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Title 7 —Agriculture

Subtitle B —Regulations of the Department of Agriculture

Chapter XXI —Office of Energy and Environmental Policy, Department of Agriculture

Part 2100 Technical Guidelines for the Production of Regenerative Agricultural Biofuel Feedstocks

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PART 2100—TECHNICAL GUIDELINES FOR THE PRODUCTION OF REGENERATIVE AGRICULTURAL BIOFUEL FEEDSTOCKS

Authority: 16 U.S.C. 3845-3846.

Source: 90 FR 5512, Jan. 17, 2025, unless otherwise noted.

Subpart A—General Provisions

§ 2100.001 Purpose.

The purpose of this part is to establish technical guidelines for quantifying, reporting, and verifying the carbon intensity of agricultural biofuel feedstock commodity crops grown in the United States.

[91 FR 39355, June 29, 2026]

§ 2100.002 Definitions.

Link to an amendment published at 91 FR 39355, June 29, 2026.

Accreditation means a formal recognition by an authorized body that a third-party verifier operates according to a set of standards.

Agricultural expert means persons who are employed by the Cooperative Extension System or the agricultural departments of universities, or other Agricultural Experts approved by Federal Crop Insurance Corporation, whose research or occupation is related to the specific crop or practice for which such expertise is sought.

Audit means a process for obtaining relevant information about an entity's practices or processes, recordkeeping, and management and evaluating it objectively.

Biofuel means liquid or gaseous fuels and fuel blending components produced from biomass feedstock.

Biofuel feedstock crop means a crop that can be used as raw material for biofuel production.

Biofuel Feedstock Report means a report generated by a farm producer that includes documentation of carbon intensity calculations and the Farm Producer Attestation.

Biofuel refiner means an entity that refines biomass feedstocks into a biofuel.

Biomass means any organic material other than oil and natural gas (or any product thereof), and coal (including lignite) or any product thereof.

Carbon intensity (CI) means a measure of greenhouse gas (GHG) performance reflecting the estimated quantity of GHG emissions associated with one unit of production. For biofuel feedstock crops, carbon intensity is expressed as grams of carbon dioxide equivalent (CO₂e) per bushel of produced crop (g CO₂e/bushel).

- Conventional crop** means a crop that is produced without the use of low-carbon practices according to this part.
- Cover crop** means grasses, legumes, and forbs planted for seasonal vegetative cover, and not intended for harvest, between harvested production crops in rotation.
- Crop interval** means the time immediately following harvest or termination of one cash crop through harvest or termination of the next cash crop in the rotation, including fallow periods and cover crops.
- Crushing yield** means a number representing the amount of oilseed produced from crushing one bushel of seed oil crop. Crushing yield is usually expressed in pounds per bushel (lbs/bu).
- Farm** means a business entity that produces (that is, grows and harvests) biofuel feedstock crops.
- Farm producer** means a person who is involved in making decisions for the farm operation. These decisions may include planting, harvesting, management, and marketing. The farm producer may be the owner, a member of the owner's household, a hired manager, a tenant, a renter, or a sharecropper. If a person rents land to others or has land worked on shares, they are considered the farm producer only for the land retained for their own operation.
- Farm Producer Attestation** means a document generated by the farm producer, who has operational control, that provides assurance that the farm producer followed standards in this part. The Farm Producer Attestation is included in the Biofuel Feedstock Report.
- Feedstock** means raw material that is converted into fuels and coproducts during the fuel production process.
- Field** means a part of a farm that is separated from the balance of the farm by permanent boundaries, such as fences, permanent waterways, woodlands, roads, croplines, or other similar features. In addition to a permanent, contiguous boundary, a field has common land cover and management.
- First point of aggregation** means the entity that purchases crops directly from the farm. Entities serving as the first point of aggregation distribute, trade, or further process these feedstocks.
- Intensive tillage** means the implementation of a tillage system that involves extensive inversion or mixing of the soil with implements such as a moldboard, disk, or chisel plow. Intensive tillage does not meet the standards of reduced till or no-till in this part.
- Intermediary entity** means any entity in the biofuel supply chain that falls between the first point of aggregation and the biofuel refiner. Intermediary entities may include crushers, processors, storage facilities, or other entities.
- Leguminous cover crop** means a cover crop that fixes atmospheric nitrogen and is planted for seasonal vegetative cover, and not intended for harvest, between harvested production crops in rotation.
- Low-carbon agriculture (low-carbon) practices** means agricultural management, practices, systems, and technologies that have been demonstrated to generally reduce GHG emissions or increase soil carbon sequestration.
- Management unit** means field, group of fields, or other land units of the same land use and having the same management.
- Manure** means feces, urine, other excrement, and bedding produced by livestock including dairy, swine, beef and poultry.

Mass balance system means a system in which materials or products with specified characteristics are mixed with materials or products without some or all of these characteristics, resulting in a claim on a part of the output, proportional to the input.

No-till means the implementation of a tillage system that limits the amount of disturbance to soil from mixing or inversion, creating only minor disturbances to the upper layers of soil throughout the crop interval.

Nutrient management means the practice of managing the rate, source, placement, and timing of plant nutrients and soil amendments to optimize their economic benefits while minimizing environmental impacts.

Operational control means authority possessed by the person who runs the farm, making day-to-day management decisions. A person with operational control could be an owner, hired manager, cash tenant, share tenant, or a partner. If land is rented or worked on shares, the tenant or renter has operational control.

Planting green means a system where a cover crop is left in place and a production crop is planted into the cover crop without prior termination.

Process means any mechanical operation that transforms the physical properties of a product. Processing includes extracting oil from seed oil crops (for example, soybeans).

Reduced-carbon intensity (reduced-CI) crop means a crop that is produced according to this part.

Reduced-carbon intensity (reduced-CI) processed product means a product derived from reduced-CI crops, between the farm and first biofuel refiner, used for the production of biofuel.

Reduced till means the implementation of a tillage system that limits disturbance to soil from mixing or inversion throughout the crop interval but allows minimal tillage and soil disturbance.

Spring canola means a canola crop that is planted during or between the months of January and June.

Third-party verifier means an accredited person or organization independent of the verified entity that performs a verification activity or audit.

Tillage Disturbance Index for Soil Carbon (T-DISC) means a numerical value between 0-1 that estimates the intensity of soil disturbance caused by a tillage system. The higher the value, the more soil disturbance and higher potential for soil carbon loss. The T-DISC value applies to the entire tillage system used in producing a crop. The components of the rating include tillage type, mixing efficiency, and tillage depth.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39355, June 29, 2026]

Subpart B—Applicability

§ 2100.010 Entities in the biofuel supply chain.

The supply chain for feedstock crops used in biofuel production begins at a farm and ends at a biofuel refiner. Any entity within this supply chain that produces, processes, or takes ownership of reduced-CI crop or reduced-CI processed product must meet all applicable standards of this part. These entities include farms, first points of aggregation, intermediary entities, and biofuel refiners. If a biofuel refiner sources directly from a farm, the biofuel refiner is the first point of aggregation.

§ 2100.011 Biofuel feedstock crops.

Crops produced in accordance with subparts F and G of this part, where a CI is quantified in accordance with subpart C of this part, are referred to as reduced-CI crops. Crops produced not in accordance with this part are referred to as conventional crops. A farm producer may produce both reduced-CI crops and conventional crops. Reduced-CI crops and conventional crops can be physically mixed. Crops for which a reduced-CI may be quantified include:

- (a) Field corn;
- (b) Soybeans;
- (c) Sorghum; and
- (d) Spring canola.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39356, June 29, 2026]

§ 2100.012 Low-carbon practices to produce reduced-CI crops.

Reduced-CI crops must be produced using nutrient management or nutrient management and one or more low-carbon practice(s):

- (a) No-till or reduced till; and/or
- (b) Cover crops.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39356, June 29, 2026]

Subpart C—Quantification of Field-level Crop-specific Carbon Intensity

Source: 91 FR 39356, June 29, 2026, unless otherwise noted.

§ 2100.020 Quantification of CI.

Any farm producing and selling reduced-CI crops must calculate a field-level CI for each field or management unit employing nutrient management or a unique combination of nutrient management and low-carbon practices for each crop type (field corn, soybeans, sorghum, or spring canola). The field-level crop-specific CI represents the net GHG emissions resulting from production of one bushel of that crop on a specified field or management unit. The field-level crop-specific CI applies to the year in which the crop was harvested and the total amount of a crop harvested from that field or management unit in a given year must be included in the calculation. Once a field-level CI is calculated for a specific crop, the total amount of that crop from that field is assigned the field-level crop-specific CI and may be sold as reduced-CI crop. To calculate the field-level CI for each crop:

- (a) Farm producers must calculate the CI for each field or management unit on which nutrient management and low-carbon practice(s) were implemented, in accordance with subparts F and G of this part, using the U.S. Department of Agriculture (USDA) Feedstock Carbon Intensity Calculator (FD-CIC). This step must be repeated for every field or management unit producing reduced-CI crops. To calculate a field or management unit-level CI in USDA FD-CIC, farm producers must input data on:

- (1) Farm location (county and state).
 - (2) Crop type produced.
 - (3) Field or management unit acres.
 - (4) Actual yield adjusted to the following moisture content.
 - (i) For field corn, 15.5%;
 - (ii) For soybeans, 13%;
 - (iii) For sorghum, 14%; and
 - (iv) For spring canola, 8.5%.
 - (5) Expected yield.
 - (i) For farm producers holding a crop insurance policy covering the reduced-CI crop for the current crop interval, farm producers must input the expected yield as the USDA Risk Management Agency (RMA) applicable approved yield(s) used to establish coverage on their crop insurance policy; or
 - (ii) For farm producers that do not hold a crop insurance policy, a farm producer must input the expected yield as the RMA applicable transitional yield(s) or Agriculture Risk Coverage (ARC) County Benchmark yield for their county published by the Farm Service Agency (FSA).
 - (6) Total synthetic nitrogen applied per acre.
 - (7) Fraction of synthetic nitrogen receiving nitrification inhibitors.
 - (8) Amount, type, and nitrogen content of manure applied.
 - (9) Use of no-till or reduced till.
 - (10) Use of a cover crop or grazed cover crop.
- (b) USDA FD-CIC will use the farm producer inputs from paragraph (a) of this section to calculate a CI for each field or management unit.
- (c) Farm producers must repeat paragraphs (a) and (b) of this section for each field or management unit for each crop type that is sold as reduced-CI crop.

Subpart D—Chain of Custody standards

§ 2100.030 General recordkeeping and reporting standards.

- (a) The total amount of reduced-CI crop and associated CI must be maintained and tracked from the farm to the biofuel refiner using records and mass balance accounting.
- (b) Crops with different CIs can be physically mixed at any entity along the supply-chain.
- (c) Processed products derived from crops (for example, seed oils) can be produced using crops with different CIs.

- (d) All entities specified in § 2100.010 must maintain required documentation for 5 years beginning at the date in which reduced-CI crops or processed products are sold, including documentation of previous verification activities and audits conducted as required by this part. Documentation must be readily available to accredited third-party verifiers and provided upon request during an audit.
- (e) Any entity specified in § 2100.010 that participates in or has recently participated in more than one sustainability certification system must provide a third-party verifier with relevant documentation (e.g. mass balance, auditing reports) of all relevant certification systems to assess compliance with § 2100.031(e)(4)(v).

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39356, June 29, 2026]

§ 2100.031 Farm recordkeeping and reporting standards.

- (a) Farm producers must keep records demonstrating implementation of the nutrient management and low-carbon practices used in calculation of a CI.
 - (1) For reduced till or no-till, see § 2100.051(c).
 - (2) For cover crops, see § 2100.052(b).
 - (3) For nutrient management, see § 2100.064.
- (b) Farm producers must keep records demonstrating all sales from the farm of corn, soybeans, sorghum, and spring canola for the duration of the crop interval. These records must indicate the total amount sold, moisture content, the purchasing entity, and the date of the transaction. For sales of reduced-CI crop, records must also include the CI.
- (c) Farm producers must provide records demonstrating the expected yield input in USDA FD-CIC which must include:
 - (1) For farm producers holding a crop insurance policy covering the reduced-CI crop for the current crop interval, records demonstrating the crop insurance policy documenting the expected yield used in the CI calculation; or
 - (2) For farm producers that do not hold a crop insurance policy, records demonstrating the appropriate transitional yield published by USDA RMA (for example, screenshots or printouts from the RMA web pages or RMA documents where transitional yields for the appropriate county and crop are published) or the appropriate ARC-County Benchmark yield published by USDA FSA.
- (d) Farm producers must provide records demonstrating that the actual yield input in USDA FD-CIC is adjusted to the applicable moisture content according to § 2100.020(a)(4).
- (e) For each crop that is sold as a reduced-CI crop, farm producers must prepare and maintain a Biofuel Feedstock Report. Farm producers must provide the Biofuel Feedstock Report to any entity purchasing reduced-CI crop. The Biofuel Feedstock Report must:
 - (1) Begin with a statement that the undersigned farm producer certifies the following under penalties of perjury.
 - (2) State the farm name, farm producer name, and farm location (county and state).
 - (3) Demonstrate the quantification of each field or management unit with reduced-CI crop through:

- (i) Documentation of USDA FD-CIC calculation for each field or management unit (for example, screenshots or printouts from the USDA FD-CIC tool, or similar documentation showing USDA FD-CIC inputs and outputs including CI for each field or management unit) including a unique identifier for each field or management unit.
- (ii) [Reserved]
- (4) Include a Farm Producer Attestation declaring that the farm producer:
 - (i) Has operational control over all fields using low-carbon practices and has decision-making authority to manage fields as specified for practice standards in subpart F of this part and nutrient management standards in subpart G of this part;
 - (ii) Implemented low-carbon practice(s) that were used in calculation of the CI according to the implementation standards in subpart F of this part, implemented nutrient management according to the implementation standards in subpart G of this part, inputted nitrogen applied and yield accurately into the calculation of the CI, and if applicable, applied manure according to § 2100.062;
 - (iii) Calculated each field-level CI as specified in subpart C of this part;
 - (iv) Will retain required records for five years and make records available upon request to accredited third-party verifier;
 - (v) Will not double sell CI information, attributes, or GHG benefits associated with the reduced-CI crop into more than one market;
 - (vi) When implementing no-till, will continue no-till on all crops in the rotation for a minimum of four out of every five years; and
 - (vii) Did not convert the land used to produce reduced-CI biofuel feedstock crops into crop production after January 17th, 2025.
- (5) Include a statement that the farm producer understands that the fraudulent use of this Biofuel Feedstock Report may subject the farm producer, or any other party making fraudulent use of this Biofuel Feedstock Report, to a fine or imprisonment, or both, together with the costs of prosecution.
- (6) Be signed by the farm producer.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39356, June 29, 2026]

§ 2100.032 First point of aggregation and intermediary entity recordkeeping and reporting standards.

Link to an amendment published at 91 FR 39357, June 29, 2026.

- (a) The first point of aggregation and intermediary entities must establish and maintain a recordkeeping system to ensure a clear link between reduced-CI crops and documentation at all times. The first point of aggregation and intermediary entities must have a documented system in place to ensure accuracy and prevent the double sale of crops associated with a CI. At minimum, the entity must keep:
 - (1) Records of incoming and outgoing reduced-CI crop, including:

- (i) the total amount and moisture content of reduced-CI crop purchased, sold, or both;
 - (ii) the entity from and to which the crop was purchased, sold, or both;
 - (iii) the associated CI; and
 - (iv) the date of the transaction;
- (2) List of and contracts with all suppliers and recipients of reduced-CI crop; and
- (3) List of and contracts with subcontractors and service providers who have a direct role in data management, accounting, processing, or other activities that involve the receipt, storage, sale, or tracking of reduced-CI crop.
- (b) In addition to the standards in paragraph (a) of this section, the first point of aggregation and intermediary entities must maintain the following documentation from the previous entity in the supply chain:
 - (1) The first point of aggregation must maintain the Biofuel Feedstock Report from each farm supplying reduced-CI crops; and
 - (2) Intermediary entities must maintain documentation showing that entities supplying reduced-CI crops or reduced-CI processed products received accredited third-party verification under this part.
- (c) When a first point of aggregation or intermediary entity sells reduced-CI crops or reduced-CI processed products, the entity must provide the following documentation to the purchasing entity:
 - (1) Documentation that the first point of aggregation or intermediary entity received third-party verification in accordance with this part;
 - (2) The Biofuel Feedstock Report associated with the reduced-CI crop or the reduced-CI crop used as an input in the reduced-CI processed product being sold; and
 - (3) An attestation including the following information signed under penalties of perjury:
 - (i) Total amount of reduced-CI crop or reduced-CI processed product sold;
 - (ii) CI(s) associated with the amount of reduced-CI crop or reduced-CI processed product sold; and
 - (iii) A statement that the first point of aggregation or intermediary entity understands that the fraudulent use of this attestation may subject the entity and all parties making any fraudulent use of this attestation to a fine or imprisonment, or both, together with the cost of prosecution.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39357, June 29, 2026]

§ 2100.033 Additional recordkeeping standards for entities that process, sell, or purchase processed product derived from reduced-CI crops.

- (a) Any entity that processes product using reduced-CI crops is subject to additional recordkeeping standards. Processing includes extracting oil from seed oil crops (for example, soybeans or spring canola). Entities that process reduced-CI crops must:
 - (1) Keep records on processing of reduced-CI crops, including the entity's crushing yield, the amount of reduced-CI crop used in processing, the Biofuel Feedstock Report associated with all reduced-CI crop being processed into reduced-CI processed product, and the corresponding amount of reduced-CI processed product; and

- (2) Demonstrate calculation of the amount of reduced-CI processed product corresponding to the amount of reduced-CI crop, using the entity specific crushing yield and the following equation:

$$\text{reduced CI processed product} = \text{crushing yield} \times \text{reduced CI crop}$$

- (b) Any entity that sells or purchases reduced-CI processed product must keep records demonstrating:

- (1) The amount of reduced-CI crop used as an input for reduced-CI processed product sold or purchased;
- (2) The CI associated with reduced-CI crop used as an input for reduced-CI processed product sold or purchased; and
- (3) The Biofuel Feedstock Report associated with reduced-CI crop used as an input for reduced-CI processed product sold or purchased; and
- (4) The amount of reduced-CI processed product sold or purchased.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39357, June 29, 2026]

§ 2100.034 Mass balance recordkeeping standards.

- (a) First points of aggregation and intermediary entities must calculate and record the mass balance of incoming and outgoing reduced-CI crops, such that the incoming and outgoing amounts of reduced-CI crops with a specific CI are equal over a defined period of time. If an entity processes, purchases, or sells reduced-CI processed product, the mass balance accounting must document the amount of reduced-CI crop that was used in the reduced-CI processed product.
- (b) To complete mass balance calculations, entities must define mass balance time periods such that mass balance time periods are continuous (that is, no gaps between mass balance periods occur). Each mass balance time period may not exceed three months. Entities must document the mass balance time period used for the mass balance calculation.
- (c) Entities must provide documentation of the mass balance calculation for each time period to the third-party verifier during audits.
- (d) For any given CI, records must indicate that incoming and outgoing crops and processed products are balanced according to the equation:

$$\text{incoming feedstock}_{i,c,m} + \text{beginning stored feedstock}_{i,c,m} = \text{outgoing feedstock}_{i,c,m} + \text{ending stored feedstock}_{i,c,m}$$

- (1) Where feedstocks (incoming, stored, and outgoing) for entity i are measured at their dry weight (0% moisture content) and are identified by their carbon intensity, c , and the pre-defined mass balance accounting time period, m .
 - (i) Incoming feedstocks include those purchased by entity i in time period m .
 - (ii) Outgoing feedstocks must include both sold and discarded or wasted feedstocks in time period m .
 - (iii) Stored feedstocks are those maintained by the entity during time period m and must be accounted for in the mass balance accounting.

(iv) If reduced-CI crops or processed product is remaining at the end of a mass balance time period m , it is accounted for as ending stored feedstock for that time period and as beginning stored feedstock for the subsequent time period.

(2) To ensure that the mass balance accounting for entity i appropriately accounts for different forms of reduced-CI processed products (that is, oils), the entity's crushing yield must be used to convert reduced-CI processed products back to their crop volume or weight equivalents using the following equation:

$$\text{processed feedstock crop equivalent} = (\text{processed feedstock})/(\text{crushing yield})$$

(e) Entities must provide documentation of amounts in dry weight of incoming and outgoing conventional crop for each time period to the third-party verifier during audits.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39357, June 29, 2026]

§ 2100.035 Biofuel refiner recordkeeping standards.

(a) For reduced-CI crop that a biofuel refiner sources directly from a farm, the biofuel refiner is acting as a first point of aggregation and must follow the standards in § 2100.032.

(b) For reduced-CI crops and reduced-CI processed products that are sourced from a first point of aggregation or intermediary entity, a biofuel refiner must keep:

(1) Records of incoming reduced-CI crops or reduced-CI processed products, which, at a minimum this includes records of incoming reduced-CI crop or reduced-CI processed products, including the total amount of reduced-CI crop or reduced-CI processed product purchased, the moisture content of reduced-CI crop, the entity from which the crop or processed product was purchased, the associated CI, and the date of the transaction;

(2) The Biofuel Feedstock Report associated with the reduced-CI crop or the reduced-CI crop used as an input in the reduced-CI processed product purchased; and

(3) Documentation that the entity supplying reduced-CI crop or reduced-CI processed product has undergone third-party verification by an accredited third-party verifier and met the standards of this part, including any attestations made by the entity as required under §§ 2100.031 and 2100.032.

(c) For all reduced-CI crops, a biofuel refiner must establish a system to track all incoming reduced-CI crops and the associated CI.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39357, June 29, 2026]

Subpart E—Audits and Verification

§ 2100.040 Third-party audits.

(a) **Audit standards for first point of aggregation.** Each audit for a first point of aggregation must meet the following standards.

(1) First points of aggregation must hire a third-party verifier to conduct an audit annually;

(2) An audit, conducted by a third-party verifier, must verify that the first point of aggregation:

(i) Operates a mass balance system as specified in § 2100.034; and

- (ii) Correctly recorded the CI associated with reduced-CI crops delivered from each farm; and
- (3) The first point of aggregation must include all farms supplying reduced-CI crops in its audit scope. The first point of aggregation and third-party verifier must adhere to the following standards when selecting the audit sample.
 - (i) The first point of aggregation must provide farm producer information to enable the third-party verifier to select a sample of supplying farms for verification. Farm producer information must include the total number of farms supplying reduced-CI crops, geographic location of each farm, type and amount of crop supplied by each farm, and CI associated with the crop from each farm;
 - (ii) The third-party verifier will determine the total number of farms to be included in the audit sample. The third-party verifier must determine the minimum size of the farm audit sample by taking the square root, rounded up to the nearest whole number, of the total number of farms supplying the first aggregation point with reduced-CI crops; and
 - (iii) The third-party verifier must select the individual farms to be included in the sample for verification. The third-party verifier should select the sample in a way that is representative of supplying farms' characteristics including types of supplied reduced-CI crop, size of farm, geographic location, and risk of non-conformity or fraud and include an element of randomization in the selection.

(b) **Audit standards for farms.** Each audit for a farm must meet the following standards.

- (1) Farms that supply reduced-CI crops to a first point of aggregation may be selected for an audit by the first point of aggregation's third-party verifier;
- (2) If the farm is selected as part of the audit sample as the first point of aggregation, the farm may be considered for exemption from an additional audit when an audit was previously completed for the applicable year. Farm producers can elect to proactively retain an accredited third-party verifier to complete an audit at their farm per the standards of paragraph (b)(3) of this section. To be considered for exemption from an additional audit, the farm producer must provide results of the completed audit. It is up to the discretion of the third-party verifier to determine whether the farm is exempt from an additional audit or if a full or partial audit is necessary; and
- (3) For farms that are audited individually or included in an audit sample:
 - (i) The third-party verifier must verify that low-carbon practices, nutrient management, and recordkeeping is in accordance with the standards in subparts F and G of this part;
 - (ii) The third-party verifier must verify that the field-level CI for each crop is calculated correctly in accordance with subpart C of this part; and
 - (iii) The third-party verifier must verify that the actual yield is accurate and accounted for correctly in accordance with §§ 2100.020(a)(4) and 2100.031; and
 - (iv) The third-party verifier must verify that the expected yield is accurate in accordance with § 2100.020(a)(5); and
 - (v) Records from relevant sub-contractors or service providers must be made available during the farm audit at the request of the third-party verifier if necessary to audit practice standards.

- (c) **Audit standards for intermediary entities.** Each audit for an intermediary entity must meet the following standards.
 - (1) Intermediary entities must hire a third-party verifier to conduct an audit annually; and
 - (2) An audit, conducted by a third-party verifier, must verify that the intermediary entity:
 - (i) Operates a mass balance system as specified in § 2100.034; and
 - (ii) Correctly recorded the CI associated with reduced-CI crops or reduced-CI processed product delivered to the intermediary entity.
- (d) **Additional audit standards for entities that process, sell, or purchase reduced-CI processed product.** Each audit for a first point of aggregation or intermediary entity that processes, sells, or purchases reduced-CI processed products must meet the following standards.
 - (1) For entities that process, sell, or purchase reduced-CI processed products, an audit, conducted by a third-party verifier, must verify that the entity implemented recordkeeping standards specified in § 2100.033.
 - (2) [Reserved]
- (e) **Additional audit standards for entities that process reduced-CI crop.** Each audit for a first point of aggregation or intermediary entity that processes reduced-CI processed products must meet the following standards.
 - (1) For entities that process reduced-CI crop, the third-party verifier must verify that internal records support the calculation and application of the entity's crushing yield used to:
 - (i) Determine the amount of reduced-CI processed product derived from the amount of inputs; and
 - (ii) Perform the mass balance calculation.
 - (2) [Reserved]
- (f) **Audit standards for biofuel refiners.** Each audit for a biofuel refiner must meet the following standards.
 - (1) Biofuel refiners must hire a third-party verifier to conduct an audit annually; and
 - (2) An audit, conducted by a third-party verifier, must verify that the biofuel refiner:
 - (i) Operates a system to correctly record the CI associated with reduced-CI crop or reduced-CI processed product as specified in § 2100.035(c); and
 - (ii) Followed the standards in paragraph (a) of this section, if the biofuel refiner acted as a first point of aggregation for any reduced-CI crop.
- (g) **Audit standards for entities participating in multiple sustainability markets.** For each entity that that participates in or has recently participated in more than one sustainability certification system, an audit conducted by a third-party verifier must verify that multiple claiming (for example, double counting) of sustainability characteristics cannot and did not occur. The third-party verifier should assess relevant documentation (for example, mass balance accounting, auditing reports) of all relevant certification systems. The third-party verifier must verify the overall plausibility of incoming and outgoing sustainable material and ensure that the sustainable material sold is not greater than the sustainable material received.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39357, June 29, 2026]

§ 2100.041 Accreditation of third-party verifiers.

Third-party verifiers that conduct audits in accordance with this part must:

- (a) Be accredited to ISO 14065: General principles and requirements for bodies validating and verifying environmental information by a member of the Global Accreditation Cooperation Incorporated (Global ACI);
- (b) Be unrelated to the entity seeking verification. To avoid any real or potential conflict of interest, a third-party verifier must not have a relationship with the entity based on one or more of the following factors (this is a non-exclusive list): familial or personal relationship, or shared ownership, governance, management, personnel, resources, finances, contracts, or marketing (including branding); and
- (c) Assign at least one verifier to the verification team who is an Agricultural Expert.

[91 FR 39358, June 29, 2026]

Subpart F—Low-Carbon Agriculture Practice Standards

§ 2100.050 General.

Low-carbon practices may be implemented individually or in combination on a field or management unit.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39358, June 29, 2026]

§ 2100.051 Tillage management.

- (a) **Reduced till standards.** To qualify as reduced till under this part, field(s) or management unit(s) must be managed according to the following standards:
 - (1) The T-DISC value of the tillage system must be no greater than 0.252. Tillage methods where the entire soil surface is disturbed by tillage operations such as chisel plowing, field cultivating, tandem disking, vertical tillage, or ridge tillage are permitted. The T-DISC value must include all field operations that are performed during the crop interval (that is, from the time immediately following harvest or termination of one cash crop through harvest or termination of the next cash crop in the rotation, including fallow periods). The T-DISC value must be determined using USDA's T-DISC calculator or utilizing USDA's T-DISC methodology and underlying parameters to produce results equivalent to those produced by USDA's T-DISC calculator. Permitted methods are also commonly referred to as mulch tillage, conservation tillage, or ridge till;
 - (2) Primary inversion tillage implements (for example, moldboard plow) must not be used;
 - (3) Residue must not be burned or harvested; and
 - (4) Removing residue from the crop planting row area prior to or as part of the cash crop or cover crop planting or seeding operation is allowed.
- (b) **No-till standards.** To qualify as no-till under this part, field(s) or management unit(s) must be managed according to the following standards:

- (1) The T-DISC value of the tillage system must be no greater than 0.075. Full-width soil disturbance must not be performed, from the time immediately following harvest or termination of one cash crop through harvest or termination of the next cash crop in the rotation, regardless of the depth of the tillage operation. Strip tillage and fertilizer injection are permitted. The T-DISC value must include all field operations that are performed during the crop interval (that is, from the time immediately following harvest or termination of one cash crop through harvest or termination of the next cash crop in the rotation, including fallow periods). The T-DISC value must be determined using USDA's T-DISC calculator or utilizing USDA's T-DISC methodology and underlying parameters to produce results equivalent to those produced by USDA's T-DISC calculator;
 - (2) Residue must not be burned or harvested; and
 - (3) Removing residue from the crop planting row area prior to or as part of the cash crop or cover crop planting or seeding operation is allowed.
- (c) ***Tillage management recordkeeping standards.*** Records must contain sufficient detail to be readily understood and auditable. Records may be of varying types and origins including, but not limited to, physical documentation (for example, paper forms, invoices, receipts, seed tags), digital files (including from farm management software), data generated by farm equipment (for example, precision agriculture equipment), remotely sensed data, georeferenced and timestamped photographs, or data and records used for participation in USDA programs. The records under this paragraph (c) for the year in which the practice is implemented must be kept for 5 years and demonstrate:
- (1) Field(s) or management unit(s) where the practice is implemented, including location and acreage;
 - (2) All field operations including tillage and all other operations (including fertilizing, planting, controlling pests, seeding, harvesting) that may cause surface disturbance;
 - (3) Type of field operation including depth and width of disturbance and average speed of operation;
 - (4) Equipment used;
 - (5) Date(s) that each operation occurred; and
 - (6) Total bushels of the harvested production crop harvested from field(s) or management unit(s) where the practice was implemented.
- (d) ***Tillage management verification.*** When auditing the reduced till or no-till practice, third-party verifiers must review documentation demonstrating all field operations including the type of operation, equipment used, and timing of operation. Using these records, third-party verifiers must verify the correct calculation (or perform the calculation) of a crop interval T-DISC value and verify that the value meets the standards of the reduced till or no-till practice.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39358, June 29, 2026]

§ 2100.052 Cover crop management.

- (a) ***Cover crop standards.*** To qualify for the cover crop practice under this part, field(s) or management unit(s) must be managed according to the following standards:
- (1) Cover crop species selection, seedbed preparation, seeding rate(s), seeding date, seeding depth, and seeding method must be consistent with applicable soil and site conditions;

- (2) When a leguminous cover crop is used individually or as part of a mix, the farm producer must develop a nutrient budget which demonstrates:
 - (i) The available nitrogen resulting from the cover crop; and
 - (ii) An adjustment in total planned nitrogen application to the harvested production crop following the cover crop;
- (3) Cover crops must be seeded in the fall. Cover crop may be interseeded into an existing or established crop. Cover crop species and seeding dates should not adversely affect crop yield or interfere with the maintenance and harvest process;
- (4) Cover crops should be seeded as early as possible and terminated as late as practical (late vegetative stage or later), with termination timing established to minimize the risk of yield loss and soil moisture depletion;
- (5) Cover crops must be terminated via winter kill or using herbicide or non-soil disturbing mechanical methods (that is, roller crimper, mowing) in the spring;
- (6) Planting green is permitted;
- (7) Cover crop biomass must not be mechanically harvested. Residues must remain on the surface following termination and may not be burned; and
- (8) If cover crops are grazed prior to termination, grazing should occur at later stages of maturity in order to maximize root biomass and to allow for at least 50% of the total above ground vegetation to remain with the majority to be flattened onto the soil surface.

(b) **Cover crop recordkeeping standards.** Records must contain sufficient detail to be readily understood and auditable. Records may be of varying types and origins including, but not limited to, physical documentation (for example, paper forms, invoices, receipts, seed tags), digital files (including from farm management software), data generated by farm equipment (for example, precision agriculture equipment), remotely sensed data, georeferenced and timestamped photographs, or data and records used for participation in USDA programs. The records under this paragraph (b) for the year in which the practice is implemented must be kept for 5 years and demonstrate:

- (1) Purchase and receipt of cover crop seed in sufficient quantities to cover the area seeded;
- (2) Field(s) or management unit(s) where cover crop practice is implemented, including location and acreage;
- (3) Cover crop seeding date, method, and seeding rate;
- (4) Total acreage seeded in cover crop across the operation;
- (5) Photographic evidence of cover crop establishment;
- (6) Cover crop termination date and method;
- (7) Total bushels of the crop harvested from field(s) or management unit(s) where the cover crop practice was implemented immediately prior to seeding or planting the harvested production crop; and
- (8) For grazed cover crops, georeferenced and timestamped photographs of cover crops being grazed.

- (c) **Cover crop verification.** When auditing the cover crop practice, third-party verifiers must review documentation demonstrating cover crop species selection, seeding date, seeding method, seeding rate, total seeded acreage, termination date, and termination method. Through an on-site visit, remote sensing data, or georeferenced and timestamped photographs, third-party verifiers must verify the establishment of cover crops.

[90 FR 5512, Jan. 17, 2025, as amended at 91 FR 39358, June 29, 2026]

Subpart G—Nutrient Management Standards

Source: 91 FR 39359, June 29, 2026, unless otherwise noted.

§ 2100.060 General nutrient management.

Every field or management unit must be managed according to the following standards:

- (a) Prior to application of nutrients, the farm producer must develop and document a planned nutrient budget, yield goal, and applications of at a minimum, nitrogen, phosphorus, and potassium (N-P-K) in pounds per acre. The nutrient budget must account for all known measurable nutrient sources and removals. Sources of nitrogen may include, but are not limited to, commercial fertilizers (including starter and in-furrow starter or pop-up fertilizer), animal manures, legume crops, green manures, plant or crop residues, compost, organic by-products, digestate, municipal and industrial biosolids, wastewater, organic materials, estimated plant available soil nutrients, and irrigation water; and
- (b) The farm producer must base the nutrient budget on current soil test results or the professional opinion of an Agricultural Expert who is employed by the Cooperative Extension System or the agricultural departments of universities, or other Agricultural Experts approved by the Federal Crop Insurance Corporation (FCIC), whose research or occupation is related to the specific crop or practice for which such expertise is sought. If the nutrient budget is based on soil test results, soil test results must be no older than 2 years. Tissue testing may be used for monitoring or adjusting the nutrient budget in accordance with the state land grant university (LGU) guidance, or industry practice recognized by the state LGU. If the nutrient budget is based on the professional opinion of an Agricultural Expert, the Agricultural Expert must be unrelated to the farm producer. To avoid any real or potential conflict of interest, an Agricultural Expert must not have a relationship with the farm producer based on one or more of the following factors (this is a non-exclusive list): familial or personal relationship, or shared ownership, governance, management, personnel, resources, finances, contracts, or marketing (including branding).

§ 2100.061 Nitrification inhibitor standards.

To include the use of nitrification inhibitors in the calculation of the carbon intensity of the reduced-CI crop under this part, field(s) or management unit(s) must be managed in accordance with § 2100.060. Nitrification inhibitors must be defined by the Association of American Plant Food Control Officers (AAPFCO) and be accepted for use by the State fertilizer control official, or similar authority, with responsibility for verification of product guarantees, ingredients (by AAPFCO definition), and label claims.

§ 2100.062 Manure application standards.

Farm producers applying solid or liquid manure must apply manure according to the following standards:

- (a) Farm producers may not exceed application rates as stated in their nutrient budget developed in accordance with § 2100.060; and
- (b) A manure test for each type of manure applied must be used for development of the nutrient budget required in § 2100.060. The manure test must be collected during the current crop interval. The manure test must at a minimum provide information on N-P-K content of the manure.

§ 2100.063 Nutrient management recordkeeping standards.

Records must contain sufficient detail to be readily understood and auditable. Records may be of varying types and origins, including, but not limited to, physical documentation (for example, paper forms, invoices, receipts, seed tags), digital files (including from farm management software), data generated by farm equipment (for example, precision agriculture equipment, as applied maps), remotely sensed data, georeferenced and timestamped photographs, or data and records used for participation in USDA programs. The records under this section for the year in which the reduced-CI crop is produced must be kept for 5 years and demonstrate:

- (a) A nutrient budget that accounts for realistic yield goal and all known and measurable sources of N-P-K based on either soil test results or the professional opinion of an Agricultural Expert who is employed by the Cooperative Extension System or the agricultural departments of universities, or Agricultural Experts approved by the FCIC, whose research or occupation is related to the specific crop or practice for which such expertise is sought.
 - (1) If using soil test results, records must demonstrate soil test results, soil test methods, laboratory where soil test was conducted, and date of the soil test within 2 years of the development of the nutrient budget;
 - (2) If using the professional opinion of an Agricultural Expert, a statement by the Agricultural Expert documenting how they currently meet the requirements in § 2100.060(b) and if applicable, documentation of any professional certification including certification name, number, license name and number, agricultural retailer business name, or other brief written statement indicating how the requirements are met; and
 - (3) If used, in-season soil samples or tissue samples results for N analysis should be provided along with methods, laboratory, and date sampled.
- (b) Date(s), method(s), location(s) of all nutrient applications in pounds per acre for N-P-K per field or management unit.
- (c) Receipts identifying the source and type of nutrients supplied, including nutrient content.
- (d) Planting or seeding date for each field or management unit where reduced-CI crop is produced.
- (e) Total acreage for each field or management unit where reduced-CI crop is produced.
- (f) Total bushels of the crop harvested from each field or management unit where reduced-CI crop is produced.
- (g) Nitrification inhibitor recordkeeping. Farm producers applying nitrification inhibitors must maintain records of receipts identifying the amount and the type of nitrification inhibitors applied are in accordance with § 2100.061.
- (h) Manure application recordkeeping. Farm producers applying manure must maintain records that demonstrate:

- (1) Date of sample, description of where manure collection occurred, and animal source of the manure for each type of manure tested and applied;
- (2) Results of manure test(s) for each type of manure applied; and
- (3) Records demonstrating amount of manure applied:
 - (i) For manure originating outside the farm, receipts demonstrating the sale or exchange of manure including date, quantity, type, and location of manure source; or
 - (ii) For manure that is produced on farm:
 - (A) If the farm participates in a livestock insurance program, insurance records demonstrating number of head or flock size specific to the year in which the manure was produced; or
 - (B) If the farm does not participate in an insurance program, farm records demonstrating livestock inventory specific to the year in which the manure was produced such as receipts of livestock or livestock products sold, permits, program enrollment documents that demonstrate number of head or flock size.

§ 2100.064 Nutrient management verification.

When auditing nutrient management implementation, the third-party verifier must verify development of a nutrient management budget that accounts for all known and measurable sources of nutrients (that is, N-P-K). The third-party verifier must verify that the nutrient management budget was developed based on current soil test results or the professional opinion of an Agricultural Expert who is employed by the Cooperative Extension System or the agricultural departments of universities, or other Agricultural Experts approved by the FCIC, whose research or occupation is related to the specific crop or practice for which such expertise is sought. The third-party verifier must verify that the nitrogen application and yield in each field or management unit on the Biofuel Feedstock Report is aligned with records. For nitrification inhibitors, the third-party verifier must verify that inhibitors followed requirements in § 2100.061. For farms applying manure, the third-party verifier must verify that the manure recorded in the calculation of the CI is consistent with farm records required in § 2100.063(h).