FARM of the FUTURE

Working lands for ecosystem services

The Farm of the Future project profiles working farms, forests, and ranches that are currently participating in environmental markets or receiving payments for ecosystem services. Through case study and illustration, the project documents how five landowners changed their land management practices to provide water quality, wetlands, wildlife habitat, and carbon benefits—managing working lands to generate new revenue from ecosystem services as a supplement to traditional income. The project highlights lessons learned from these early experiences and some of the challenges and rewards of market-based conservation.

Big River and Salmon Creek Forests demonstrate a new approach to sustainable forest management that involves a "light-touch" harvest regime, the protection of wildlife habitat and water quality, the sale of carbon offsets, and job creation in local, rural communities. | **North Coast CA**

Buck Island Ranch is one of eight ranches in the Lake Okeechobee watershed supplementing its cattle sales with payments for water retention as part of a pilot project. |**Northern Everglades FL**

Sacramento River Ranch sells wetland and habitat mitigation credits to local developers in addition to its food production on 3,600 acres of cropland and orchards. | **Central Valley CA**

Mudford Farm maintains corn, soybean, and wheat production on its most productive soils while restoring wetlands and wildlife habitat on marginal agricultural land. This management strategy generates returns from a wetland mitigation bank, hunting permits, water quality enhancement, and row crops. | **Chesapeake Bay MD**

Watson Partners Farm receives payments for planting a cover crop with its sugar beets as part of a phosphorus trading program within its cooperative. Cover cropping sequesters phosphorus and offsets discharge from the cooperative's wastewater treatment facility. | **Minnesota River Basin MN**

Lessons Learned

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Public programs jumpstart innovation. Many market-based conservation initiatives depend on dedicated "seed funding" from state, local, and Federal partners to help cover program development and landscape modification costs. In four of the five cases, public funding from a combination of USDA, state, and local conservation programs was necessary for project success.

Creative financing is often needed. To cover upfront costs, participants should seek out creative financing mechanisms, such as low-interest loans and capitalization of future payments. The Conservation Fund's use of the existing State Revolving Fund highlights the potential for leveraging existing public finance vehicles to bring ecosystem services projects to fruition.

Securing demand is critical. Landowners must identify a clear, reliable source of demand in order to generate additional ecosystem services on their land. In many cases regulation from the Clean Water Act, Safe Drinking Water Act, and Endangered Species Act drives demand.

It takes a team. Environmental markets involve farming, ecological, legal, and financial expertise as well as buy-in from landowners, environmentalists, investors, regulators, and other government agencies. All five cases achieved success through partnerships. Landowner networks, cooperatives, conservation districts, and third-party aggregators can play crucial roles in building partnerships and integrating the necessary expertise.

Diversify to alleviate risk. Payments for ecosystem services can diversify income sources and alleviate financial risk. The sale of carbon offsets enabled the Conservation Fund to weather the dramatic decline in timber prices in 2009 and 2010. The fixed, scheduled payments that Sacramento River Ranch receives for its wildlife habitat insulate the property from fluctuations in crop yield and prices.

One size does not fit all. Landowner involvement in emerging markets is currently on a case-by-case basis and an entrepreneurial endeavor. There is no one blueprint for success. Each case is grounded in the particulars of its environment context and main actors. However, as different environmental markets develop, program models should evolve and become easier to replicate.

Aggregation is advantageous. Organizations such as landowner cooperatives can help bring the delivery of ecosystem services to scale. In the case of Watson Partners, working through the sugar beet cooperative enabled greater, more cost-effective impacts on water quality in the basin than would many small projects involving multiple landowners. Because ecosystem services function at a landscape scale, it makes sense to aggregate best management practices through group participation.

Keep it simple. Current markets are time-intensive to build, involve many players, and have high transaction costs. More streamlined models would make it easier and more affordable for landowners to participate.

USDA

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