



Management practices that improve the health of grasslands, for grazing purposes, also improve the ability to sequester carbon.

*Just over the hill may be opportunities to*

# Trade Carbon Credits for Ca\$h

*Story & photo by*  
**TROY SMITH**

How many owners of grazing land would like to earn an extra \$5, \$10 or \$20 per acre? Grazing livestock may not be the only way that landowners can profit from range and pasture. Grasslands can also yield carbon credits — a potential product of good management and a product with profit potential.

John Caveny, an Illinois grass farmer and conservationist, says grasslands are effective tools for carbon sequestration. Caveny also heads Environmentally Correct Concepts Inc. (ECCI), a grasslands management and bioenergy

development company. ECCI has developed methods for measuring how much carbon is sequestered through proper grassland management.

“Carbon sequestration is a fancy term for storage of carbon,” Caveny explains. “Through the natural processes of growth, death and decay, plants scrub carbon dioxide from the air and store carbon in vegetation and the soil. And that stored carbon has monetary value.”

Grade school science class introduced most of us to how, during respiration, plants take in carbon dioxide and expel oxygen. The carbon remains in aboveground vegetation and belowground roots,

and eventually becomes part of the soil. It’s a good thing for soil quality, increasing fertility and water-holding capacity.

Scrubbing carbon dioxide from the air is a good thing, too, since it is one of the so-called greenhouse gases blamed for global warming. With growing concern about increasing levels of carbon dioxide in the atmosphere, carbon sequestration has gained attention as a countermeasure. Much of that attention has focused on the value of forests and woodlands for sequestering carbon. However, scientists say 80% of carbon sequestered by trees is stored in aboveground vegetation. With

deep-rooted perennial grasses, as much as 80% of the carbon is stored below ground. And grasslands can be used for livestock production, including haying and grazing, while they are sequestering carbon.

## **Added value**

Caveny says owners of grasslands will see their range and pasture gain added value when managed for both livestock production and carbon sequestration. It works because management practices that improve the health of grasslands, for grazing purposes, also improve the ability to sequester carbon.

ECCI’s patented processes can quantify actual amounts of carbon stored by grasslands. Through application of these processes, producers can secure certified “carbon credits” which, like any commodity, can be banked, sold or leased. Caveny says a carbon credit represents 2,000 pounds (lb.) of stored carbon, and the removal from the atmosphere of 7,333 lb. of carbon dioxide. It also represents a potential cash crop.

“Think of carbon credits as being like warehouse receipts for grain, with the ability to trade them in the same way,” Caveny says.

Who wants to buy carbon credits? The buyer list may include environmentally conscious individuals, organizations and companies, he says. The biggest players will likely be companies from industries subject to current and coming mandates for reduction of carbon dioxide emissions. Buyers will include utilities that need to offset fossil fuel emissions from coal-fired power plants.

In effect, these buyers of carbon credits would be paying grassland owners to sequester carbon and offset carbon dioxide released into the atmosphere by manufacturing processes. Organizations wanting to leave a legacy or support the ecosystem also will be buyers of carbon credits.

“There are individuals willing to do that, too,” Caveny adds. “For some people, it’s as simple as wanting to offset greenhouse gas emissions from their automobiles.”

Cattle producer Diann Adams sees trading of carbon credits as a market-driven way to reward landowners for good management practices that enhance livestock production, as well as capabilities of grazing lands to return carbon to the soil. Adams and her family raise wheat and cattle near Buffalo, Okla. She also serves as vice chairman of the High Plains Resource Conservation and Development (RC&D) district, which is licensed to apply ECCI technology for measuring carbon credits.

Adams says High Plains RC&D is now in the business of quantifying and verifying carbon credits on

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private and public lands throughout the United States. A network of site-licensees is being developed. These “technicians” will handle producer enrollment and take measurements at the local level.

Adams says the process of banking carbon credits starts with establishing a baseline for each producer’s enrolled

acreage. Then, increases in amounts of carbon sequestered from the atmosphere into forage plants and the soil can be calculated annually, with certified credits issued accordingly. Calculations are based on range and pasture health and plant production, emphasizing the importance of smart grazing management.

Overgrazing won’t put much carbon in the ground, but neither will letting grasslands go without use, Adams says. Studies of acreage enrolled in the government’s Conservation Reserve Program (CRP) showed how grasslands that were not utilized for 10 years had sequestered less carbon than well-managed grazing lands.

“Carbon credit trading should

encourage good grazing management,” Adams states. “It will reward producers that do a good job and provide an incentive for the rest to do better.”

**Rewards to come**

The size of the rewards and incentives remain open to some speculation, because the market for carbon credits is still feeling its way forward. Insiders believe early trade will find a carbon credit, representing one ton of sequestered carbon, worth about \$5 wholesale, Adams says.



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The capability of grasslands to sequester carbon will vary with climatic conditions, soil type, plant communities and management. However, assuming an acre of well-managed western Oklahoma grassland would sequester 1,800 to 2,200 lb. of carbon, Adams foresees producers picking up \$5 per acre from the sale of credits.

“There is no way to tell, for sure, when serious trading of credits will begin,” Adams admits. “Lack of verification has held it back. The new patents provide a science-based process for measuring carbon sequestration and certifying credits. That’s bringing us closer to active trading. As soon as some huge, global company wants to buy a million credits, others will be scrambling to buy them, too.”

Caveny agrees that it is only a matter of time before trading of carbon credits begins to heat up. But foreign buyers may be the first to want carbon credits held by U.S. producers. Manufacturers in other countries, and particularly in Europe, are facing increased pressure to account for greenhouse gas emissions. Caveny expects trading to start this year in Europe and in the United States by the end of 2006.

“By 2007,” Caveny predicts, “we could have a \$10 billion market. That should get our attention.”