Financing Climate Resilience

How private capital can support climate resilient agriculture

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Finding the ways that work

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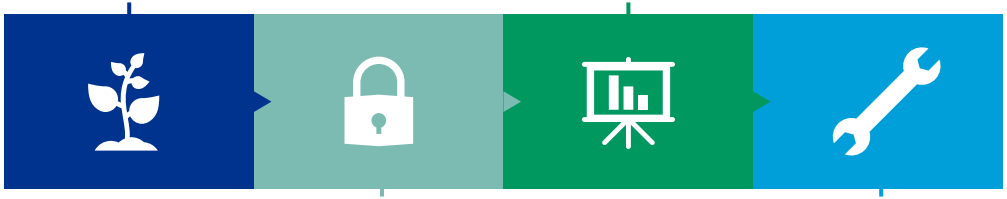

EDF’s vision for U.S. working lands

Produce food, fuel and fiber

Protect communities from extreme floods and droughts

Provide ecosystem services like clean water and reduced greenhouse gases

Soil health and climate resilience

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By mid-century climate change will have negative impacts on crops and livestock

Increased Precipitation

Increasing precipitation extremes will ruin crops and degrade soil resources unless conservation methods are implemented

Heat & Draught Damage

Rising temperatures and incidences of draught will decrease crop and livestock productivity with innovating production

Weeds, Disease & Pests

Many regions will face greater weed, disease and pests associated with changing climate conditions

Soil health practices build resilience to extreme weather

A recent research paper (Kane et al. 2021) found that higher soil organic matter was correlated with higher yields and lower crop insurance payouts under drought conditions

97%

Ninety-seven percent of farmers in a recent Soil Health Institute project documented an increase in crop resilience to extreme weather from soil health institute

Financial barriers

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In field conservation practice adoption remains low

No- and reduced tillage is adopted on 50% of cropland

Cover crops are grown on less than 4% of cropland

Financial barriers prevent farmer investment in conservation

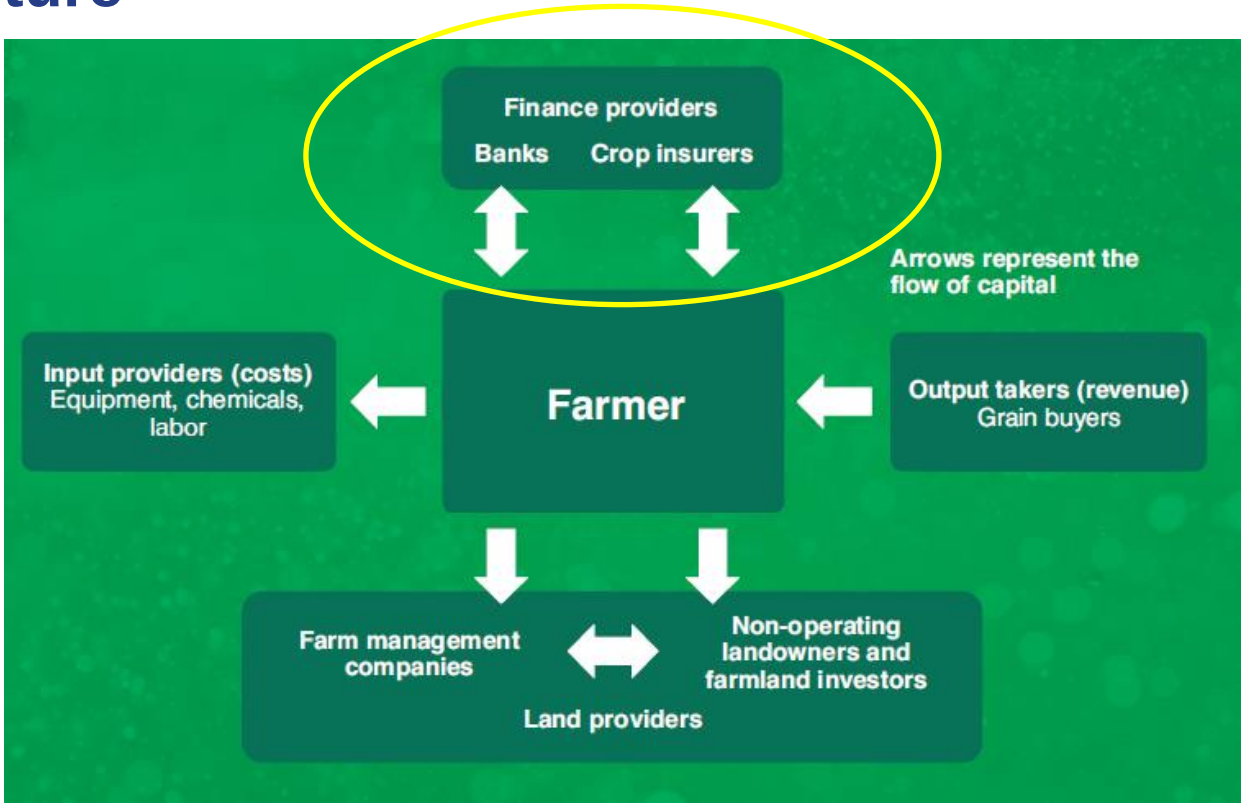
1. Farm profitability and working capital are low

2. Financing is annual and lacks long-term investments

3. Subsidized risk tools are substitutes for investments in resilience

4. Regional markets often limit crop choices

Agricultural lenders are at the heart of financing agriculture



The lender’s role in financing resilience

Provide operating capital to bridge the planting to harvest period

Cannot prescribe practices

Can provide lending programs tailored to a specific se of farmers

Evaluate the financial merits of farmer investments

Climate impacts on lending institutions

Risks

- Degraded asset values
- Portfolio shocks from extreme weather
- Increased financial regulation

Opportunities

- New markets for ecosystem services
- Public interest in sustainable ag
- Build climate resilience in portfolios

Financial case for soil health

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Identifying and communicating the financial case for conservation is essential to scale adoption

Limited understanding about the financial impacts of conservation

Information

GAP

Financial solutions targeting conservation adoption

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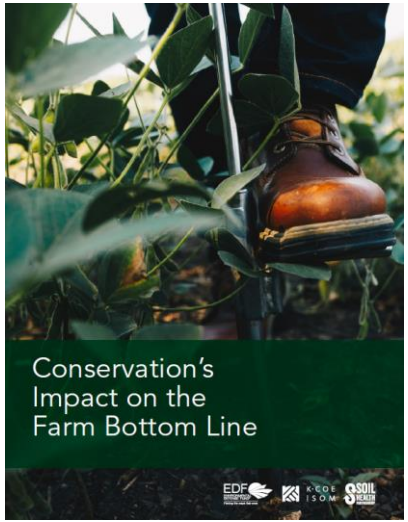
EDF and partners have advanced the business case for in-field conservation practices

Conservation budget analyses



Recently released analysis outlines specifics of the business case

01

Conservation tillage reduces operating costs

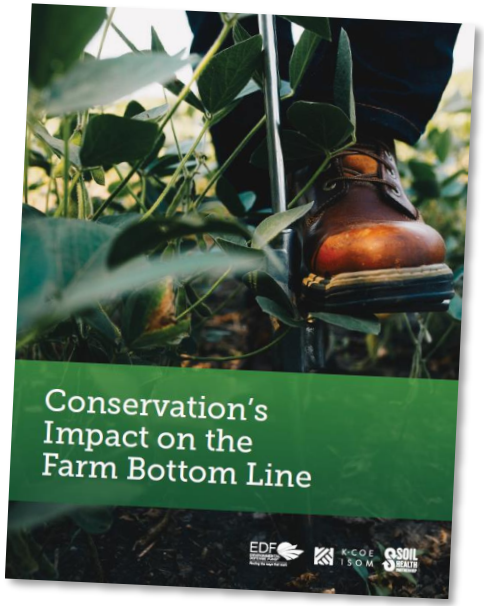
02

Cover crops can be part of a profitable system, especially as experience grows

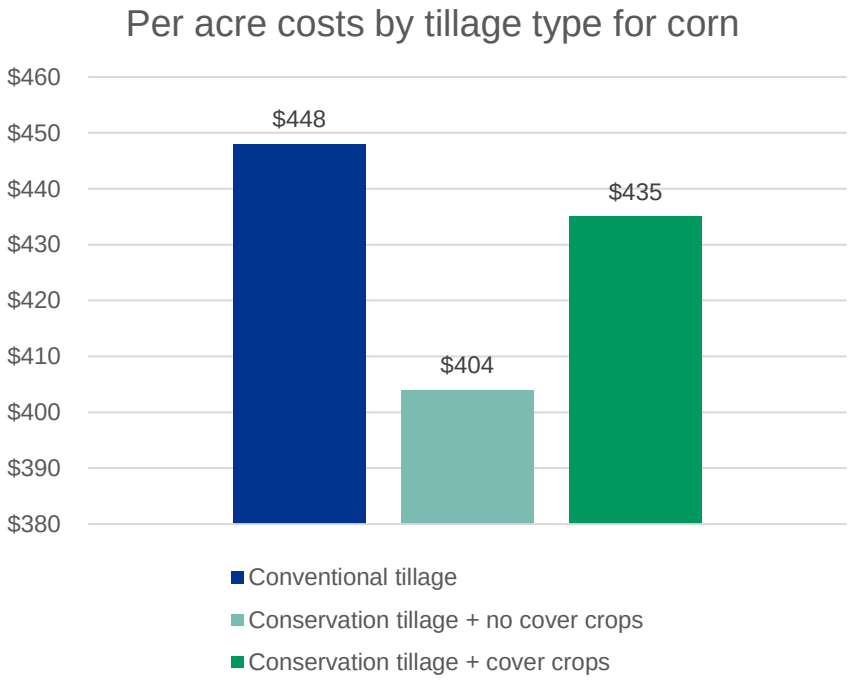
03

Success with conservation practices is the outcome of a targeted and stepwise approach

Project team:

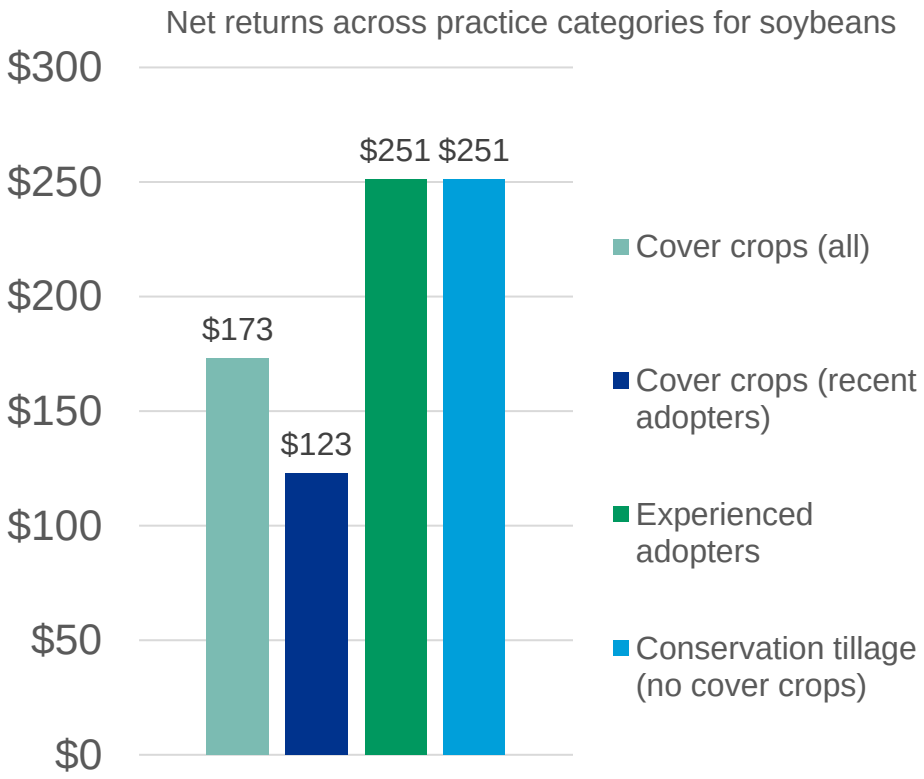


Conservation tillage reduces operating costs



- Per-acre costs for corn fields with conservation tillage were lower ($404/acre) than those for conventionally tilled fields ($448/acre)
- The most substantial savings from no-till on corn came from equipment and fuel costs
- Conservation tillage acres with and without cover crops had increased burndown costs

Cover crops can be part of a profitable system, but experience is key

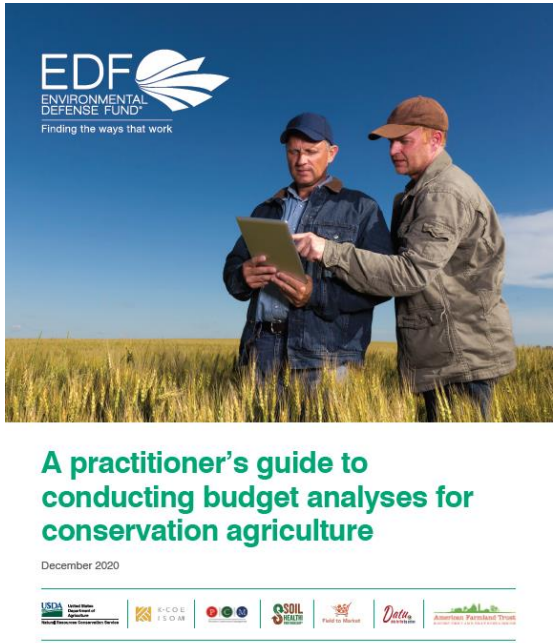


- Cover crops have upfront costs that cannot be ignored—and benefits can take time to accrue
- Farmers with >5 years of cover crop experience are more profitable than farmers who have recently adopted cover crops
- For soybeans, experienced adopters of cover crops had some of the highest net returns in our study

EDF and partners created a best practice guide to help others measure the business case

Outlines best practices for:

1. Selecting objectives and target audiences
2. Sample selection
3. Selecting and gathering data
4. Analyzing farm budgets
5. Communicating farm budget analyses



Financial solutions

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Transition financing solutions

Challenge

Farmers face up-front costs, a learning curve, and long-term benefits

Opportunity

Adjust financing to address up-front costs, but delay repayment until long-term benefits are achieved

Product

Transition loan for conservation adoption

Examples

Organic transition loans

Rabobank

COMPEER FINANCIAL

Risk reduction solutions

Context	Problem	Solution
Farmers perceive risk to adopting sustainable practices	Federal crop insurance does not measure the risk-reducing value of sustainable practices	Crop Insurance Buy-Ups Warranties

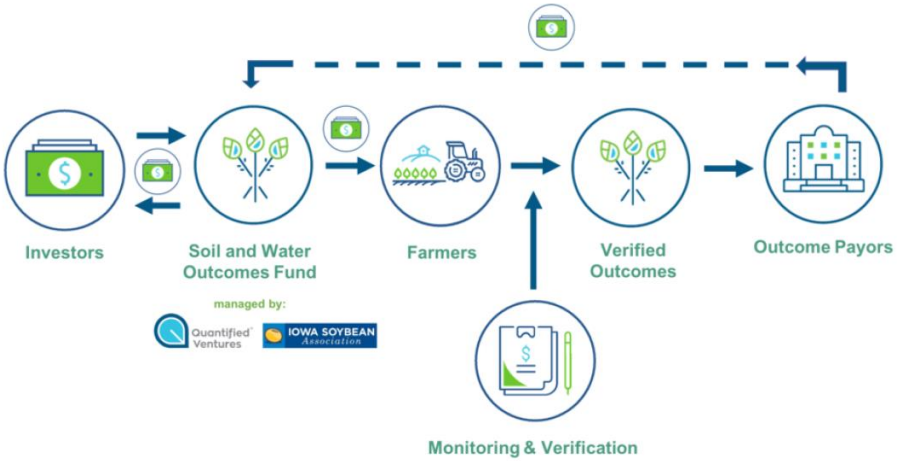
Innovative solutions

Community choice aggregation

1% Surcharge on restaurant meals

Fund soil health investments in local farms

Water quality markets



Thank you!

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