

One American investigation into the potential for storing CO₂ on agricultural lands is taking place in California. Soil scientist Whendee Silver of the University of California, Berkeley, is conducting a first-of-its-kind study on a large cattle farm in the state. She and her students are testing the effects on carbon storage of the compost that is created from waste – both agricultural, including manure and cornstalks, and waste produced in gardens, such as leaves, branches, and lawn trimmings.

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In Australia, soil ecologist Christine Jones is testing another promising soil-enrichment strategy. Jones and 12 farmers are working to build up soil carbon by cultivating grasses that stay green all year round. Like composting, the approach has already been proved experimentally; Jones now hopes to show that it can be applied on working farms and that the resulting carbon capture can be accurately measured.

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It's hoped in the future that projects such as these will demonstrate the role that farmers and other land managers can play in reducing the harmful effects of greenhouse gases. For example, in countries like the United States, where most farming operations use large applications of fertiliser, changing such long-standing habits will require a change of system. Rattan Lal argues that farmers should receive payment not just for the corn or beef they produce, but also for the carbon they can store in their soil.

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Another study being carried out ...