Carbon Farming Opportunities in Illinois

ILLINOIS SUSTAINABLE AG PARTNERSHIP

Consumer demand and corporate responsibility have motivated many national and international corporations to set voluntary greenhouse gas (GHG) emission targets and develop science-based strategies to achieve desirable environmental outcomes. In any supply chain there are several sources of GHG emissions but many corporations are finding that the most effective and cost efficient opportunities to offset GHG emissions is through practices that increase on-farm carbon storage, like cover crops and no-till, and reducing agricultural inputs with large energy production requirements, like commercially produced nitrogen fertilizer. This guide serves to introduce farmers to financial opportunities available for implementing practices that reduce GHG emissions, summarizing minimum requirements and payments from traditional financial assistance programs side-by-side with market-based approaches. It should be noted that this guide attempts to cover a wide-range of programs and is not intended to be all-inclusive.

SETTING THE STAGE: HOW MUCH CARBON CAN MY FARM STORE?

Table 1. Annual GHG emission reduction potential of converting to no-till (NT) and planting cover crops (CC) as estimated per individual practice at the national and state levels via COMET-Planner[1]. All values are reported in metric tonnes of carbon dioxide equivalents per acre per year (CO_2e/ac-yr) with averages in parentheses.

PRACTICE	NATIONAL RANGE (AVG.)	ILLINOIS RANGE (AVG.)	
No-till (NT)	0.03 – 1.07 (0.49)	Intensive till to NT 0.57 – 0.80 (0.72)	Reduced till to NT 0.46 – 0.64 (0.57)
Cover Crops (CC)	-0.03 – 1.50 (0.37)	Legume cover crop 0.23 – 1.26 (0.68)	Non-legume cover crop 0.16 – 0.90 (0.50)

[1]Swan et al., 2019, available at http://comet-planner.nrel.colostate.edu/COMET-Planner_Report_Final.pdf and http://comet-planner.com/, ranges provided for general reference and should not be considered additive or field-specific.

CALL TO ACTION: WHICH PROGRAM IS RIGHT FOR ME?

Table 2. Contract length, average annual payment rates, and minimum acres required to enroll in federal, state and market-based opportunities for NT and CC.[2]

PROGRAM	CONTRACT LENGTH	AVERAGE ANNUAL PAYMENT[3]	MINIMUMS/ MAXIMUMS
Federal Environmental Quality Incentives Program[4]	3 Years	$19/ac NT, $52/ac CC	Max $$ may be capped by region
Conservation Stewardship Program[5]	5 Years	$4/ac NT, $9/ac CC	$1,500 Min to $ 200,000 Max
State Partners for Conservation Program[4]	1 Year	Up to $20/ac NT, $40/ac CC	40-acre Max
Fall Covers for Spring Savings[5]		$5/ac off crop insurance premium for CC	NA
Market-based[6] Nori[5]	10 Years	Estimated rates based on 2019/2020 payments = $10 - 15 per verified tonne CO_2e stored, payments subject to market conditions and 10 –year vesting schedule	1000-acre Min
Indigo Ag[4]	10 Years		300-acre Min

[2] Table 2 provides an overview of available programs and is not intended to be all inclusive. Additional program restrictions and criteria may apply. [3]Payment rate estimates are practice specific and do not include additional opportunities that may be available for implementation of CC and NT in conjunction with other conservation measures. [4] Incentive is for practice adoption, not to pay for existing practice. [5] Potential of payment for practices already implemented. [6] Enrollment in state/federal programs does not prevent enrollment in carbon markets.

POTENTIAL CARBON SEQUESTRATION MARKET FOR ILLINOIS

Estimates generated using the CaRPE TOOL™ , assuming a $15/Tonne price point

$151,854,645

If 100% of available acres in IL converted to **NO TILL***

$166,030,110

If 100% of available acres in IL planted **COVER CROPS***

**Dollar amounts are intended to reflect the total market opportunity for new practice implementation in IL. Available acres represent cropland acres not currently utilizing the referenced practices. CaRPE Tool™: https://farmland.org/carpetool/*

MANAGEMENT AND FUTURE GENERATIONS

Whether your operation takes advantage of developing carbon markets, or implements practices independently, know that you are creating a legacy of stewardship. The carbon stored in your soils may, sometime in the near future, be a tangible commodity, just like the crops you harvest.

THE FINE PRINT

Eligibility – Farmers should check if enrollment in a particular carbon market limits their eligibility to participate in additional water quality markets. Contact local conservation staff in your area to learn more about priority resource concerns, geographic availability of NRCS program funds and additional eligibility requirements.
https://www.nrcs.usda.gov/wps/portal/nrcs/il/programs/financial/

Permanence / Penalties – Most programs have penalties for breaking contract earlier than full length and some require a payback of a portion of money received. Additional consideration may be warranted on rented acres.

Price Stability / Caps – Payment schedules through carbon markets are subject to market volatility and may not be stable over the life of the contract period.

Privacy / Data Sharing – Data protection and security services provided by Federal and State Programs differ from those of market-based approaches. Data accessibility and requirements, both for individual users and outside parties, should be made transparent and well understood before contracts are signed.

Verification/Hidden Fees – All programs require verification of practice implementation, but market-based opportunities may require additional fees for third party verification.

FUTURE OPPORTUNITIES

Ecosystem Services Market Consortium (ESMC) – ESMC is a not-for-profit, producer focused effort to launch a marketplace in 2022 for farmers to sell carbon *and* water quality credits. ESMC boasts member companies from across the ag supply chain, along with robust protocols for measuring and verifying credits allowing them to be the first organization to meet market standards. The program is currently being piloted in several US regions. The IL Corn Growers Association is cooperating with ESMC to test protocols through IL Corn's Precision Conservation Management program.
https://ecosystemservicesmarket.org/

For more information on individual company commitments and pilot programs, a quick internet search including the company of interest's name and the term carbon sequestration should provide up to date info detailing ongoing opportunities.

TO LEARN MORE ABOUT ISAP VISIT: ILSUSTAINABLEAG.ORG

ISAP's members include: *The Nature Conservancy, American Farmland Trust, Precision Conservation Management, Illinois Corn, Illinois Central College, The Wetlands Initiative, The Zea Mays Foundation, Soil Health Partnership, Illinois Land Improvement Contractors Association, Illinois Stewardship Alliance, Association of Illinois Soil and Water Conservation Districts, Illinois Pheasants Forever and Quail Forever, and University of Illinois Extension*

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