

C-Lock

can help you participate in soil carbon credit trading



Dr. Patrick R. Zimmerman
C-Lock Corporation

233 Westberry Trails
Rapid City, SD 57709

Phone: 605-431-8841

E-mail: clock@rushmore.com

Website: <http://www.hpcnet.org/clock>



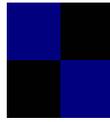
If you're wondering:
“Can I market soil carbon credits from my land?”
consider the following questions:

1. Do you have fields formerly cropped that were enrolled in the CRP since 1990? Are they still enrolled?
2. Do you have fields that you have converted to no-till or reduced-tillage management since 1990? Fields converted from summerfallow to continuous cropping?
3. Do you have pasture land on which you have implemented improved grazing management (rotational grazing, reduced livestock numbers) since 1990?
4. Have you implemented any closed manure di-gestors or other types of improved manure management for your confined livestock since 1990?
5. Have you planted trees or implemented other conservation improvements on your land since 1990?

If you answered “yes” to any of these, you may be eligible to market carbon credits from your land. Additional helpful, though not required, criteria for registration in the C-Lock system:

1. You have good management records for your land at least as far back as 1990 and at least a general idea to 1980 or earlier.
2. All land management changes are well-documented.
3. You can substantiate your management information with commodity records provided to (e.g.) the Farm Service Agency or other agencies in charge of farm programs in which you participate.

C-Lock CERC Features



C-Lock CERCs are compatible with the most stringent national and international standards for tradable credits. Some of the most important quality criteria that C-Lock addresses include:

- **Verifiability:** Project verification occurs *internally*, through data quality flags and requirements for client documentation of their reported management (e.g., FSA records), *externally*, via third party auditing of the system, and *scientifically*, based on regional data and model validation studies, remote sensing and atmospheric measurements of GHG fluxes.
- **Transparency:** The system is transparent and replicable because it relies on widely-used spatial databases and a model that has been extensively tested and validated in diverse environments. All client data are processed in the same way.
- **Additionality:** The C-Lock approach factors out non-management influences such as weather on soil carbon storage, to ensure that measured sequestration occurs because of activities undertaken by the landowner.

- **Permanence:** The C-Lock business model allows for carbon leasing arrangements, where producers contract to sequester and store a defined amount of carbon only over the lifetime of the contract.

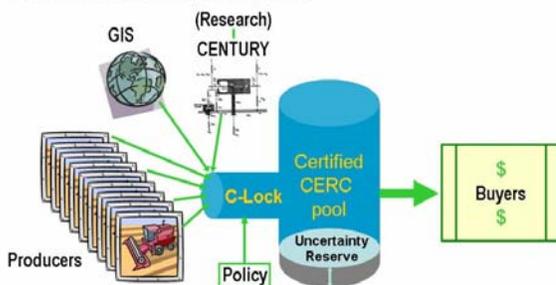
Monitoring and Verification

Because changes in management can affect the size of the carbon stock on a producer's land, it is necessary to periodically verify that the stock defined in his contract is still in place. Field sampling of soil properties is very costly and difficult to implement on the scale necessary to accurately track small changes in the large reservoir of soil carbon. C-Lock minimizes measurement and monitoring costs because it relies primarily on modeling rather than field sampling to estimate changes in carbon stocks. Producers simply update their management records on an annual basis, rerun the model, and receive a new report of accrued CERCs.

C-Lock is a one-stop shop where producers can register their parcels, estimate and certify credits, and aggregate them into a seller's pool, all in the same location, without the intervention of third-party brokers or certifiers.

C-Lock is currently optimized for agricultural sequestration projects, but future versions will be able to estimate forestry and wetland-derived emissions offset credits. The C-Lock framework is also expanding to allow "whole-farm" GHG accounting, via the addition of utilities to estimate GHG emissions due to livestock management, as well as due to energy usage by farm equipment and fertilizer manufacture.

C-Lock, A Tool to Facilitate Trading:



Delivering science to stakeholders

