

JANUARY 2021

ECOSYSTEM SERVICES PAYMENT PROGRAMS

AN EVALUATION OF OPPORTUNITIES FOR
KERNZA® GROWERS

NORI

SUMMARY

- Nori is a marketplace focused on incentivizing carbon removal through a suite of farming practices. The company utilizes tools such as COMET-Farm to measure the effects of adopting new farm management practices.
- Nori states that it is committed to transparent methodology as well as giving the grower full control of generating and selling the asset, and is "only focused on building a carbon market where the revenue model is aligned with the farmer getting paid as much as possible."

CAN KERNZA® GROWERS PARTICIPATE?

- Not yet
- Nori Pilot Program is not currently accepting new applications.
- After the Pilot program, Kernza® growers will likely be able to enroll as TLI collaborators at Colorado State University are currently working on an analog to be integrated into DayCent, the underlying model that simulates entity-scale greenhouse gas emissions in COMET-Farm technology

Method for estimating soil carbon

The company utilizes COMET-Farm (USDA-backed technology) to generate a 10-year estimate to measure the effects of adopting new farm management practices. At the end of 10 years, Nori requires an audit which includes on-site sampling to create a final baseline

Historical farm management info required

Geospatial field boundaries, information around planting and harvesting, tillage intensity, fertilizer use, organic matter additions, irrigation, liming, and burning. [Click here for full list of required data.](#)

Acceptable farm management practices

If you have adopted **conservation tillage practices**, planted cover crops, incorporated organic matter or new crop rotations, you most likely qualify.

Can land leases or rentals qualify?

If you lease or co-own land, you will need to be assigned title to the ownership of the future NRTs so that you can sell them. In order to register these projects, you will need to prove you've secured all the necessary arrangements.

Costs to Grower

Two main costs to consider: project registration verification costs. Verification by a Nori-approved third party could cost \$3,000 to upwards of \$5,000 per project, depending on your project size and quality of records. The second cost is time.

Payment per ton of carbon

1 NRT/ton. NRTs represent one ton of CO2 pulled out of the atmosphere and stored in the soil for a minimum of ten years. The NRT is a digital representation of a unique asset that trades over the Nori Marketplace. [Click here for more information on NRTs and Nori Tokens.](#)

Payment for other Ecosystems Services

N/A

Minimum enrollment period & acreage

10 years, Prioritizing farms with >1000 acres

% of payment that is taken by the administering program

Nori makes money by charging a transaction fee to funders. There is no stated % of the payment taken from farmers

States included

No indication that you must be in a specific state to qualify

ECOSYSTEMS SERVICES MARKET CONSORTIUM

SUMMARY

- The goal of the Ecosystem Services Market Consortium (ESMC) is to launch a fully functioning national scale ecosystem services market conceived and designed to sell both carbon and water quality and quantity credits for the agriculture sector by 2022.
- ESMC is unique in that it focuses on the impact of agricultural management on soil C, net GHG (carbon, methane and nitrous oxide), water quality and water quantity. However, farmers only need a singular point of entry in order to participate in multiple market opportunities.

CAN KERNZA® GROWERS PARTICIPATE?

- Not yet, national launch is planned for 2022
- At this point, ESMC is working on the expansion of protocols and pilots in various production systems and geographies.
- Throughout 2021, the goal is to achieve scale in priority regions and production systems as well as continued R&D through the Ecosystem Services Market Research Consortium (ESMRC)

Method for estimating soil carbon

TBD. ESMC is working on the expansion of protocols and pilots in various production systems and geographies.

Historical farm management info required

TBD

Acceptable farm management practices

TBD

Can land leases or rentals qualify?

TBD

Costs to Grower

TBD. Likely similar to other ES payment options. Verification costs and the investment of time.

Payment per ton of carbon

TBD

Payment for other Ecosystems Services

TBD. ESMC is conducting research on best practices for quantifying management impacts on soil C, net GHG (carbon, methane and nitrous oxide), water quality and quantity.

Minimum enrollment period & acreage

TBD

% of payment that is taken by the administering program

TBD. ESMC is a nonprofit.

States included

No indication that you must be in a specific state to qualify

INDIGO CARBON

SUMMARY

- Through Indigo Ag's Indigo Carbon program, farmers can enroll to receive carbon credits by adopting practices such as adding cover crops, reducing tillage/fertilizer, diversifying crop rotations, etc.

CAN KERNZA® GROWERS PARTICIPATE?

- Not yet
- Enrollment is now open for 2021 credits, generated from changes made after harvest 2020 and before harvest 2021. However, Kernza® is not currently included in Indigo's list of field crops. Kernza® should be accepted if the broader grower network indicated that it was interested in Kernza® becoming available for trade on Indigo Marketplace.

Method for estimating soil carbon

Indigo calculates carbon credits based on historical and current season management data provided by farmers and soil samples on a subset of fields taken by Indigo. Then, "independent carbon credit issuers" verify those carbon credits.

Historical farm management info required

3-5 years of historical as well as current season details about planting and harvest dates, fertilizer, tillage, as well as information on cover crop types, dates, planting and termination methods, and organic amendments. [Click here to learn more.](#)

Acceptable farm management practices

Adding cover crops (for the first time, extending the duration, or diversifying your mix), diversifying your crop rotation, **reducing or eliminating tillage**, reducing fertilizer (reducing N or switching to injection)

Can land leases or rentals qualify?

No specific language on leasing. However, "you must have the exclusive rights to operate your enrolled acres"

Costs to Grower

Fine print on Indigo website as of 12/15/20: "All payments under Indigo Carbon are subject to a 10-year vesting schedule. \$15 price per verified carbon credit is only an estimate based on the 2019 payment rate. Actual payment rate is subject to market conditions, may change at any time, and will be determined at the time of sale of the carbon credit. Indigo does not guarantee any minimum or specific payment rate."

Payment per ton of carbon

Any field enrolled in Indigo Carbon in 2020 is guaranteed a minimum of \$10 per verified carbon credit (growers are estimated to generate 0.3-1 credits per acre in their first year). NOTE: This applies only to credits sold before the end of 2022 as part of your first carbon crop.

Payment for other Ecosystems Services

N/A

Minimum enrollment period & acreage

Website does not detail anything specific for enrollment period. However, because of the nature of carbon credits, it's likely that 2 years of involvement would be the bare minimum, 300 acres minimum

% of payment that is taken by the administering program

See costs to grower section

States included

Arkansas, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Minnesota, Mississippi, Missouri, Nebraska, North Carolina, North Dakota, Ohio, Oklahoma, South Carolina, South Dakota, Tennessee, and Texas

SOIL HEALTH AND INCOME PROTECTION PROGRAM (SHIPP)

SUMMARY

- SHIPP is a voluntary program from the USDA. It is more akin to CRP than the above market payment programs. It is included here because it may be an option in the future for Kernza® growers to offset costs.
- SHIPP is designed to target marginal acres within a field, not to convert whole fields to perennial cover. SHIPP also differs from existing CRP programs in contract length. Where most CRP contracts are 10 or 15 year contracts, SHIPP contracts are much shorter.

CAN KERNZA® GROWERS PARTICIPATE?

- Yes, if program reopens
 - Enrollment deadline has passed. Check USDA website to see if the program will reopen in future years

Method for estimating soil carbon

N/A

Historical farm management info required

Must be less productive land on the farm, must have been planted (and not in CRP) in crop years 2017, 2018, and 2019

Acceptable farm management practices

Land may be hayed or grazed outside the primary nesting season with no reduction, provided adequate stubble height of the cover is maintained to protect the soil as specified in the conservation plan. It is recommended to reach out to your SWCD or FSA County office to confirm that Kernza® plantings would be eligible and a good fit.

Can land leases or rentals qualify?

N/A

Costs to Grower

N/A

Payment to Farmer

Annual rental payments will be made at 50 percent of the weighted average soil rental rate for the SHIPP offer, using the county average rental rate for the applicable county. [Click here for more information.](#)

Payment for other Ecosystems Services

N/A

Minimum enrollment period & acreage

SHIPP allows contracts with agricultural producers for a contract term of 3, 4, or 5 years. Must have a total of no more than 15 percent of the eligible land per farm enrolled in SHIPP

% of payment that is taken by the administering program

N/A

States included

Iowa, Minnesota, Montana, North Dakota, and South Dakota

BIBLIOGRAPHY

NORI

- [Nori Resources/Documents](#)
- [Nori Data Policies and Requirements for Croplands Methodology](#)
- [Nori For Growers](#)

Ecosystems Services Market Consortium

- [ESMC Resources](#)
- [ESMC Protocols](#)
- [ESMC Asset Quantification](#)

Indigo Carbon

- [Indigo For Growers](#)
- [Indigo Webinars](#)

Soil Health and Income Protection Program

- [SHIPP Factsheet](#)