Farmer Considerations for Ag Ecosystem Credit Markets

Key Takeaways

- As farmers consider Ag Ecosystem Credit Markets, this paper looks at considerations and the development of good business practices for agriculture ecosystem credit markets and assesses the markets' long-term impacts. This paper should not be taken as legal advice.
- A change to a farm operation could increase costs associated with the operation, depending on the conservation practice adopted.
- Trade-off barriers such as labor availability, education, legal advice, verification costs, additionality requirements, being an early-adopter, and lack of quality broadband can prevent farmers from being able to participate in these markets.
- Enrollment in any ecosystem credit market is a contractual agreement between the farmer and other market participants. These contracts generally commit the farm to conservation practices in exchange for payments or credits for ecosystem services or "natural climate solutions."
- As with any start-up company, there is always a risk of business failure. Contracts should specify a farmer's continuing obligations if the market-operator fails while the farmer is still enrolled.

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Background

As farmers consider Ag Ecosystem Credit Markets, this paper looks at considerations and the development of good business practices for agriculture ecosystem credit markets and assesses the markets' long-term impacts. This paper should not be taken as legal advice. Making any kind of change on a farm creates some kind of cost. Some of those costs are explicit, cash expenses, while others are trade-offs which force a farmer to give up something in order to participate. All barriers to participation carry risk which weighs differently from farm to farm. More risk-averse farmers may require more tools and support to participate, while those with the financial footing to be riskier could participate with less concern.

Costs

A change to a farm operation could increase costs associated with the operation, depending on the conservation practice adopted. For example, as reported by farmers experimenting with conservation cropping systems, in a no-till cropping system, expenses spent on machinery and hired labor may be saved -- $10 to $12 per acre and $4 to $15 per acre, respectively -- but more money would be spent on crop protection products used to manage weeds which have taken root -- typically $7 to $12 per acre. In a cover crop system, farmers have said increased expenses come in the form of cover crop seed purchases, typically $8 to $15 per acre depending on the mix, and the overall cost to actually plant the cover crop, which would include fuel, labor and any unexpected costs incurred, between $5 to $15 per acre, bringing the total cover crop investment up to $30 per acre. But according to research studies, up to $5 to $14 per acre could be saved in fertilizer or herbicide crop chemicals. The overall investment is more than the return in savings, thus providing some kind of cost-sharing to help offset upfront additional costs could help promote widespread adoption.

Trade-off Barriers

Many barriers make it difficult for farmers to participate in agriculture ecosystem credit markets. Growing a crop or raising livestock requires significant cash to cover the associated expenses. However financial barriers are not the only hurdle to participation. **Trade-off barriers such as labor availability, education, legal advice, verification costs, additionality requirements, being an early-adopter, and lack of quality broadband can prevent farmers from being able to participate in these markets.** While making any kind of change is costly, change also carries various amounts of risk. Some farms are able to extend their risk tolerance to participate, while others may not have the resources, financial or otherwise. While this list may not cover every obstacle a farmer may face trying to participate in an ag ecosystem credit market, the barriers detailed here and others need to be resolved by market-operators or policymakers to encourage broader participation for farmers who voluntarily want to participate in these markets.

Trade-off barriers can prevent farmers from being able to participate in these markets.

Soil Carbon Contracts

Enrollment in any ecosystem credit market is a contractual agreement between the farmer and other market participants. These contracts generally commit the farm to conservation practices in exchange for payments or credits for ecosystem services or "natural climate solutions." With renewed interest in rewarding farm practices increasing carbon stock in soils, various other markets are paying farmers and landowners for ecosystem benefits such as capturing methane from manure digesters or sustainable forest management.

Ecosystem credit markets will require data collection, monitoring and sharing with the market-operator. If the government becomes a collector of farm-level data, the farmer's information should be protected from being disclosed pursuant to Freedom of Information Act requests.

Farmers should consider these principles on data ownership and privacy:

- Contracts should explicitly identify all data which will be generated and shared.
- Contracts should identify the purposes for any data collection, who will receive the data, and whether the farmer can limit the use and disclosure of information.
- Contracts should not require sharing more information than necessary to execute the market operation. Any information shared should be kept private to the maximum extent possible.

Contracts should specify a farmer's continuing obligations if the market-operator fails while the farmer is still enrolled.

Ecosystem Credit Markets in the Long-Run

As with any start-up company, there is always a risk of business failure. Contracts should specify a farmer's continuing obligations if the market-operator fails while the farmer is still enrolled. In addition, for this emerging market, contingency plans providing risk management tools for farmers and the assets they generated should be developed in the event a market fails.

The value companies and consumers place on sustainability, as well as their respective willingness to pay, has yet to be accurately estimated. Future research should attempt to infer consumers' willingness to pay for goods given the fact these credits will cost additional money to produce.

Summary

Increased investment in technology and the advancements which have come with it have reintroduced opportunities for farmers who want to voluntarily participate in ecosystem credit markets and potentially earn additional revenue. Companies of various sizes across numerous industries are making sustainability commitments which are priming them to become buyers in an ecosystem credit market. The many potential market-operators farmers could contract with are developing different pricing models and market structures. Farmers have unique barriers of entry, most of which are related to their risk tolerance. If participating in a credit market is the right decision for them, there are still some points of caution.

These markets are developing and evolving at a rapid pace. Farmers should gather as much information as possible in deciding whether or not to participate. Therefore, it is important participation in these markets remains voluntary, with incentives encouraging conservation practice adoption, rather than hinder it. If it looks like a good fit, the farmer will make the necessary trade-offs to take advantage of the opportunity.

The markets also provide diversified revenue potential for farmers who want to participate in them. However, before any contracts are signed, farmers should consult their trusted advisors to determine if enrolling in a market is truly the best thing for their farm.

Farmers should gather as much information as possible in deciding whether or not to participate.