality Incentives Program. Such programs can give farmers the incentive to build healthy soil over the long haul, rather than produce a low-margin commodity in a marketplace ruled by short-term thinking.

More Information

- The Institute for Agriculture & Trade Policy/National Family Farm Coalition fact sheet, "Why Carbon Markets Won't Work for Agriculture," is at <https://www.iatp.org/documents/why-carbon-markets-wont-work-agriculture>.
- The *Proceedings of the National Academy of Sciences* paper, "Persistent soil carbon enhanced in Mollisols by well-managed grasslands but not annual grain or dairy forage cropping systems," is at <https://www.pnas.org>.
- Check out LSP's priorities for the 2023 Farm Bill at <https://landstewardshipproject.org/federal-policy>.

More Myth Busters

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