



# Bayer Group Verification

Group 2024.1, January 2024



Document Prepared By

NSF  
789 N. Dixboro Road  
Ann Arbor, MI 48105  
[www.nsf.org](http://www.nsf.org)

# Table of Contents

<b>1</b>	<b>Introduction</b>	<b>7</b>
1.1	Summary Description of the Project	7
1.2	Quantification Method	9
<b>2</b>	<b>Verification Process</b>	<b>11</b>
2.1	Method and Criteria	11
2.2	Document Review	11
2.3	Interviews	11
2.4	Site Inspections	11
2.5	Resolution of Findings	11
2.6	Participation under Other Carbon Programs	11
<b>3</b>	<b>Validation Findings</b>	<b>11</b>
3.1	Verification Findings	12
3.2	Accuracy of Data	12
3.3	Carbon Stock Risk Analysis	12
<b>4</b>	<b>Verification Conclusion</b>	<b>12</b>
<b>5</b>	<b>Representation</b>	<b>13</b>
<b>ANNEX A:</b>	<b>Requirements for Project Batch Verification</b>	<b>16</b>
<b>ANNEX B:</b>	<b>Field Level Verification Results</b>	

<b>Project Title</b>	<i>Bayer Group 2024.1</i>
<b>Version</b>	<i>v1.2</i>
<b>Nori Project ID</b>	<i>5412778103275520, 5363469462798336, 5439476657029120, 4751204023795712, 5444230551437312, 5400279748444160, 5334016637534208, 5399576179113984, 5388466172461056, 5358205175070720, 5402222583611392, 5484258270904320, 5379531966251008, 5389351606812672, 5423509280391168, 5484817287741440, 5481696017776640, 5376285544546304, 5464250232864768, 5375421430890496, 5356643313778688, 5454084078829568, 5390038096936960, 5487922582650880, 5349168664543232, 5443797900591104, 5420689030381568, 5376386207842304, 5360435806601216, 5417239366336512, 5404701115285504, 5371251071123456, 5483471520137216, 5411916611059712, 5376194142273536, 5381138287165440, 6512885839167488, 5407858587336704, 5425269478785024, 5443388872065024, 6555631688876032, 5423171521478656, 5483123929776128</i>
<b>Methodology</b>	<i>Croplands Methodology Version 1.4</i>

<b>Report Title</b>	<i>Bayer Group Verification 2024.1</i>
<b>Primary Contact (Applicant)</b>	<i>Bayer CropScience LP</i>
<b>Pages</b>	<i>16 (excluding Annexes)</i>
<b>Date Verification Complete</b>	<i>January 2024</i>
<b>Prepared By (Verifier)</b>	<i>NSF</i>
<b>Contact</b>	<i>789 N. Dixboro Road, Ann Arbor, MI, 48105, USA <a href="mailto:sustainability@nsf.org">sustainability@nsf.org</a> <a href="http://www.nsf.org">www.nsf.org</a></i>
<b>Approved By</b>	<i>David Jaber</i>
<b>Work Carried Out By</b>	<i>Razane Akil (Lead), Hannah Francis, Bhamini Jain (Support)</i>

## Overview

This report verifies that no till, strip till and cover crop practices to sequester carbon have occurred on 46,904 acres which are located among 498 fields on 43 farms in the United States in the following 11 states: Illinois, Indiana, Iowa, Kansas, Maryland, Michigan, Minnesota, Missouri, Nebraska, South Dakota and Wisconsin. Of the 46,904 acres reported by Applicant, 44,797 acres (over three times the area of Manhattan) equivalent to 106,544 NRTs (credits) were determined by the Nori model as eligible for NRT issuance.

Third party verification followed Nori's *Requirements for Project Batch Verification v1.1* (see Annex A). The key to group verification is the review of a random sample of fields and farms to establish a 95% level of confidence in the accuracy and completeness of the eligibility and documentation for the farms and fields in the group. The sample reviewed directly by Verifier represents 16,306 of the acres reported by Applicant (34.8% of total eligible acres).

The explicit location of the farms and owner or manager information is kept confidential to protect personal identifier information, but Verifier has confirmed exact location through background documentation. This verification ensures that reasonable and sufficient evidence exists to substantiate that: 1) new farming practices were implemented that can sequester additional carbon; 2) practices changed after the switch date; 3) the applicant has the right to sell the credit(s) – referred herein as Nori Removal Tonnes (NRTs)— associated with the land; 4) the credits are not being double-sold on other carbon credit markets; 5) the applicant or land owner was not found to be in violation of applicable laws either during the issuance period (2018-2022) or during the actual verification process; and 6) verifier has no conflict of interest.

NSF provides assurance at a reasonable level that regenerative agriculture practices that sequester additional carbon have been implemented since the switch event. Overall evidence to support eligibility claims provided by the farm is thorough, with field activity records, farm equipment records, photographs, and purchase of materials needed to support switch date practices readily available.

Verifier recommends periodic onsite audits, or more extensive video, in the renewal cycle to further document the extent of verified practices.

## Conflict of Interest Statement

No employee, executive or board member of the verifying body shall have any financial interest, direct or indirect, in this Nori Project, or any contract, agreement or other transaction contemplated to occur or be undertaken thereunder or with respect thereto, nor shall any such employee, executive or board member participate in any decision relating to the Nori Project which affects his or her personal interests or the interests of any corporation, partnership or association in which he or she is directly or indirectly interested.

If an employee, executive or board member of the verifying body is providing additional services to the Primary Contact or Data Manager or other interested party to this Nori Project it has been disclosed to all parties the role you as the verification and validation body (VVB) will be playing for this Nori project and these parties have waived any conflict of interest the VVB may have for this Nori project.

The undersigned represents and warrants that the above is true and correct.

*Lisa Spicka de Bercegua*

Name: Lisa Spicka

Title: Director, Sustainability Consulting

# 1 Introduction

## 1.1 Summary Description of the Project

The Bayer Group 2024.1 Nori US Croplands Project is comprised of multiple fields totaling 46,904 acres located across 11 states (Illinois, Indiana, Iowa, Kansas, Maryland, Michigan, Minnesota, Missouri, Nebraska, South Dakota and Wisconsin). The soil management, crop choice and cropping methods employed to produce food and fiber in these fields draw incremental CO<sub>2</sub> out of the atmosphere, enhancing soil health, moisture retention, soil productivity and increasing the percent of soil organic matter (SOM%), and related soil organic carbon (SOC), that is retained in the top 20 centimeters of the soil layer.

Verifier verified a sample of the total acres. Applicant employed:

- no till
- strip till and/or
- cover crop techniques

to the acreage submitted for verification. Of the 16,306 acres in the sample, 15,767 were able to be modeled by Nori, after modeling corrections were taken into account.

This project qualifies for a maximum of 5 years of “vintage” NRTs, or NRTs the Supplier has phased in a sequence of regenerative soil management, crop choice and cropping practices in the past (vintages 2018 through 2022), subject to verification of the annual Carbon Removal Claims. An NRT represents approximately 1 tonne of CO<sub>2</sub> removed from the atmosphere and sequestered in the soil for 10 years. This project reflects practice changes that were adopted during and/or after 2012 (the earliest project “Switch year” among fields).

Project Information:

<b>Project Name</b> <i>Name of the farm/project enrolling</i>	Bayer Group 2024.1
<b>Sectoral Scope</b>	Agriculture, Forestry, and Other Land Uses (AFOLU)
<b>Applicable Methodology</b>	Croplands Methodology v1.4
<b>Nori Project ID:</b>	5412778103275520, 5363469462798336, 5439476657029120, 4751204023795712, 5444230551437312, 5400279748444160, 5334016637534208, 5399576179113984, 5388466172461056, 5358205175070720, 5402222583611392, 5484258270904320, 5379531966251008, 5389351606812672, 5423509280391168, 5484817287741440, 5481696017776640, 5376285544546304, 5464250232864768, 5375421430890496, 5356643313778688, 5454084078829568, 5390038096936960, 5487922582650880, 5349168664543232, 5443797900591104, 5420689030381568, 5376386207842304, 5360435806601216, 5417239366336512, 5404701115285504, 5371251071123456, 5483471520137216, 5411916611059712, 5376194142273536, 5381138287165440, 6512885839167488, 5407858587336704, 5425269478785024, 5443388872065024, 6555631688876032, 5423171521478656, 5483123929776128
<b>State(s)</b>	IA, IL, IN, KS, MD, MI, MN, MO, NE, SD and WI, USA
<b>County(ies)</b>	
<b>Enrolled acres</b>	46,904 (total); 16,306 (in verified sample)
<b>Total modelable acres</b>	44,797 (total); 15,767(verified sample)
<b>NRTs</b>	106,544 (total); 33,442 (verified sample)

Contact Information:

<b>Primary Contact Name (also Applicant)</b>	Bayer CropScience LP
<b>Also known as (past aliases, maiden name, etc)</b>	
<b>Primary Contact cell phone number</b>	833-877-7934
<b>Primary Contact email</b>	carbonprogram@bayer.com
<b>Primary Contact Mailing Address</b>	800 North Lindbergh Blvd St. Louis, MO 63167
<b>Secondary Contact Name</b>	N/A
<b>Also known as (past aliases, maiden name, etc)</b>	
<b>Secondary Contact cell phone number</b>	
<b>Secondary Contact email</b>	
<b>Data Manager Company (if applicable)</b>	N/A
<b>Data Manager Name (if not applicable, write N/A, if data manager is the secondary contact write "same as above")</b>	
<b>Data Manager cell phone number</b>	
<b>Data Manager email</b>	



## 1.2 Quantification Method

Nori uses a process-based model to estimate increases in SOC stocks resulting from the adoption of regenerative soil treatment and cropping practices.

Nori relies on the Soil Metrics platform, which is the commercial implementation of a Greenhouse Gas Implementation Tool model (“GGIT”), that meets USDA greenhouse gas and carbon stock and flux estimation guidance (sometimes referred to as the “Blue Book” standards). The tool on which GGIT is based was developed by Colorado State University (CSU) staff and students, with funding from and under the guidance of the US Department of Agriculture’s (USDA) Natural Resources Conservation Service (NRCS). GGIT directly and indirectly relies on outputs from DayCent and up to 35 other models that are maintained and used by multiple US federal government agencies to estimate the SOC stock change and greenhouse gas (GHG) emissions impacts associated with changes in soil treatment, cropping and livestock management and production practices at both the field and farm-scale.

## 2 Verification Process

### 2.1 Method and Criteria

As per Nori’s *Requirements for Project Batch Verification v1.1*, the parameter for statistical sampling was defined to be the number of fields (rather than acreage or grower). A sample of 562 fields across 47 growers was provided from the total group. To achieve 95% confidence that the sample represents the full group proposed for verification, verifier was required to verify a minimum of 229 of the 562 fields (41%).

Note 64 fields from four growers were subsequently removed from the original verification group after the verifier found discrepancies in total acres managed (no concerns were found with the switch practices; rather the need existed to reconcile total acres reported with public records and the subsequent impact on NRTs). Those four growers have been moved into a future group verification in order to properly recalculate NRTs with that batch. Consequently, the numbers reported earlier/in the summary of this report reflect the remaining content of the sample: 498 fields across 43 growers.

#### *Random Sample Generation Methodology*

Once each grower’s code and number of fields were disclosed, a number was randomly generated for each grower. Verifier added growers to the verification sample (a subset of the total initial sample of 562), starting with the lowest randomly-generated number and moving to the highest, until the aggregate number of fields captured in the verification sample reached 229. 18 growers were captured in the verification sample, 14 included in this verification and four growers moved to a future group verification as described above.

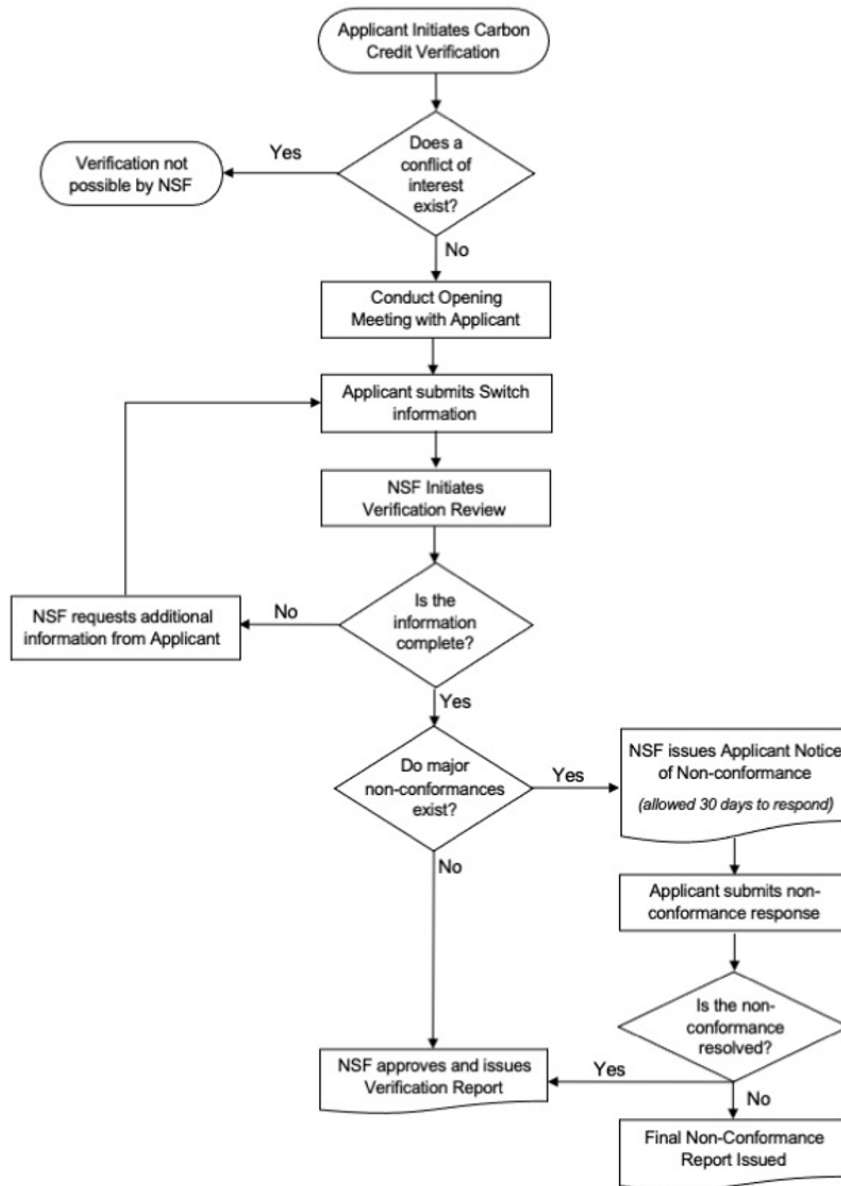
NSF’s verification process for those 229 fields involved verifying the following six items, as dictated by Nori Croplands Methodology v1.4:

- Non-Conflict of Interest
- Right to Register the Project

- Evidence Review
- Appropriateness of Project Switch Date
- No Double Selling of Credits
- Legal Compliance

There was no conflict of interest for the verifier team.

Remote verification practices are used to complete the verification, unless clear concerns exist that can only be resolved on-site. NSF's process is seen in the following flow chart:



## 2.2 Document Review

A review of documentation provided by Nori and the Primary Contact is a critical step to verify four of the verification criteria, including:

- 1) Right to register the project
- 2) Evidence review/replicability
  - a. Evidence that can provide substantial and compelling proof that the switch event occurred was reviewed, including:
    - i. *Grower attestation* regarding implementation of switch event and description of practices used to enable the switch event with signature. Description should highlight connections between switch events and other evidence provided (i.e. new equipment or input purchases).
    - ii. *Annual field photos* with date stamps, before and after switch date (or explanation of why before photos are not available, if not available).
    - iii. *Purchase/financial records* that demonstrate supplies or infrastructure were purchased to implement the alternate practice(s). These may include but are not limited to: inputs, seeds, fuel, labor records and equipment.
    - iv. *Field activity logs* for alternate practice, with date stamps to determine switch year.
- 3) Appropriateness of switch year
  - a. Documents such as field records to prove when switch even occurred.
- 4) Legal compliance of the Land Operator/Farmer
  - a. Review of any regulatory violations in relevant databases, including the EPA, to verify the supplier is in legal compliance with applicable regulations.

## 2.3 Interviews

Applicant group verification project managers were interviewed to understand the approach to data management and presentation. Formal interviews of Applicant's growers were not conducted. Supplemental information requests where required were sent to the NRT source grower via the Applicant.

## 2.4 Site Inspections

Site inspections were not required as part of the group verification.

## 2.5 Resolution of Findings

The verification process allows for supplemental info requests, and a 30-day window for corrective actions to be addressed if concerns are found. If not addressed after 30 days, a non-conformance report is issued, indicating the project did not pass verification.

Verification of the right to register not only requires review of land ownership records for landowner and grower names, but also review and verification of acreage. In cases where total claimed acreage could not be verified through land ownership records, credit was given only for the verified amount of acreage. For example, if grower claimed a plot was 80 acres, and ownership records document 75 acres for that plot, credit was given for 75 acres and the NRTs associated with that acreage.

Verification of legal compliance did discover the name of Applicant's parent company associated

with an FTC violation, but that violation was settled over 20 years ago and is not material to this verification.

### 2.5.1 Forward Action Requests

During the verification process, we issued ten supplemental information requests, as follows:

- Three related to confirmation of which conservation programs grower C21-0520 had participated.
- One pertained to confirm land ownership of grower C21-0211.
- Four pertained to providing field location information for multiple growers to allow for confirmation of right to register.
- One pertained to providing evidence for cover crop use with C21-0406

Information requests were responded to by Applicant staff in a timely manner.

## 2.6 Participation under other Carbon Programs

The following registries were checked to confirm that project is not registered by NRT supplier or source farmer:

- Verra
- ACR
- Climate Action Reserve
- Gold Standard
- Markit
- Nori

Checks involved searching the associated database(s) for the Applicant and growers' names.

Applicant name is associated with a project in both Verra and Gold Standard, but no credits or retirements were ever issued, and there is no material concern with those listings.

## 3 Validation Findings

### 3.1 Verification Findings

Field by field verification findings can be found in Annex B for the 229+ sampled fields.

### 3.2 Accuracy of Data

#### *95% Confidence Interval Verification Methodology*

Achieving 95% confidence in results, allowing for a 5% margin of error, was a verification goal. If 90+% of NRTs in the sample pass verification, then the entire batch passes, excluding any NRTs within the sample that did not pass direct verification. If below 90% of NRTs in the sample pass verification, Nori will begin to pro-rate NRTs. The "Requirements for project batch verification v1.1" document provided by Nori has additional details.

### Confidence Interval Results

Of the 33,442 NRTs in the final sample, Verifier found evidence to verify 33,442 NRTs, representing a 100% pass rate that clears the 90% threshold. However, that pass rate is only achieved because of the removal of the four growers where Verifier was unable to verify the full acreage. Verifier estimates inclusion of those four growers results in a 99% pass rate, and Nori NRT recalculations are required to confirm the pass rate.

	Number of Fields	Total Acres	Modeled Acres	Modeled Acres Verified	Total Modeled NRTs
Initial Verified Sample	231	22,929	22,267	21,821	42,929
Final Verified Sample	167	16,306	15,767	15,767	33,442
Total Group Sample	498	46,905	44,797	44,794	106,544

The total NRTs that have been verified for the group verification is 106,544

### 3.3 Carbon Stock Risk Analysis (if applicable)

Not applicable.

### 3.4 Deforestation (if applicable)

Applicant's field logs document land use back to 2012, clearly indicating that lands have been in agricultural use over the 2012 – 2022 timeframe. Verifier makes no warranties or guarantees of land use practices previous to 2012.

## 4 Verification conclusion

This project complies with Nori Verification criteria as outlined in the current version of the Nori Croplands Methodology as of this report date. The body of evidence provided by the growers is thorough. NSF provides assurance at a reasonable level that regenerative agriculture practices have been implemented since the switch event and we note that Nori modeling indicates those regenerative practices create NRTs.

Verification period: From Oct 1, 2021 – Sep 30, 2022.

# 5 Representation

Verification Statement: This is to state that, for the verification period from beginning October 1, 2021 to ending September 30, 2022 this Nori Project (name of Project) carbon sequestration listed above for the aforementioned project: have been verified without qualification according to the Nori Pilot Croplands Methodology version 1.4 and all of the requirements of the Nori program. Nori, Primary Contacts, Suppliers and Buyers of Nori Removal Tonnes may rely on the terms of the Verification Statement and Report.

Attestation Lead Verifier: In signing this Verification Statement, I certify that the information contained herein is true, accurate and complete.

Senior Internal Reviewer: In signing this Verification Statement, I certify that the information contained herein is true, accurate and complete. I attest that I was not involved in the verification services documented in this Verification Statement, but have conducted an independent review of the verification services and findings of the verification team and concur with this Verification Statement.

**EXECUTED** by NSF International



\_\_\_\_\_  
*Razane Akil*

Signature of Lead Verifier

\_\_\_\_\_  
Name of Lead Verifier



\_\_\_\_\_  
*David Jaber*

Signature of Internal Reviewer

\_\_\_\_\_  
Name of Internal Reviewer