



THE STANDARD BEHIND THE BUTTERFLY

Non-GMO Project Standard

v17

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Public comment periods on the Non-GMO Project Standard are held for 60 days beginning no later than April of revision years; for more information please visit our website nongmoproject.org. Comments received in the interim will be reviewed during the next scheduled public comment period. Comments may be submitted at any time through our Public Comment Form at nongmoproject.org/public-comment.

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The Non-GMO Project Standard (Version 17)

The Non-GMO Project

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The Non-GMO Project Standard is a normative document of the Product Verification Program.
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between such content and the official English-language version of the Non-GMO Project Standard,
the English-language version shall prevail.

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Table of Contents

1	Introduction	1
1.1	Purpose.....	2
1.2	Defining Genetically Modified Organism	2
1.3	Methodology and Approach of the Standard	2
2	Scope of the Standard	4
2.1	Product Eligibility	4
2.2	Input and Ingredient Evaluation.....	5
3	Input and Ingredient Classification	8
3.1	Weight Percentage	8
3.2	Risk Status	10
3.3	Testability	11
3.4	Product Compliance by Input and Ingredient Classification	11
4	Chain of Custody	13
4.1	Activities	13
4.2	Global Chain of Custody Requirements	14
4.3	Segregation	14
4.4	Cleanout	14
4.5	Traceability	15
5	Onsite Inspections	15
6	Sampling and Testing	16
6.1	Action Thresholds	16
6.2	Global Sampling Requirements	17
6.3	Global Testing Requirements	18
6.4	Molecular Testing Methods	19
6.5	Immunological Testing Methods.....	20
7	Affidavits	21
7.1	Global Affidavit Requirements	21
7.2	Non-Testable High-Risk Inputs and Ingredients	21
7.3	Testable High-Risk Minor and Micro Inputs and Ingredients	22
7.4	Affidavit Compliance Based on Country of Origin.....	23

7.5	Low-Risk Major, Minor, and Micro Inputs and Ingredients	23
7.6	Non-Risk Major, Minor, and Micro Inputs and Ingredients	24
8	Livestock and Poultry	24
8.1	Compliance of Livestock- and Poultry-derived Inputs and Ingredients	24
8.2	Life Cycle	25
8.3	Compliance of Rations	26
8.4	Feed Sampling	28
8.5	Testing Methodology	32
8.6	Feed Compliance Through Compliant Seed	32
8.7	Feed Mills	33
8.8	Onsite Farm and Feed Mill Inspections	34
9	Special Requirements for Specific Products, Ingredients, and Inputs	34
9.1	Apiculture	34
9.2	Beer, Wine, and Liquor	35
9.3	Microorganisms	35
9.4	Probiotics	36
9.5	Saltwater and Freshwater Aquatic Animals	36
9.6	Vitamins and Supplements	36
10	Product Specifications and Labeling	36
10.1	Specifications for Obtaining Inputs and Ingredients	36
10.2	Labeling	37
11	Quality Assurance	37
11.1	Total Quality Management Systems	37
11.2	Non-conformities and Corrective and Preventive Actions	38
11.3	Renewal	38
Appendix A – Terms and Definitions		39
Appendix B – High-Risk List		44
B.1	Testable and Non-Testable High-Risk Inputs and Ingredients	44
Appendix C – Biotechnology Techniques		46

Tables

Table 1-1	Product Verification Program Documents	1
Table 3-1	The Three Risk Statuses	10
Table 3-2	Compliance of Verified Inputs and Ingredients	11
Table 3-3	Compliance of Low-Risk and Non-Risk Inputs and Ingredients	12
Table 3-4	Compliance of Testable High-Risk Major, Minor, and Micro Inputs and Ingredients	12
Table 3-5	Compliance of Non-Testable High-Risk Major, Minor, and Micro Inputs and Ingredients	13
Table 4-1	Activities Along the Chain of Custody.....	14
Table 6-1	Action Thresholds	17
Table 8-1	Compliance of Livestock- and Poultry-derived Inputs and Ingredients based on Weight Percentage	25
Table 8-2	Compliance of Testable High-Risk Inputs to Rations for Livestock- and Poultry-derived Major Ingredients	27
Table 8-3	Compliance of Non-Testable High-Risk Inputs to Rations for Livestock- and Poultry- derived Major Ingredients	27
Table 8-4	Quarterly Sampling Density and Selection	29

Figures

Figure 1-1	The Relationship Among Inputs, Ingredients, and Products	3
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1 Introduction

The Non-GMO Project is a nonprofit organization whose mission is to offer rigorous product verification and trustworthy education that empowers people to care for themselves, the planet, and future generations.

In support of our mission, the Non-GMO Project offers a Product Verification Program (PVP) whereby Participants may enroll wholesale and retail Products for evaluation against, and determination of compliance with, the Non-GMO Project Standard. The PVP also includes the Non-GMO Project Program Rules and Procedures, the Non-GMO Project Trademark Use Guide, and the Non-GMO Project Trademark License and Program Participation Agreement, collectively referred to as Program Documents. Where applicable, a written agreement between the Participant and one or more Technical Administrators (TAs) is also required. If all elements of the PVP are satisfied, including meeting the compliance requirements set forth by the Non-GMO Project Standard, Products may attain Non-GMO Project verification.

To monitor compliance with the PVP, the Non-GMO Project maintains surveillance and auditing programs. The surveillance program routinely tests Verified Products and Inputs and Ingredients thereof, for compliance with the Action Thresholds outlined in the Non-GMO Project Standard. The auditing program is in place to ensure that the appropriate supporting documentation associated with Verified Products is on file and fulfills the requirements of the PVP.

Compliance with all Program Documents listed in [Table 1-1](#) is required to attain Non-GMO Project verification.

Table 1-1 Product Verification Program Documents

Product Verification Program Documents: https://www.nongmoproject.org/resources/#program-documents
The Non-GMO Project Standard
The Non-GMO Project Program Rules and Procedures
The Non-GMO Project Trademark Use Guide
The Non-GMO Project Trademark License and Program Participation Agreement

Hereafter, the Non-GMO Project will be referred to as “the Project” and the Non-GMO Project Standard as “the Standard.”

English is the original and official language of the Standard. Terms defined in [Appendix A](#) and used in the Standard are capitalized throughout. Requirements listed under headers titled “Global Requirements” apply to the entirety of the section in which they appear (e.g., Section 4.2, Global Chain of Custody Requirements, applies to all of Section 4).

1.1 Purpose

The purpose of the Standard is to offer meaning and value to the marketing claim “Non-GMO Project Verified” by creating, maintaining, and keeping publicly available, a set of rigorous requirements against which all Non-GMO Project Verified Products are measured.

1.2 Defining Genetically Modified Organism

The Standard employs a definition of Genetically Modified Organism (GMO) that focuses on the application of Biotechnology rather than comparing the observable or measurable traits of an engineered organism to those of a “natural” organism. For purposes of the Standard, Biotechnology is defined in [Appendix A](#) and further illustrated in [Appendix C](#). Under this approach, any organism modified using Biotechnology, such as through recombinant DNA techniques or new genomic techniques (e.g., CRISPR, TALEN) is classified as a GMO, along with its derivatives. For instance, if corn is Genetically Modified using techniques such as recombinant DNA or gene editing and then processed into corn oil, both the corn and the resulting oil are classified as Genetically Modified. This definition ensures a rigorous evaluation framework, emphasizing transparency, compliance, and alignment with consumer expectations.

1.3 Methodology and Approach of the Standard

The Project’s PVP is based on a practice-oriented and process-oriented Standard that uses both testing and Affidavits as key strategic tools to confirm that practices and processes meet requirements.

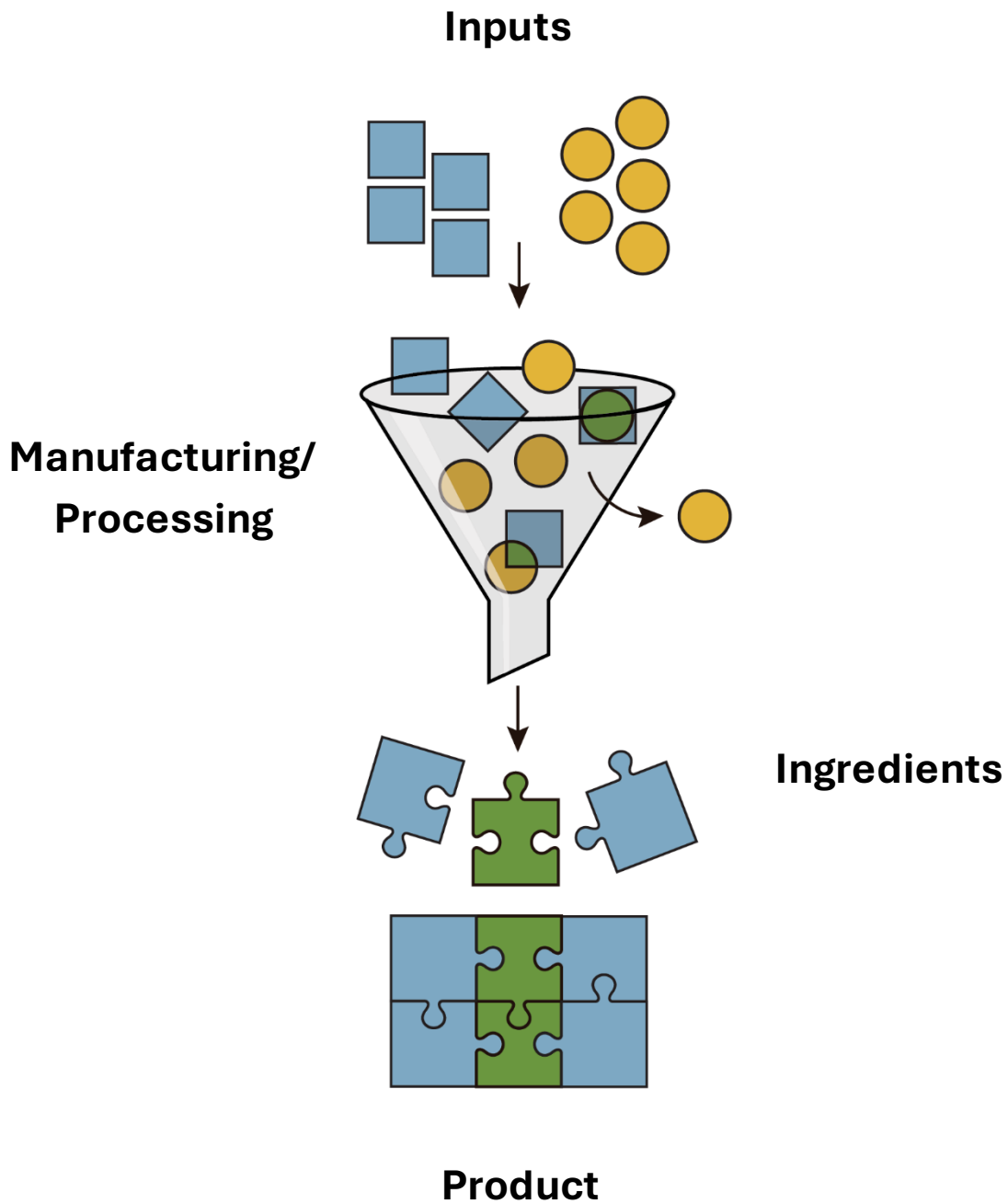
Continuous improvement on the part of Participants is required with the common goal of eliminating any Inputs and Ingredients derived from GMOs from their supply chains.

A Product is a unique branded formula and process, where process could be either the manufacturing or facility process.

The breadth and depth of Product evaluation is informed by the nature of the Inputs and Ingredients that are represented in or present in the Product formulation. Inputs and Ingredients are classified according to three attributes: 1) weight percentage as represented in or present in the Product, 2) likelihood that they are derived from a GMO, and 3) whether a testable precursor exists at any point in the supply chain. These three attributes are termed Weight Percentage, Risk Status, and Testability, respectively. Compliance of all Inputs and Ingredients within the scope of evaluation is required for verification.

Figure 1-1 The Relationship Among Inputs, Ingredients, and Products

Materials used in the production of a Product are Inputs. In relation to the Product being Verified, some Inputs are present in the finished Product and considered Ingredients (shown as puzzle pieces), while other Inputs support production but are not present in the finished Product (shown as circles). All Ingredients are Inputs, but not all Inputs become Ingredients.



Activities occurring along the chain of custody (CoC) for Products and their Inputs and Ingredients are evaluated for compliance with the segregation, cleanout, traceability, and quality assurance requirements outlined in the Standard. Products must comply, on an ongoing basis, with the Project's labeling requirements and shall not carry competing claims or 100% GMO absence claims. Before using the Non-GMO Project verification mark in connection with any Product, Participants will be required to sign a written agreement with the Project.

Although requiring compliance of all Inputs and Ingredients within the scope of evaluation, the Standard is highly focused on Inputs and Ingredients that are or are likely to be derived from GMOs. Testable High-Risk Inputs and Ingredients must comply with the appropriate Action Threshold, and Non-Testable High-Risk Inputs and Ingredients must comply with Affidavit requirements.

Addressing the contamination of seed is a stated priority of the Project. Although traceability back to tested seed is not required for Product verification in general, the Project is actively developing sources of compliant seed as the basis for a sustainable Non-GMO supply chain.

In summary, all Verified Products must have systems in place for:

Labeling: Accurate and clear Product labeling.

Quality Assurance: Maintaining operational consistency and addressing Non-conformities promptly.

Procurement: Obtaining Inputs and Ingredients in accordance with uniform and meaningful specifications.

Testing: Meaningful, ongoing testing of Major High-Risk Inputs and Ingredients.

Segregation and Cleanout: Protecting compliant Inputs and Ingredients from commingling with non-compliant materials.

Traceability: Supply chain traceability, especially following Input and Ingredient testing or the establishment of a compliant Affidavit.

2 Scope of the Standard

2.1 Product Eligibility

2.1.1 The following types of wholesale or retail Products are eligible for verification:

2.1.1.a Seed and vegetative propagation materials.

2.1.1.b Wholesale or retail Products for human or pet use that are either ingested or topically applied including over the counter (OTC) drugs and homeopathic remedies.

- 2.1.1.c** Wholesale or retail Products for human or pet use that are not ingested or topically applied.
- 2.1.1.d** Feed and supplements for livestock, poultry, bees, and aquatic animals.
- 2.1.2** The following types of Products are ineligible for verification:
 - 2.1.2.a** Controlled or illegal substances, narcotics, or any similarly regulated or designated substances, materials, Inputs, Ingredients, and/or Products (as reasonably determined by the Project in its sole discretion) under U.S., Canadian, and/or Mexican law, including the laws of any individual states, provinces, territories, or agencies therein, or under the law in the country or region in which the Product is being manufactured or sold. For the avoidance of doubt, this could include any substance that is currently undergoing review for legality by any state, federal, and/or applicable governmental authority.
 - 2.1.2.b** All prohibited substances listed under [Section 2.2.1](#).
 - 2.1.2.c** Certain medicines and other medical Products.
 - 2.1.2.d** Live animals.
 - 2.1.2.e** Synthetic pesticides.
 - 2.1.2.f** Products composed entirely of Non-Risk Inputs and Ingredients and that are part of a Non-Risk Category.
 - 2.1.2.f.i** Non-Risk Categories include, but are not limited to, 100% salt Products, unflavored still beverages, unflavored carbonated beverages, and unflavored electrolyte beverages.
 - 2.1.2.g** Products making a voluntary or mandatory disclosure under The National Bioengineered Food Disclosure Standard.¹

2.2 Input and Ingredient Evaluation

- 2.2.1** The following are prohibited and shall not be or be contained in Inputs or Ingredients that are within the scope of evaluation:
 - 2.2.1.a** Controlled or illegal substances, narcotics, or any similarly regulated or designated substances, materials, Inputs, Ingredients, and/or Products (as reasonably determined by the Project in its sole discretion) under U.S., Canadian, and/or Mexican law, including the laws of any individual states, provinces, territories, or agencies therein, or under the law in the country or region in which the Product is being manufactured or sold. For the

¹ 7 CFR § 66 (2018).

avoidance of doubt, this could include any substance that is currently undergoing review for legality by any state, federal, and/or applicable governmental authority.

- 2.2.1.b** Recombinant bovine growth hormone (rBGH).²
- 2.2.1.c** GM animals including those that are cloned, their progeny, and their derivatives.
- 2.2.1.d** Synthetic Biology,³ its derivatives, and any organisms, Inputs, or Ingredients, or derivatives thereof, represented as synthetic biology³ in any public communications.⁴
- 2.2.1.e** Biological Compounds⁵ that are structurally identical to or intended or represented as a substitute for an animal-derived compound (including human) and are:
 - 2.2.1.e.i** produced by organisms that do not naturally produce the compound without the use of Biotechnology, or
 - 2.2.1.e.ii** produced by cell-free systems.⁶Enzymes shall be exempt from this prohibition.
- 2.2.1.f** Organisms that have been subjected to Heavy Ion Beam Radiation and derivatives thereof.
- 2.2.1.g** Inputs and Ingredients produced through or derived from Plant Molecular Farming.

² Recombinant bovine growth hormone is also known as recombinant bovine somatotropin (rBST).

³ The terms “Synthetic Biology” (uppercase and defined in [Appendix A](#)) and “synthetic biology” (lowercase) are referenced intentionally here. As there is no universally accepted definition for synthetic biology, the term “synthetic biology” (lowercase) includes usage of that term (and comparable terms) by industry even if such terms are not necessarily in full alignment with the Standard’s definition.

⁴ Public communications include, but are not limited to, marketing materials, patent filings, SEC filings, and other regulatory documents.

⁵ Biological Compounds are substances such as proteins, sugars, fats, and other natural materials that are normally produced by living organisms. For the purposes of this requirement, if a compound is typically sourced from animals (including humans), it must come from a Non-GMO animal source to be eligible for use in a Verified Product. Substances that are produced using other organisms or systems, such as yeast, bacteria, fungi, plants, or cell-free systems, even if they replicate the structure or function of the animal-derived compound or are intended or represented as its substitute, are not permitted.

⁶ Cell-free systems are production methods that make Biological Compounds outside of whole, living organisms. They combine molecular components from cells (e.g., the machinery used to assemble proteins) with DNA or RNA instructions to build proteins and other molecules without growing Microorganisms or animal cells.

2.2.2 The following Inputs and Ingredients are within the scope of evaluation:

2.2.2.a Seeds and vegetative propagation materials only when the same seeds or vegetative propagation materials are the Products seeking verification.

2.2.2.b Compost only when the same Compost is the Product seeking verification.

2.2.2.c All Inputs and Ingredients represented in or present in the Product formulation from the following categories shall comply with the requirements of the Standard in order for the finished Product to be Verified:

2.2.2.c.i Unprocessed raw agricultural materials such as vegetables, grains, fruit, greens, herbs, other fresh foods, and fibers.

2.2.2.c.ii Manufacturing Inputs and Ingredients, including flavorings, seasonings, colorings, additives, and all other substances present in final, manufactured Products.

2.2.2.c.iii Animal derivatives including dairy, meat, eggs, wool, and hides; derivatives of apiculture including, but not limited to, honey and beeswax; derivatives of aquatic animals.

2.2.2.c.iv Processed agricultural Inputs and Ingredients.

2.2.2.c.v Packaging that is directly immersed in or combined with liquid for the purpose of making the Product available for human consumption, including tea, coffee, spice, and soup bags but not including any part of the packaging other than the bag.

2.2.2.c.vi Rations and supplemental feed for livestock, poultry, bees, aquatic animals, and other animals.

2.2.2.c.vii Mushrooms and mushroom cultivation substrates.

2.2.2.d Other Inputs and Ingredients used in personal care, cosmetic, and textile Products.

2.2.2.e Dietary supplements, vitamins, and herbal preparations.

2.2.2.f Microorganisms, Enzymes, and Growth Media.

2.2.2.g Processing Aids present in the finished Product at 0.5% or more.

2.2.2.h Processing Aids listed on the Ingredient panel of a retail Product or Input/Ingredient disclosure documentation of a wholesale Product.

2.2.3 The following Inputs and Ingredients are excluded from the scope of evaluation:

- 2.2.3.a** Processing Aids present in the finished Product at less than 0.5% and not declared on the retail Ingredient panel or the Input/Ingredient disclosure documentation of a wholesale Product. For the purposes of the Standard, fermentation Microorganisms are not considered to be Processing Aids. See [Section 9.3](#) for the evaluation of and compliance requirements for Microorganisms.
- 2.2.3.b** Purified carbon dioxide (CO₂) from either biological or non-biological sources.
- 2.2.3.c** Fully composted materials, when used as Inputs.
- 2.2.3.d** Growth Media, feed, and mushroom cultivation substrates, including Inputs to livestock, poultry, bee, and aquatic animal Rations, when the Microorganism, animal, or mushroom grown on or with such materials is represented in or present in the finished Product as a Micro Ingredient.
- 2.2.3.e** Minor and Micro Inputs and Ingredients to livestock and poultry Rations.
- 2.2.3.f** Growth Media used in the production of Probiotic Ingredients.
- 2.2.3.g** Growth Media to Microorganisms from which Enzyme Inputs and Ingredients to vitamin and supplement Products are derived.

3 Input and Ingredient Classification

Inputs and Ingredients within the scope of evaluation shall be classified in accordance with Section 3 and meet all applicable requirements under the Standard to be included in a Verified Product.

3.1 Weight Percentage

Inputs and Ingredients shall be classified according to their Weight Percentage as represented in or present in the finished Product. Excluded from the Weight Percentage calculation are: 1) salt, 2) added water, 3) Processing Aids present in the finished Product at less than 0.5% and not declared on the retail Ingredient panel or the Input/Ingredient disclosure documentation of a wholesale Product, and 4) purified CO₂.

For livestock, poultry, bee, and aquatic animal feed other than pet food, the Weight Percentage categories under [Section 3.1.1](#), [Section 3.1.2](#), and [Section 3.1.3](#) shall be calculated based on the weight of the Input or Ingredient as a percentage of the Ration fed to the animal. Rations demonstrating compliance on an as-fed basis have additional reporting requirements per [Section 8.3.1.d](#). Rations demonstrating compliance on a dry matter basis do not have any

additional reporting requirements. Per [Section 8](#), all Minor and Micro Inputs and Ingredients of livestock and poultry Rations may be excluded from the scope of evaluation.

Unless a Verified Ingredient, the Inputs to each Major or Minor Ingredient shall be classified and evaluated back to the point in the supply chain where they can be confirmed compliant with the Standard's requirements. If the TA determines that a Micro Ingredient qualifies for [Section 3.1.3.b](#) no further breakdown or classification is required.

3.1.1 Major Inputs and Ingredients, each of which represents, or is present as, 5% or more of the finished Product.

3.1.2 Minor Inputs and Ingredients, each of which represents, or is present as, at least 0.5% but less than 5% of the finished Product.

3.1.3 Micro Inputs and Ingredients, each of which represents, or is present as, less than 0.5% of the finished Product. The depth of evaluation for these Inputs and Ingredients, including application of the limits in [Section 3.1.3.a](#), is limited to the organism from which they were derived, as opposed to Growth Medium or feed. Certain Micro Inputs and Ingredients may be eligible for Micro Exemption under [Section 3.1.3.b](#).

3.1.3.a Inputs and Ingredients ineligible for Micro Exemption:

3.1.3.a.i High-Risk Ingredients on the List of Bioengineered Foods.⁷

3.1.3.a.ii High-Risk Ingredients not on the List of Bioengineered Foods⁸ for which the Participant has actual knowledge that the Ingredients contain detectable modified genetic material, and said Ingredients retain detectable modified genetic material in the finished Product.

3.1.3.a.iii Viable Microorganisms present in the finished Product.

3.1.3.a.iv Functional Enzymes present in the finished Product and listed on the retail Ingredient panel or, for Products sold without retail labeling, listed on the Input/Ingredient disclosure documentation.

3.1.3.a.v High-Risk Micro Ingredients, other than artificial and natural flavors, if they are either:

3.1.3.a.v.a) Named in text on the Principal Display Panel (PDP) of a retail Product and the same name, or any common names by which the

⁷ 7 CFR § 66.1 (2018); 7 CFR § 66.6 (2018).

⁸ 7 CFR § 66.6 (2018).

Ingredients are known, are listed on the Ingredient declaration or supplement facts panel.

3.1.3.a.v.b) Named in parenthetical Ingredient declarations or supplement facts panels and are reasonably considered to characterize a Major, Minor, or Micro Ingredient that is named in text on the PDP of a retail Product.

3.1.3.a.v.c) For Enzymes and Microorganisms, the conditions in Sections 3.1.3.a.v.a) and 3.1.3.a.v.b) apply when the Ingredient is voluntarily named in text on the PDP, or is reasonably considered to characterize a Major, Minor, or Micro Ingredient that is voluntarily named in text on the PDP, of a retail Product.

See [Section 3.2](#) for an explanation of Risk Status.

3.1.3.b Ingredients present in Products as Micro Ingredients and not listed in [Section 3.1.3.a](#), and Inputs represented in Products as Micro Ingredients, may be approved for use without demonstrating Non-GMO sourcing (Micro Exemption) provided no Product contains more than 0.9% total exempt Micro Ingredients by Weight Percentage.

3.2 Risk Status

Inputs and Ingredients shall be classified according to their Risk Status. Risk Status denotes the likelihood that an Input or Ingredient is or is derived from a GMO. In order to focus the PVP on Inputs and Ingredients at risk for GMO contamination throughout the CoC, the Standard recognizes three Risk Statuses ([Table 3-1](#)).

Table 3-1 The Three Risk Statuses

Risk Status	Definition
High Risk (see Appendix B)	Organisms and the Inputs and Ingredients derived from them for which GM counterparts are widely commercially available.
Low Risk	Organisms and the Inputs and Ingredients derived from them that are not classified as High Risk.
Non-Risk	Inputs and Ingredients that originate entirely outside living systems, with no history of being alive or derived from a living organism. They contain no cells, cellular components, or genetic material and, by their nature, cannot be Genetically Modified.

3.3 Testability

Inputs and Ingredients are either Testable or Non-Testable. Testable Inputs and Ingredients have a point in the supply chain where the Input or Ingredient contains sufficient intact deoxyribonucleic acid (DNA) or protein to return valid molecular or immunological test results. Additionally, molecular tests or immunological tests are publicly commercially available to cover all events for which the Project requires testing. Non-Testable Inputs and Ingredients either lack a point in the supply chain with sufficient intact DNA or protein for valid molecular or immunological test results or do not have commercially available testing methods for the relevant GM events as required by the Project. Some organisms and their derivatives may meet the criteria for being both Testable and Non-Testable, depending on the specific circumstances.

3.3.1 For Testable High-Risk Inputs and Ingredients (including for use in pet food) other than animal feed, the molecular method polymerase chain reaction (PCR) is the only acceptable testing methodology.

3.3.2 For Testable High-Risk Inputs and Ingredients to animal feed (other than pet food), either the molecular method PCR or immunological methods may be used to demonstrate compliance with the Action Threshold.

3.4 Product Compliance by Input and Ingredient Classification

Full Input and/or Ingredient disclosure is required in most cases for Products. [Table 3-2](#) summarizes the compliance pathway for Verified Inputs and Ingredients. [Table 3-3](#) summarizes the compliance pathways available for Low-Risk and Non-Risk Inputs and Ingredients. The compliance pathways of these two Risk Statuses are unaffected by Weight Percentage in the finished Product and Testability. [Table 3-4](#) and [Table 3-5](#) summarize the various compliance pathways for Testable and Non-Testable High-Risk Inputs and Ingredients, respectively, when they are Majors, Minors, and Micros. [Table 3-2](#), [Table 3-3](#), [Table 3-4](#), and [Table 3-5](#) are summaries; where appropriate, additional compliance requirements, including those outlined in [Section 10](#), Product Specifications and Labeling, and [Section 11](#), Quality Assurance, could also apply.

Table 3-2 Compliance of Verified Inputs and Ingredients

Verified Major, Minor, and Micro Inputs and Ingredients
1. Provide proof of verification of appropriate scope. 2. Participant complies with Section 4, Chain of Custody, from the point of procurement to the finished Product.

Table 3-3 Compliance of Low-Risk and Non-Risk Inputs and Ingredients

Low Risk	
1. Comply with Section 4.3 , Segregation. If the facility does not use any High-Risk Inputs or Ingredients, then demonstration of this fact is sufficient to fulfill this requirement.	
AND EITHER	
a. Provide a complete Input and Ingredient disclosure.	
OR	
b. Comply with Section 7.5 , Low-Risk Major, Minor, and Micro Inputs and Ingredients.	
Non-Risk	
1. Provide a complete Input and Ingredient disclosure.	
OR	
2. Comply with Section 7.6 , Non-Risk Major, Minor, and Micro Inputs and Ingredients.	

Note: Inputs and Ingredients from the Low-Risk and Non-Risk Risk Statuses have the same compliance pathways regardless of Testability or Weight Percentage attributes. For example, Non-Risk Major, Minor, and Micro Inputs and Ingredients have the same compliance pathways.

Table 3-4 Compliance of Testable High-Risk Major, Minor, and Micro Inputs and Ingredients

Testable High-Risk		
Major	Minor	Micro
1. Submit a complete Input and Ingredient disclosure.	1. Comply as a Major.	1. Comply as a Major.
2. Comply with Section 4 , Chain of Custody.	OR	OR
3. Comply with Section 5 , Onsite Inspections.	2. Submit a complete Input and Ingredient disclosure.	2. Comply as a Minor.
AND EITHER	3. Comply with Section 4 , Chain of Custody.	OR
a. Comply with Section 6 , Sampling and Testing.	4. Where eligible, comply with Section 7.3 , Testable High-Risk Minor and Micro Inputs and Ingredients.	3. Comply with Section 3.1.3 , Micro Inputs and Ingredients.
OR	5. Comply with Section 10 , Product Specifications and Labeling.	4. Comply with Section 10 , Product Specifications and Labeling.
b. Where eligible, comply with Section 7.4 , Affidavit Compliance Based on Country of Origin.	6. Comply with Section 11 , Quality Assurance.	5. Comply with Section 11 , Quality Assurance.
4. Comply with Section 10 , Product Specifications and Labeling.		
5. Comply with Section 11 , Quality Assurance.		

Table 3-5 Compliance of Non-Testable High-Risk Major, Minor, and Micro Inputs and Ingredients

Non-Testable High-Risk		
Major	Minor	Micro
1. Submit a complete Input and Ingredient disclosure. 2. Comply with Section 4, Chain of Custody. 3. Comply with Section 5, Onsite Inspections. AND EITHER a. Comply with Section 7.2, Non-Testable High-Risk Inputs and Ingredients. OR b. Where eligible, comply with Section 7.4, Affidavit Compliance Based on Country of Origin. 4. Comply with Section 10, Product Specifications and Labeling. 5. Comply with Section 11, Quality Assurance.	1. Comply as a Major. OR 2. Submit a complete Input and Ingredient disclosure. 3. Comply with Section 4, Chain of Custody. AND EITHER a. Comply with Section 7.2, Non-Testable High-Risk Inputs and Ingredients. OR b. Where eligible, comply with Section 7.4, Affidavit Compliance Based on Country of Origin. 4. Comply with Section 10, Product Specifications and Labeling. 5. Comply with Section 11, Quality Assurance.	1. Comply as a Major. OR 2. Comply as a Minor. OR 3. Comply with Section 3.1.3, Micro Inputs and Ingredients. 4. Comply with Section 10, Product Specifications and Labeling. 5. Comply with Section 11, Quality Assurance.

4 Chain of Custody

Compliant Products, Ingredients, and Inputs shall maintain their integrity while being moved through various activities along the CoC.

4.1 Activities

CoC requirements apply beginning at the point of procurement for Verified Inputs and Ingredients, at the point that Risk Status is confirmed as Non-Risk or Low Risk for an Input or Ingredient, at the point of testing, or at the point where compliant Affidavits are procured. When relevant to the verification of the Product, the following activities shall be subject to evaluation and shall be found compliant with the applicable Standard sections ([Table 4-1](#)).

Table 4-1 Activities Along the Chain of Custody

Type of Activity	Comment
Agricultural production—seeds and crops	Includes farm production, harvest, and post-harvest handling and storage on farm or farm-related facilities.
Handling	Includes any form of post-harvest movement, storage, transformation, or labeling of Inputs, Ingredients, or Products along the entire CoC from seed to consumer, except for Products enclosed in final retail packaging.
Storage	Includes all links in the CoC from seed to finished Product.
Distribution	This may or may not involve physical handling of Inputs, Ingredients, or Products.
Processing	Includes all conveyance, storage, processing, handling, assembly, or packaging of Inputs, Ingredients, or Products within any given production facility.
Manufacturing	Involves the production, and combination of, Inputs and Ingredients to make the finished Product.
Packaging and labeling	Includes any and all events during which the packaging or labeling of Inputs, Ingredients, or Products is added, removed, or altered.

4.2 Global Chain of Custody Requirements

- 4.2.1** All required procedures shall be written and accessible to all appropriate staff and updated as necessary.
- 4.2.2** All appropriate staff working with compliant Inputs, Ingredients, and Products shall be adequately trained in the required procedures.
- 4.2.3** All records shall be maintained for a minimum of 3 years.

4.3 Segregation

- 4.3.1** Systematic procedures shall be in place during activities to keep compliant Inputs, Ingredients, work-in-progress, and finished Products separate from all non-compliant High-Risk materials.
- 4.3.2** Segregation measures shall be maintained where any required testing occurs after the Input or Ingredient in question has entered the facility.

4.4 Cleanout

- 4.4.1** Receiving, production, processing, manufacturing, transfer, and storage facilities, as well as shipping and transportation conveyances, shall be inspected and cleaned/purged as needed to remove sources of GMO contamination, and all relevant cleaning, purging, and inspections shall be documented.

4.5 Traceability

- 4.5.1** Each lot of Verified Product shall be traceable back to specific lots of the Inputs and Ingredients used in its production. If lots of compliant Inputs and/or Ingredients are commingled in storage before use in production of a certain lot of Product, the lot numbers related to all commingled lots shall be linked to that particular lot of Product.
- 4.5.2** Testable High-Risk Inputs and Ingredients shall be traceable back to the lots that demonstrate compliant test results. Non-Testable High-Risk Inputs and Ingredients shall be traceable back to the lots associated with compliant Affidavits.
- 4.5.3** Systematic procedures shall be in place for tracking lot numbers and/or marking and labeling of packaging, containers, and storage facilities to ensure traceability of Inputs, Ingredients, work-in-progress, and finished Products at all points in the production process.
- 4.5.4** Traceability records shall explicitly trace and track the compliance of Inputs, Ingredients, and finished Products.

5 Onsite Inspections

Sections 5.2 through 5.6 are effective beginning November 1, 2027.

- 5.1** Producing Facilities engaged in Parallel Processing of a Major High-Risk Input or Ingredient shall undergo annual onsite inspection.
- 5.2** The TA may reduce the frequency of inspection, but no less frequently than once every three years, for Producing Facilities that satisfy Section 5.3 and are not subject to Section 5.4.
- 5.3** Eligibility for reduced inspection frequency shall require:
 - 5.3.1** Demonstrated consistent compliance with the Standard for the preceding two years, with no Major Non-conformities during that period.
- 5.4** The following Producing Facilities shall not be eligible for reduced inspection frequency:
 - 5.4.1** Producing Facilities that conduct onsite sampling for molecular or immunological testing.
- 5.5** In determining whether reduced inspection frequency is appropriate, the TA shall conduct a risk analysis that includes, at minimum:
 - 5.5.1** Compliance history, including the number, severity, and resolution of Non-conformities.

- 5.5.2** The nature and extent of material changes to operations or scope since the last inspection.
- 5.5.3** Operational complexity.
- 5.5.4** The fungibility of compliant and non-compliant versions of the Input, Ingredient, or Product.
- 5.5.5** The potential for commingling or material transfer.
- 5.5.6** Relevant third-party certifications.
- 5.6** In years when an inspection is not required, the TA shall request additional supporting documentation to confirm ongoing compliance.
- 5.7** Contract processors that are not Participants are exempt from inspection as long as Products, Ingredients, and Inputs they manufacture are the result of a system that has been designed to avoid GMOs.
- 5.8** The TA may require additional inspections at any time based on a risk analysis of the supply chain, regardless of the Weight Percentage, Risk Status, or Testability of Inputs or Ingredients.
- 5.9** The TA may conduct unannounced inspections at any time to confirm compliance with the Standard, regardless of the Weight Percentage, Risk Status, or Testability of Inputs or Ingredients.

6 Sampling and Testing

All High-Risk Inputs and Ingredients shall comply with the relevant Action Threshold through either Section 6 or [Section 7](#), unless otherwise allowed by a different section of the Standard. The combination of Weight Percentage, Risk Status, and Testability determines the pathways available for the demonstration of compliance with the relevant Action Threshold. Refer to [Table 3-4](#) and [Table 3-5](#) for summaries of the appropriate compliance pathways.

6.1 Action Thresholds

Absence of all GMOs is the target for all Verified Products. Continuous improvement practices toward achieving this goal shall be part of the Participant's quality assurance systems. A key outcome of such quality assurance systems is to meet or continually be below the applicable Action Threshold. Testable High-Risk Inputs and Ingredients that do not comply with the applicable Action Threshold shall not be intentionally used in Verified Products, unless otherwise allowed by a different section of the Standard.

The Project has established the following Action Thresholds for Testable High-Risk Inputs and Ingredients ([Table 6-1](#)).

Table 6-1 Action Thresholds

Category	Action Threshold ^a
Seed and vegetative propagation materials	0.25%
Wholesale or retail Products for human or pet use that are either ingested or topically applied including OTC drugs and homeopathic remedies	0.9%
Livestock, poultry, bee, and aquatic animal feed and supplements, including those used for animal-derived Inputs and Ingredients to all Products	5% ^b
Wholesale or retail Products for human or pet use that are not ingested or topically applied including, but not limited to, Inputs and Ingredients to packaging, cleaning supplies, and textiles	1.5%
^a For all crops not listed in Appendix B.1.1 there is no allowable presence. ^b Compliance with this Action Threshold may be based on the quarterly average of all lots tested.	

6.2 Global Sampling Requirements

6.2.1 A statistically valid sampling and testing plan shall be designed based on a risk assessment of the production and handling system and shall reflect the level of monitoring appropriate for the risks inherent in the production and handling system, as well as industry standards.

6.2.1.a The sampling and testing plan shall be approved by the TA before any test results acquired on the basis of said sampling and testing plan may be used to demonstrate compliance with the Action Threshold.

6.2.1.b Unless otherwise allowed by a different section of the Standard, compliant sampling and testing shall occur at least once post-harvest for all Inputs and Ingredients, depending on contamination risks.

6.2.1.c When achieving statistical validity through crop sampling cannot be done without destroying significant quantities of the consumer Product (e.g., for large crops such as papaya, sweet corn, zucchini and yellow summer squash), the TA may shift testing to the seed level with limited post-harvest spot testing.

6.2.2 Compositing samples

Statistical calculations may be used to design compositing strategies under which portions of multiple samples may be combined and tested together to reduce the number of tests required.

- 6.2.2.a** Compositing shall be done in a manner that ensures that any single sample in excess of the relevant Action Threshold produces a positive result for the composite sample as a whole. If a result is obtained for the composite that indicates that one or more single samples exceeds the relevant Action Threshold, the lot shall be rejected, or if sub-lots are segregated and not commingled, then retesting of individual lot samples may be possible to salvage compliant lots.

6.3 Global Testing Requirements

- 6.3.1** Participants shall demonstrate compliance with the applicable Action Threshold.
- 6.3.2** Compliance shall be demonstrated by ensuring that each lot of Testable High-Risk Input or Ingredient is compliant with [Section 6](#) prior to its use in a Verified Product.
- 6.3.3** The sample Matrix shall be appropriate for the testing method to yield valid results. If necessary, the precursor from which the Input or Ingredient was derived shall be tested.
 - 6.3.3.a** All GM events for which the Project requires testing shall be tested for, and the results shall be conclusive.
 - 6.3.3.b** Test results shall be traceable back to the lot number(s) of the precursor, Input, or Ingredient.
 - 6.3.3.c** From the point of testing forward, the activities associated with the precursor, Input, or Ingredient shall comply with [Section 4](#).
- 6.3.4** Test results shall be submitted to the TA for evaluation prior to initial verification.
- 6.3.5** All test results from the preceding year shall be submitted to the TA for evaluation at annual renewal.
- 6.3.6** In cases where the requirements of [Section 6.1](#) are demonstrated to be problematic to achieve for every lot, compliance may be demonstrated by ensuring that test results for all lots of High-Risk precursor, Input, or Ingredient used during each 6-month period average at or below the relevant Action Threshold, with no single lot of precursor, Input, or Ingredient ever exceeding the relevant Action Threshold by more than a factor of two.
 - 6.3.6.a** Planting seed, vegetative propagation materials, and livestock, poultry, bee, and aquatic animal feed shall not demonstrate compliance via [Section 6.3.6](#).
 - 6.3.6.b** The Participant shall justify in writing to the TA why the requirements of [Section 6.1](#) are problematic to achieve for every lot at initial verification and at each renewal.

- 6.3.6.c** The Participant is responsible for ongoing monitoring of test results to ensure compliance for each 6-month period.

6.4 Molecular Testing Methods

- 6.4.1** Testable High-Risk Inputs and Ingredients will be compliant with Section 6.4 if all the following criteria are met:
 - 6.4.1.a** Appropriate laboratory controls indicate that the DNA of the precursor, Input, or Ingredient is sufficiently intact to allow valid quantitative analysis by PCR.
 - 6.4.1.b** The testing is conducted by an Approved Laboratory in compliance with [Section 6.4.2](#), and the analysis report references the specific lot of precursor, Input, or Ingredient, where applicable.
 - 6.4.1.c** The analysis report shows that the GM contamination of the precursor, Input, or Ingredient in question is at or below the relevant Action Threshold.
- 6.4.2** Approved Laboratories shall carry out testing, except in cases where Inputs and Ingredients are compliant with [Section 7.4](#).
- 6.4.3** Laboratory testing may employ quantitative, semi-quantitative, or qualitative PCR.
 - 6.4.3.a** Quantitative PCR may be used to demonstrate compliance with the Action Threshold if:
 - 6.4.3.a.i** For each test panel conducted on a precursor, Input, or Ingredient, the sum of all test results is at or below the relevant Action Threshold.
 - 6.4.3.b** Semi-quantitative PCR may be used to demonstrate compliance with the Action Threshold if:
 - 6.4.3.b.i** The upper limit of the range in which the result is reported is at or below the relevant Action Threshold.
 - 6.4.3.c** Qualitative PCR may be used to demonstrate compliance with the Action Threshold if:
 - 6.4.3.c.i** The PCR limit of detection is 0.1% or lower.
 - 6.4.3.c.ii** Each test result for each Testable High-Risk precursor, Input, or Ingredient is negative.
 - 6.4.3.c.iii** Should any test result be positive for a GM event, the Testable High-Risk precursor, Input, or Ingredient shall be tested in

compliance with [Section 6.4.3.a](#) or [Section 6.4.3.b](#) to demonstrate compliance with the Action Threshold. If the Testable High-Risk precursor, Input, or Ingredient cannot be tested in compliance with [Section 6.4.3.a](#) or [Section 6.4.3.b](#), compliance with the appropriate Action Threshold cannot be demonstrated and the lot shall not be used in a Verified Product.

6.5 Immunological Testing Methods

- 6.5.1** Immunological testing methods such as Enzyme-linked Immunosorbent Assay (ELISA) or lateral flow strip tests may be used in lieu of molecular testing methods to demonstrate compliance of animal feed (other than pet food) with the appropriate Action Threshold when the methods meet the criteria in Section 6.5.
- 6.5.2** Analysts shall be trained, and their proficiency established, to ensure that they use and interpret the tests reliably and according to the manufacturer's specifications. In-house training and performance evaluations shall be conducted, and this shall be documented.
- 6.5.3** In cases where immunological testing methods are permissible by the Standard, they shall cover all GM events for which the Project requires testing. If all GM events for which the Project requires testing are not covered, samples shall be tested in compliance with [Section 6.4](#).
 - 6.5.3.a** Quantitative immunological methods may be used to demonstrate compliance with the Action Threshold when:
 - 6.5.3.a.i** The result for each assay counted toward overall contamination is either below the limit of detection or returns a number within the range of quantification and is not above the upper limit of the range of detection.
 - 6.5.3.a.ii** The overall contamination of the Testable High-Risk precursor, Input, or Ingredient is indicated by the sum of each test panel or by following the manufacturer's instructions for the interpretation of test panel results.
 - 6.5.3.b** Qualitative immunological methods may be used to demonstrate compliance with the Action Threshold when:
 - 6.5.3.b.i** Each test result for each GM event per Testable High-Risk precursor, Input, or Ingredient is negative.

- 6.5.3.b.ii** Should any test results be positive, the Testable High-Risk precursor, Input, or Ingredient shall be tested according to [Section 6.5.3.a](#), [Section 6.4.3.a](#), or [Section 6.4.3.b](#) to demonstrate compliance with the Action Threshold.

7 Affidavits

In most cases, testing is a required validation tool for confirming compliance with the Action Threshold of Testable High-Risk Major Inputs and Ingredients. In the case of Non-Testable High-Risk Inputs and Ingredients, where testing is not an available validation tool, or in the case of Inputs and Ingredients classified as other than Testable High-Risk Major, the Project uses a process-based approach that includes comprehensive Affidavits as an alternate validation tool. In some situations, the frequency and necessity of testing or the need for certain Affidavits may be reduced based on the country in which a crop was grown.

7.1 Global Affidavit Requirements

- 7.1.1** At minimum, all Affidavits shall include the signature and the printed name of the party signing the Affidavit and the date.
- 7.1.2** The party signing the Affidavit shall have sufficient knowledge of the supply chain to authoritatively sign.
- 7.1.3** If appropriate, Affidavits should be accompanied by supporting documentation.
- 7.1.4** At the discretion of the TA or the Project, Affidavits may be required in additional situations not explicitly identified in Section 7.
- 7.1.5** Unless otherwise stated, Affidavits shall be updated as appropriate to reflect changes to the crops, precursors, Inputs, Ingredients, systems, processes, or operations they reference.

7.2 Non-Testable High-Risk Inputs and Ingredients

- 7.2.1** Non-Testable High-Risk Major, Minor, and Micro Inputs and Ingredients are identified in [Appendix B.1](#). An Affidavit stating that any such Non-Testable High-Risk Major, Minor, or Micro Input or Ingredient is Non-GMO shall be provided to establish compliance with Section 7.2. Organisms, precursors, Inputs, or Ingredients identified as Non-Testable High-Risk Major, Minor, and Micro Inputs and Ingredients in [Appendix B.1](#) that are subject to any European Union (EU) GMO Directives or

Regulations,⁹ including but not limited to any such items that an EU Member State has determined are subject to such GMO Directives or Regulations, are GMO under the Standard; Non-Testable High-Risk Affidavits accompanying such organisms, precursors, Inputs, or Ingredients do not establish them as Non-GMO and will not be considered for compliance with Section 7.

For the avoidance of doubt, all Non-Testable High-Risk Major, Minor, and Micro Inputs and Ingredients remain subject to evaluation, and may be deemed GMO, under the Standard, regardless of whether such Inputs or Ingredients are regulated as GMOs (or have been deemed Non-GMO) by any EU GMO Directive or Regulation, or have been deemed subject to any EU GMO Directive or Regulation by a Member State.

- 7.2.2** The Project has issued a standardized Non-Testable High-Risk Affidavit. This is the only Affidavit compliant with Section 7.2.1.
- 7.2.3** Unless otherwise allowed by a different section of the Standard, Affidavits for any Non-Testable High-Risk Major, Minor, or Micro Input or Ingredient shall be submitted to the TA for evaluation prior to initial verification and, at minimum, updated and resubmitted annually upon each renewal.
- 7.2.4** Testable High-Risk Major Inputs and Ingredients listed in [Appendix B.1](#) shall be compliant with [Section 6](#) or [Section 7.4](#). Testable and Non-Testable High-Risk Inputs and Ingredients listed in [Appendix B.1](#) shall comply with both [Section 6](#) and Section 7.

7.3 Testable High-Risk Minor and Micro Inputs and Ingredients

- 7.3.1** All Affidavits shall include the definitions of Biotechnology and GMO as they appear in [Appendix A](#).
- 7.3.2** Testable High-Risk Minor and Micro Inputs and Ingredients may demonstrate compliance based on Affidavits as long as these Inputs and Ingredients are the result of a system that has been designed to avoid GMOs. The suitability of systems designed to avoid GMOs is subject to evaluation by the TA with final determination by the Project.
- 7.3.3** When available, valid certificates from third-party certifiers are acceptable alternatives to Affidavits under Section 7.3, if the third-party certification program satisfies the requirements for which an Affidavit would be used in Section 7.3.2.

⁹ See, e.g., without limitation, Council Regulation 1829/2003/EC on genetically modified food and feed; Council Regulation 1830/2003/EC concerning the traceability and labelling of genetically modified organisms and the traceability of food and feed products produced from genetically modified organisms and amending Directive 2001/18/EC.

- 7.3.3.a** Except for honey and other derivatives of apiculture, Testable High-Risk Minor and Micro Inputs and Ingredients that are certified organic do not require an Affidavit.

7.4 Affidavit Compliance Based on Country of Origin¹⁰

- 7.4.1** Certain Testable and Non-Testable High-Risk crops and their derivatives that comprise a single Input may demonstrate compliance with aspects of the Standard based on country of origin.
- 7.4.2** The necessity or frequency of testing of certain Testable High-Risk crops and their single Input derivatives may be reduced by the TA based on an Affidavit.
- 7.4.3** The Affidavit shall state that:
- 7.4.3.a** Procurement procedures that require that the crop source or single Input derivative is grown strictly in specific countries are in place throughout the supply chain.
 - 7.4.3.b** No crop or crop-derivatives from outside those specific countries may be commingled.
 - 7.4.3.c** Procedures throughout the supply chain are in place for the segregation, cleanout, and traceability of compliant materials from non-compliant materials.
- 7.4.4** The Affidavits shall be submitted to the TA for evaluation prior to initial verification and, at minimum, updated and resubmitted annually upon each renewal.
- 7.4.5** The Project has issued standardized Affidavits for Section 7.4.3. These are the only Affidavits compliant with Section 7.4.
- 7.4.6** When available, valid third-party Identity Preservation (IP) certificates are acceptable alternatives to Affidavits when the scope of the third-party certification program satisfies the requirements for which an Affidavit would be used in Section 7.4.2.

7.5 Low-Risk Major, Minor, and Micro Inputs and Ingredients

- 7.5.1** Affidavits may be used to confirm the compliance of Low-Risk Major, Minor, and Micro Inputs and Ingredients.
- 7.5.2** The Affidavit shall attest to compliance with the requirement for classification as Low Risk as described in [Table 3-1](#).

¹⁰ The Project maintains the list of countries (and associated frequencies and necessities of testing) that comply with [Section 7.4.2](#).

7.6 Non-Risk Major, Minor, and Micro Inputs and Ingredients

7.6.1 Affidavits may be used to confirm the compliance of Non-Risk Major, Minor, and Micro Inputs and Ingredients.

7.6.2 The Affidavit shall attest to compliance with the requirement for classification as Non-Risk as described in [Table 3-1](#).

8 Livestock and Poultry

The following requirements are intended to complement other sections of the Standard. Where specific topics are addressed (e.g., sampling, testing), these requirements are authoritative. Where special requirements are not given, requirements from elsewhere in the Standard apply.

Absence of all GMOs is the target for all Verified Products. Continuous improvement practices toward achieving this goal shall be part of the Participant's quality assurance systems.

Livestock- and poultry-derived Inputs and Ingredients are High Risk, and their Ration Inputs are within the scope of evaluation and could be Testable or Non-Testable High Risk. These Inputs and Ingredients comply with the sampling and testing requirements of the Standard through the sampling and testing of Inputs to the animals' Rations or the seed used to grow the Inputs to the animals' Rations. Inputs to Rations shall be classified based on their Weight Percentage within the Ration, Risk Status, and Testability. Unless otherwise specified, compliance with the 5% Action Threshold is based on the quarterly average of all lots tested. In all cases, the animals shall be sourced Non-GMO and shall not have been treated with or derived from prohibited substances listed under [Section 2.2.1](#).

8.1 Compliance of Livestock- and Poultry-derived Inputs and Ingredients

Livestock- and poultry-derived Inputs and Ingredients are High Risk and have different compliance pathways depending upon their Weight Percentage as present in the finished Product. [Table 8-1](#) outlines the compliance requirements for livestock- and poultry-derived Majors, Minors, and Micros when the livestock- or poultry-derived material is present in the Product under evaluation. [Table 8-1](#) is a summary; additional compliance requirements could apply.

Table 8-1 Compliance of Livestock- and Poultry-derived Inputs and Ingredients based on Weight Percentage

Major
1. Animals shall be Non-GMO. 2. Animals shall comply with Section 8.2, Life Cycle. 3. Inputs to Rations shall be classified based on the combination of Weight Percentage as present in the Ration, Risk Status, and Testability. 4. Major Inputs to Rations are within the scope of evaluation and shall be found compliant with Table 8-2. 5. Major High-Risk Inputs to Rations shall comply with: a. Section 4, Chain of Custody b. Section 8, Livestock and Poultry c. Section 8.8, Onsite Farm and Feed Mill Inspections 6. In addition to Ration compliance, the livestock- or poultry-derived material shall comply with: a. Section 4, Chain of Custody b. Section 5, Onsite Inspections c. Section 8.8, Onsite Farm and Feed Mill Inspections d. Section 10, Product Specifications and Labeling e. Section 11, Quality Assurance
Minor
1. Animals shall be Non-GMO. AND EITHER a. Comply with Standard requirements as a Major. OR b. Comply with Section 7.3, Testable High-Risk Minor and Micro Inputs and Ingredients (e.g., Verified, organic certification).
Micro
1. Animals shall be Non-GMO. AND EITHER a. Comply with Standard requirements as a Major. OR b. Comply with Standard requirements as a Minor. OR c. All Inputs to Rations may be excluded from the scope of evaluation; Comply with Section 3.1.3, Micro Inputs and Ingredients.

8.2 Life Cycle

Livestock- and poultry-derived Inputs and Ingredients shall be from animals that comply with the following life-cycle feed guidelines.

- 8.2.1** Meat animals, including culls (other than poultry): starting at birth (the feed of nursing mothers is not evaluated) and ending at slaughter.

- 8.2.2** Poultry, including spent hens: starting on the second day after hatching and ending at slaughter.
- 8.2.3** Laying hens: starting 30 days prior to initial verification and for the remainder of the animal's productive life (including rest and molt periods).
- 8.2.4** Dairy animals: starting 30 days prior to initial verification and for the remainder of the animal's productive life (including dry periods).
- 8.2.5** Animals shall not be intentionally cycled on and off compliant feed. The use of non-compliant Major Inputs to the animals' Rations triggers a Non-conformity.
- 8.2.6** Animals may be removed from a Non-GMO-compliant group (e.g., herd, flock) for medical treatment. During this time, their feed shall be excluded from the scope of evaluation, and no material (e.g., milk, eggs) shall be collected from them for use in the Non-GMO supply chain. The animals shall immediately resume Non-GMO compliant feed once treatment is concluded and they are returned to the group.

8.3 Compliance of Rations

The Weight Percentage of Inputs to Rations shall be calculated based on the weight of the Input as present in the Ration. [Table 8-2](#) and [Table 8-3](#) are summaries; additional compliance requirements could apply.

Table 8-2 Compliance of Testable High-Risk Inputs to Rations for Livestock- and Poultry-derived Major Ingredients

Testable High-Risk		
Major	Minor	Micro
1. Comply with Section 4, Chain of Custody, from the point of testing onward. 2. Operations shall comply with Section 8.8, Onsite Farm and Feed Mill Inspections. AND EITHER a. Sampling and testing shall comply with Section 8.4, Feed Sampling, Section 8.5, Testing Methodology, Section 8.6, Feed Compliance Through Compliant Seed, and Section 8.7, Feed Mills, as applicable. OR b. Where eligible comply with Section 7.4, Affidavit Compliance Based on Country of Origin.	1. Excluded from the scope of evaluation. OR 2. Comply as a Major. OR 3. Comply with Section 7.3, Testable High-Risk Minor and Micro Inputs and Ingredients.	1. Excluded from the scope of evaluation. OR 2. Comply as a Major. OR 3. Comply as a Minor. OR 4. Comply with Section 7.3, Testable High-Risk Minor and Micro Inputs and Ingredients.

Table 8-3 Compliance of Non-Testable High-Risk Inputs to Rations for Livestock- and Poultry-derived Major Ingredients

Non-Testable High-Risk		
Major	Minor	Micro
1. Comply with Section 4, Chain of Custody, from the point of compliance with either Section 7.2, Non-Testable High-Risk Inputs and Ingredients or where eligible Section 7.4, Affidavit Compliance Based on Country of Origin, onward. 2. Operations shall comply with Section 8.8, Onsite Farm and Feed Mill Inspections. AND EITHER a. Comply with Section 7.2, Non-Testable High-Risk Inputs and Ingredients. OR b. Where eligible comply with Section 7.4, Affidavit Compliance Based on Country of Origin.	1. Excluded from the scope of evaluation. OR 2. Comply as a Major. OR 3. Comply with Section 7.2, Non-Testable High-Risk Inputs and Ingredients.	1. Excluded from the scope of evaluation. OR 2. Comply as a Major. OR 3. Comply as a Minor. OR 4. Comply with Section 7.2, Non-Testable High-Risk Inputs and Ingredients.

8.3.1 Ration Reporting Requirements

- 8.3.1.a** Dairy and laying operations shall submit to the TA at initial verification a plan detailing the stages of life or production managed, including, at minimum, corresponding durations and Rations fed.
 - 8.3.1.a.i** Weight Percentage, Risk Status, and Testability attributes shall apply to all Ration Inputs as they appear within each individual Ration.
 - 8.3.1.a.ii** Multiple Rations that are materially different shall not be combined into a single Ration.
 - 8.3.1.a.iii** Multiple Rations spanning different stages of life or production shall not be combined into a single Ration unless they are materially homogeneous.
- 8.3.1.b** Meat operations shall submit to the TA at initial verification a plan detailing the stages of life or production, including, at minimum, corresponding durations and the Ration fed to the animals for the full length of their life cycle as stated in [Section 8.2.1](#).
- 8.3.1.c** Poultry operations shall submit to the TA at initial verification a plan detailing the stages of life or production, including, at minimum, corresponding durations and the Ration fed to the animals for the full length of their life cycle as stated in [Section 8.2.2](#).
- 8.3.1.d** Rations compliant on an as-fed basis shall be subject to additional reporting requirements, including, at minimum, the following:
 - 8.3.1.d.i** The corresponding dry-matter conversion of each individual Ration shall accompany each as-fed Ration.
 - 8.3.1.d.ii** A written rationale for why compliance of Rations has been established on an as-fed basis.
- 8.3.1.e** Rations compliant on a dry-matter basis have no additional reporting requirements.

8.4 Feed Sampling

Feed grown from commercially purchased seed and commercially purchased or produced feed shall demonstrate compliance through the evaluation of, at minimum, the Major Inputs to the animals' Rations. Ongoing testing of Testable High-Risk Major Inputs is required.

8.4.1 Certified organic farming operations in which animal-derived materials are pooled before final processing (e.g., dairy, ground meat, egg mixtures)

The sampling plan for certified organic operations shall be based on testing a composite sample of the High-Risk feed Inputs from a representative selection of farms, with the intention of identifying and addressing any contamination occurring in a Participant's operation. Farms shall be chosen based on the quarterly sampling density and selection requirements outlined in [Table 8-4](#). Such sampling and testing shall be representative of a Participant's operations in a Region.

8.4.1.a Regions

Regions shall be designed such that farms within a Region are relatively similar and source their feed from the same or similar location(s). In order to inform the design of Regions, Participants shall supply the TA with:

- Farm locations
- Feed mill locations
- List of feed mills serving each farm
- Processing facility locations
- Proposed Regions

This basic documentation shall be accompanied by a global rationale for what factors are considered in creating the different Regions, how the consideration of these factors leads to variation within the Participant's operation being captured among Regions, and how farms within a Region are more alike than different.

8.4.1.b Quarterly Sampling Density and Selection

The number of farms within a Region determines the number of farms to be sampled. Fractions of farms are rounded up to the next whole number. Should a farm be chosen for sampling and testing and not have any Major High-Risk Inputs to sample and test onsite, another farm shall be chosen at random from within that same Region.

Table 8-4 Quarterly Sampling Density and Selection

Number of Farms per Region	Number of Farms to be Sampled and Tested
Fewer than 10	Minimum of one farm tested per Region per quarter
10 to 20	Minimum of two farms tested per Region per quarter
21 to 50	10% of farms tested per Region per quarter
51 to 100	5% of farms tested per Region per quarter
Greater than 100	Minimum of six farms tested per Region per quarter

The sampling plan within each Region shall include a random selection of farms each quarter. Annual sampling plans shall be reviewed with the TA and may be adjusted over time to provide the most technically sound basis for continuous improvement.

Farms should retain a portion of each sample until test results demonstrate compliance. If a sample tests above the Action Threshold, the Participant shall seek the cause of contamination.

8.4.1.c Ration Reporting within the Regional Model

All farms in the Participant's supply chain shall be prepared to supply full Rations to TAs. Full Ration reporting may include all Rations fed annually from every farm that is part of the Participant's operation or, at minimum, shall include the full Rations from the previous quarter and any additional Major High-Risk Inputs to the current Rations, if not captured in the previous quarter's Rations, of each farm randomly selected for sampling and testing by the TA. The Major High-Risk Inputs to the Rations shall be evaluated and found compliant.

8.4.1.d Testing within the Regional Model

Testing shall comply with [Section 6.3.3](#). Composite samples shall be tested on a quarterly basis. When multiple tests are needed within a single Region, the results may be averaged within that Region. Averaging of test results across more than one Region shall not be permitted. Quarterly results or averages in excess of the Action Threshold shall trigger an assessment of the cause of contamination and appropriate steps to eliminate identified sources of contamination.

Upon renewal, Participants shall provide a report of any significant changes in the frequency of GMO presence in feed Inputs, the percentage of samples exceeding the Action Threshold, and steps taken to secure feed that tests at or below the Action Threshold.

8.4.2 Certified organic farming operations in which animal-derived materials are not pooled (e.g., shell eggs, cut meat) and conventional farming operations

The sampling and testing plan for certified organic farming operations in which animal-derived materials are not pooled and conventional farming operations shall include either of the following:

- 8.4.2.a** Sampling of every incoming lot of Testable High-Risk Major Input, testing each sample in compliance with [Section 6.4](#) or [Section 6.5](#) by each farmer in the Participant's operations, and quarterly averaging of results to comply with the Action Threshold

- 8.4.2.b** Sampling of every incoming lot of Testable High-Risk Major Input, compositing of samples, and quarterly testing of composite samples by each farmer in the Participant's operations in compliance with [Section 6.2.2](#)

8.4.3 Group Compliance Model

Large certified organic farming operations where animal-derived materials are pooled, large certified organic farming operations where animal-derived materials are not pooled, and large conventional farming operations where animal-derived materials are either pooled or not pooled, may demonstrate compliance with the Standard through a group compliance model. The group compliance model shall include an Internal Control System (ICS). All components of the ICS are subject to final determination by the TA. At a minimum, the ICS shall include:

- 8.4.3.a** A clearly defined scope outlining the ICS management structure, including personnel, titles, roles, contact information, and conflict of interest policy.
- 8.4.3.b** A listing of farms, facilities, and/or operations within the group being overseen (i.e., group members), locations of all farms in the operation, locations of all feed mills, identification of which feed mills service which farms, locations of all processing facilities, locations where Parallel Processing is taking place, and the group member(s) responsible for testing.
- 8.4.3.c** A training plan for ICS personnel, including how ICS personnel educate their group members.
 - 8.4.3.c.i** Each member of the group shall have, and acknowledge access to, a copy of the most recent Standard version.
 - 8.4.3.c.ii** Each member of the group shall have, and acknowledge access to, any relevant documents such as standard operating procedures (SOPs) and sampling and testing plans.
- 8.4.3.d** A comprehensive plan for how each group member will comply with all relevant Standard sections based on the nature of their animal-derived materials and Ration formulations, including [Section 4](#), Sections 8.2 through 8.8, [Section 10](#), and [Section 11](#).
 - 8.4.3.d.i** Frequency of inspection shall be at least once per year by ICS personnel of all farms under the scope of the ICS.
 - 8.4.3.d.ii** Third-party inspections shall be conducted annually on 10% of all conventional farms that are Parallel Processing the same Major High-Risk Inputs to Rations. Farms are chosen by the TA.

8.4.3.d.iii The comprehensive plan shall include how the ICS will handle Non-conformities.

8.4.3.e For large certified organic farming operations where animal-derived materials are pooled, a sampling and testing plan in compliance with [Section 8.4.1](#) and [Section 8.6](#) shall be provided for each group member responsible for testing.

8.4.3.f For large certified organic farming operations where animal-derived materials are not pooled and for large conventional farming operations where animal-derived materials are pooled or not pooled, a sampling and testing plan in compliance with [Section 8.4.2](#) and [Section 8.6](#) shall be provided for each group member responsible for testing.

8.4.3.g Documentation that outlines the frequency with which group members submit test results to the ICS.

8.4.3.h Documentation that outlines how the results will be handled (quarterly averaging or pass-fail).

8.5 Testing Methodology

The testing method shall yield valid results for all Testable High-Risk Inputs. Immunological testing methods may be used when compliant with [Section 6.5](#). Molecular testing methods compliant with [Section 6.4](#) shall be used when immunological testing methods cannot be used and may be used in all cases in lieu of immunological testing methods.

8.6 Feed Compliance Through Compliant Seed

Under certain circumstances, compliance of livestock and poultry feed may be demonstrated based on use of compliant seed; in such cases post-harvest feed testing is not required. Neither seed compliant under Section 8.6.1, Section 8.6.2, or Section 8.6.3 nor feed derived from seed compliant under Section 8.6.1, Section 8.6.2, or Section 8.6.3 is eligible for verification.

8.6.1 Farmer-saved seed and seed purchased from any neighboring farmer who does not have a retail seed operation shall be tested annually. Frequency of testing should increase if there are any changes that would significantly increase the likelihood of contamination. Testing may be conducted in compliance with either [Section 6.4](#) or [Section 6.5](#). If testing is conducted in compliance with [Section 6.5](#), and the immunoassay is positive for any event, samples shall be retested with molecular testing methods per [Section 6.4](#) to demonstrate compliance with the 0.25% Action Threshold. If the sample tests above the Action Threshold, it shall not be planted.

8.6.2 Freshly harvested and direct-fed forage, as well as silage and similarly fermented feed. When post-harvest testing of freshly harvested and direct-fed forage and/or silage and similarly fermented feed is feasible, sampling shall comply with

[Section 6.2](#), testing shall comply with [Section 6.3](#), and test results shall comply with either [Section 6.4](#) or [Section 6.5](#). When post-harvest testing is not feasible because compliance cannot be established with one or more of Sections 6.2 through 6.5, these feed Inputs may demonstrate compliance through seed testing, Affidavit, or use of Verified seed. In all cases, the grower shall demonstrate traceability from the planted field to the harvested feed crop.

8.6.2.a When test results are available, each lot of seed planted shall be compliant with [Section 6](#) and test at or below the Action Threshold.

8.6.2.b When test results are not available, each lot of seed planted shall have a seed tag, an Affidavit from the seed supplier establishing that the seed is Non-GMO, an invoice, and an Affidavit from the grower confirming planting location.

8.6.2.c When Verified seed is planted, each lot of seed shall have the seed supplier seed tag, an invoice, and an Affidavit from the grower confirming planting location.

8.6.3 Alfalfa hay grown onsite and fed to resident animals may demonstrate compliance by using Verified seed, where each lot of seed is accompanied by a seed supplier seed tag, an invoice, and an Affidavit that includes confirmation of planting locations.

8.7 Feed Mills

8.7.1 Rations formulated by feed mills may be found compliant if:

8.7.1.a Every lot of Testable High-Risk Major Input to the Ration complies with [Section 6](#).

8.7.1.b Every lot of Non-Testable High-Risk Major Input to the Ration complies with [Section 7](#).

8.7.2 Or, feed sold by feed mills may be found compliant if:

8.7.2.a Every incoming lot of Testable High-Risk crop destined for the Non-GMO supply chain, regardless of future Weight Percentage in the on-farm Ration, complies with [Section 6](#).

8.7.2.b Every incoming lot of Non-Testable High-Risk crop destined for the Non-GMO supply chain, regardless of future Weight Percentage in the on-farm Ration, complies with [Section 7](#).

8.7.2.c The Non-GMO integrity of every Testable and Non-Testable High-Risk crop compliant with Section 8.7.2.a and Section 8.7.2.b is maintained through compliance with [Section 4](#).

8.8 Onsite Farm and Feed Mill Inspections

- 8.8.1** All farms and feed mills may be subject to annual inspections at the discretion of the TA.
- 8.8.2** Unless the TA finds cause for inspection, inspections may not be required for:
 - 8.8.2.a** Certified organic farming operations in which animal-derived materials are pooled or not pooled during final processing.
 - 8.8.2.b** Conventional farming operations that are not Parallel Processing the same Major High-Risk Input to a Ration.
 - 8.8.2.c** Feed mills that are not Participants.
- 8.8.3** At the TA's discretion, unannounced inspections may be used to ensure compliance with the Standard.
- 8.8.4** Large conventional farming operations that are compliant with [Section 8.4.3](#) shall have 10% of all farms that are Parallel Processing the same Major High-Risk Inputs to Rations inspected by a third party on an annual basis. Farms shall be chosen by the TA.

9 Special Requirements for Specific Products, Ingredients, and Inputs

The following requirements are intended to complement other sections of the Standard. Where specific topics are addressed below (e.g., sampling, testing), these requirements are authoritative. Where special requirements are not given, requirements from elsewhere in the Standard apply.

9.1 Apiculture

Honey and other Inputs and Ingredients derived from apiculture shall meet the following requirements:

- 9.1.1** The bees' forage area (defined as the area within a 4-mile radius of the hives) shall be sufficiently free of GM commercial agriculture.
- 9.1.2** Any supplemental bee feed shall be evaluated for compliance with [Section 3](#).
- 9.1.3** Certified organic honey and other Inputs or Ingredients derived from certified organic apiculture may be deemed compliant with the Standard based on a signed Affidavit from the organic certifier. The Affidavit shall:
 - 9.1.3.a** Meet all requirements of [Section 7](#).

- 9.1.3.b** Attest that the organic certifier has confirmed that the apiary is adhering to the Organic Apiculture Standard as formally recommended by the National Organic Standards Board (NOSB) to the National Organic Program (NOP).¹¹

9.2 Beer, Wine, and Liquor

- 9.2.1** Fermentation Microorganisms used in the production of beer, wine, and liquor Products, Ingredients, and Inputs are not considered Processing Aids under the Standard, shall be ineligible for [Section 3.1.3.b](#), and shall be Non-GMO.
- 9.2.2** Processing Aids used in the production of beer, wine, and liquor shall be subject to the compliance requirements in [Section 2.2.2](#).
- 9.2.3** Inputs to the fermentation media for beer, wine, and liquor Products, Ingredients, and Inputs shall be classified according to their Weight Percentage as represented in the finished Product, Risk Status, and Testability and shall be compliant with the appropriate compliance pathways.
- 9.2.4** Beer, wine, and liquor Products shall be held to the same level of evaluation as Products with Ingredient panels.

9.3 Microorganisms

- 9.3.1** When Microorganisms or Inputs or Ingredients derived from Microorganisms are Major or Minor Ingredients, both the Microorganism and the Growth Media shall be within the scope of evaluation and shall be compliant.
- 9.3.1.a** A standardized Non-Testable High-Risk Affidavit in compliance with [Section 7.2](#) shall be provided.
- 9.3.2** Inputs to Growth Media shall be categorized into Major, Minor, and Micro Ingredients based on their representative Weight Percentage in the finished Product and shall be compliant according to the appropriate compliance pathways.
- 9.3.3** When Microorganisms or Inputs or Ingredients derived from Microorganisms are Micro Ingredients, the Microorganism shall be within the scope of evaluation, and the Growth Media shall be excluded from the scope of evaluation.
- 9.3.3.a** A standardized Non-Testable High-Risk Affidavit in compliance with [Section 7.2](#) shall be supplied to the TA at initial verification. Updated standardized Non-Testable High-Risk Affidavits shall be resubmitted to the TA no later than by the third annual renewal and every 3 years thereafter.

¹¹ NOSB. 2010. Formal Recommendation by the National Organic Standards Board (NOSB) to the National Organic Program (NOP), Subject: Apiculture Recommendation. October 28, 2010.

9.4 Probiotics

9.4.1 When Probiotics or Inputs or Ingredients derived from Probiotics are Major, Minor, or Micro Ingredients, the Probiotics shall be within the scope of evaluation and shall be compliant. The Growth Media for Probiotics as Inputs and Ingredients shall be excluded from the scope of evaluation.

9.4.1.a A standardized Non-Testable High-Risk Affidavit in compliance with [Section 7.2](#) shall be supplied.

9.5 Saltwater and Freshwater Aquatic Animals

9.5.1 Farm-raised saltwater and freshwater aquatic animals (in captivity from egg to harvest and/or where nutrient additions are provided) shall be evaluated as High Risk and shall require the evaluation and compliance of Ration Inputs.

9.5.2 Inputs and Ingredients derived from farm-raised saltwater and freshwater aquatic animals shall be evaluated in the same manner as livestock- and poultry-derived Inputs and Ingredients in [Section 3](#) and [Section 8](#).

9.5.3 The feed of saltwater and freshwater aquatic animals may be compliant under [Section 7.5](#) if the Affidavit establishes that the organism was caught in the wild.

9.6 Vitamins and Supplements

9.6.1 The Growth Media for Microorganisms from which Enzyme Inputs and Ingredients to vitamin and supplement Products are derived shall be excluded from the scope of evaluation.

10 Product Specifications and Labeling

10.1 Specifications for Obtaining Inputs and Ingredients

10.1.1 Major and Minor Inputs and Ingredients shall be sourced from Non-GMO sources. Micro Inputs and Ingredients should be sourced from Non-GMO sources.

10.1.2 Verified Inputs and Ingredients shall meet the requirements for Risk Status and Testability prior to procurement and may be used at any Weight Percentage, subject to the criteria outlined in [Table 3-2](#).

10.1.3 The written specifications for all Products, Ingredients, and Inputs shall include requirements regarding Standard compliance and shall be updated if the Participant changes suppliers, Inputs, or Ingredients.

10.2 Labeling

- 10.2.1** Products shall be labeled in compliance with The Non-GMO Project Program Rules and Procedures and The Non-GMO Project Trademark Use Guide.
- 10.2.2** Labeling claims shall be accurate, truthful, and shall not mislead the consumer about the GMO content of the Product. One-hundred percent GMO absence claims are unacceptable and include, but are not limited to, “contains zero GMOs,” “GMO-free,” and “GE free.”
- 10.2.3** High-Risk Micro Ingredients other than artificial and natural flavors that have been Micro exempted under [Section 3.1.3.b](#) shall not be listed with the same name, or any other common name, on the PDP of a retail Product.
- 10.2.4** Ingredients other than artificial and natural flavors shall not be named on the PDP of a retail Product if one or more of their sub-Ingredients (as they appear in a parenthetical Ingredient declaration or supplement facts panel) have been Micro exempted under [Section 3.1.3.b](#) and the Micro-exempted sub-Ingredient(s) is/are considered to reasonably characterize the Ingredient appearing on the PDP.
- 10.2.5** For Enzymes and Microorganisms, the conditions in Sections 10.2.3 and 10.2.4 apply when the Ingredient is voluntarily named in text on the PDP, or is reasonably considered to characterize a Major, Minor, or Micro Ingredient that is voluntarily named in text on the PDP, of a retail Product.

11 Quality Assurance

11.1 Total Quality Management Systems

- 11.1.1** The Participant’s quality assurance and quality control program, including SOPs, forms, and documents, shall be revised as needed to ensure compliance with the Standard, and revisions shall be documented.
- 11.1.2** Compliance with applicable requirements of the Standard shall be identified as key quality indicators of the Participant’s total quality system.
- 11.1.3** The Participant shall monitor and control the compliance of Inputs and Ingredients purchased and finished Products, and this shall be documented.
- 11.1.4** Where needed, additional training shall be provided to relevant staff to ensure that SOPs in support of Standard compliance are followed, and training shall be documented.
- 11.1.5** All SOPs, documents, forms, and specifications needed by personnel to fulfill the requirements of the Standard shall be readily available to relevant personnel.

11.1.6 Records shall be retained for a minimum of 3 years.

11.2 Non-conformities and Corrective and Preventive Actions

11.2.1 Products shall comply with the Non-conformity and corrective and preventive action requirements outlined in The Non-GMO Project Program Rules and Procedures.

11.2.2 Changes from approved processes, procedures, Inputs, Ingredients, or Products, that could impact compliance with any aspect of the Standard, shall be deemed Non-conformities and shall trigger corrective and preventive actions.

11.3 Renewal

11.3.1 Products shall comply with the renewal requirements outlined in The Non-GMO Project Program Rules and Procedures.

Appendix A – Terms and Definitions

Affidavit

A formal document either created and supplied by the Project or TA, or provided by a Participant, that includes a written and signed statement confirming specific characteristics of a given organism, crop, precursor, Input, Ingredient, system, process, or operation.

Approved Laboratory

A testing laboratory compliant with, and participating in, the Non-GMO Project Approved Laboratory Program.

Biological Compound

A substance produced by or derived from a living organism.

Biotechnology¹²

the application of:

- a. in vitro nucleic acid techniques, including recombinant deoxyribonucleic acid (DNA) and the direct injection of nucleic acid into cells or organelles; or
- b. fusion of cells beyond the taxonomic family, that overcame natural physiological, reproductive, or recombination barriers and that are not techniques used in traditional breeding and selection.

Certificate of Approval

A document confirming an Approved Laboratory's current status within the Non-GMO Project Approved Laboratory Program.

Compost

Biologically-stable material showing practically no macroscopic indication as to the original substrate and produced through managed aerobic biological decomposition of organic materials that has undergone mesophilic and/or thermophilic temperatures.

Enzyme

A protein molecule produced by a living organism that acts as a catalyst to bring about a specific biochemical reaction.

Functional Enzyme

An Enzyme that has not been denatured (e.g., by being subjected to high heat, harsh acids or bases, ultrafiltration, or centrifugation) and thus retains its catalytic functioning capability.

¹² Adapted from Secretariat of the Convention on Biological Diversity (2000). Cartagena Protocol on Biosafety to the Convention on Biological Diversity: text and annexes. Montreal: Secretariat of the Convention on Biological Diversity.

Genetically Engineered or Genetic Engineering (GE)

See Genetically Modified or Genetic Modification.

Genetically Modified or Genetic Modification (GM)

A term referring to the result of the application of Biotechnology.

Genetically Modified Organism (GMO)

An organism to which Biotechnology has been applied and derivatives of such an organism; cloned animals are included within this definition.

Growth Media

Materials or mixtures of materials designed to support the growth of Microorganisms.

Heavy Ion Beam Radiation

A form of high linear energy transfer ionizing radiation generated by accelerating charged atomic nuclei heavier than helium using a particle accelerator.

High Risk

Organisms and the Inputs and Ingredients derived from them for which GM counterparts are widely commercially available.

Ingredient

Input that becomes part of a Product during its creation and is present in the final Product in either its original or altered form.

Input

Material used in the production of a Product at any point in the supply chain.

Internal Control System (ICS)

A robust internal oversight structure that functions as the administrative body responsible for maintaining compliance of all members with one or more set(s) of requirements.

Low Risk

Organisms and the Inputs and Ingredients derived from them that are not classified as High Risk.

Major Non-conformity

As defined in the current version of The Non-GMO Project Program Rules and Procedures.

Matrix

All sample constituents other than the analyte of interest. This encompasses the composition of the sample (single or multi Ingredient) and the state of processing (raw grain vs. flour).

May

A permissive statement under the Standard.

Micro Exemption

A provision allowing specific Micro Ingredients to be included in a Verified Product without demonstrating that they are derived from a Non-GMO source.

Microorganism

A microscopic organism (such as a bacterium, yeast, fungus, or alga).

Must

See Shall.

Non-conformity

Any deviation in operations that has not been approved by the TA.

Non-GMO or Non-GM

An organism to which Biotechnology has not been applied and derivatives of such an organism.

Non-Risk

Inputs and Ingredients that originate entirely outside living systems, with no history of being alive or derived from a living organism. They contain no cells, cellular components, or genetic material and, by their nature, cannot be Genetically Modified.

Non-Risk Category

A designation by the Project for a group of one or more types of wholesale or retail Products that are made solely from Non-Risk Inputs.

Non-Testable

Attribute of having precursors in the supply chain associated with GM events for which no quantifiable molecular testing method is available to distinguish between Non-GM and GM counterparts, or for which the Project does not require testing.

Parallel Processing

The handling, storing, distributing, processing, manufacturing, or packaging and labeling of both a compliant and non-compliant version of the same fungible Input or Ingredient, whether simultaneously or sequentially, using the same equipment, lines, or shared infrastructure.

Participant

A company that is seeking verification within the PVP and signs a License Agreement with the Project.

Plant Molecular Farming

Use of plants to which Biotechnology has been applied as production platforms to produce target Biological Compounds.

Principal Display Panel (PDP)¹³

Portion of the package label that is most likely to be seen by the consumer at the time of purchase (often the front face of the packaging).

Probiotics¹⁴

Live Microorganisms that, when administered in adequate amounts, confer a health benefit on the host.

Processing Aid¹⁵

- a. Substances [Inputs] that are added to a food [Product or Ingredient] during the processing of such food but are removed in some manner from the food before it is packaged in its finished form.
- b. Substances [Inputs] that are added to a food [Product or Ingredient] during processing, are converted into constituents normally present in the food, and do not significantly increase the amount of the constituents naturally found in the food.
- c. Substances [Inputs] that are added to a food [Product or Ingredient] for their technical or functional effect in the processing but are present in the finished food at insignificant levels and do not have any technical or functional effect in that food.

Producing Facility

Location where Inputs and Ingredients are combined to create the finished Product and/or where bulk Product is packaged for final sale and/or where bulk Product is labeled for final sale.

Product

A unique branded formula and process, where process could be either the manufacturing or facility process.

Program Documents

The Non-GMO Project Standard, The Non-GMO Project Program Rules and Procedures, The Non-GMO Project Trademark License and Program Participation Agreement, and The Non-GMO Project Trademark Use Guide.

Ration

The feedstuffs offered to an animal during a 24-hour period.

¹³ U.S. Department of Health and Human Services. 2013. A Food Labeling Guide, Guidance for Industry. January, 2013.

¹⁴ Hill, C., Guarner, F., Reid, G. et al. The International Scientific Association for Probiotics and Prebiotics consensus statement on the scope and appropriate use of the term probiotic. Nat Rev Gastroenterol Hepatol 11, 506–514 [online], (2014).

¹⁵ 21 CFR § 101.100 (2018).

Region

A geographic area with relatively homogeneous farm operations and sources of livestock or poultry feed, typically encompassing one or more states, in which farms ship unprocessed livestock or poultry materials to one or a few processors.

Risk Status

The attribute assigned to a material that denotes the likelihood that a material is or is derived from a GMO.

Shall

A requirement under the Standard.

Should

A non-mandatory recommendation or recommended practice.

Standard

The Standard for the Non-GMO Project Product Verification Program, which is this document.

Supplier

Any party from whom an Input and/or Ingredient is obtained.

Synthetic Biology

The development of novel, artificial nucleic acid sequences, biological pathways, organisms, or devices or the redesign of existing natural biological systems.

Technical Administrator (TA)

A certification body approved by the Project to assess compliance with the Standard on behalf of the Project.

Testable

Attribute of having precursors in the supply chain associated with GM events, for which at least one molecular testing method is available to quantify GM contamination, and for which the Project requires testing.

Verified

Confirmed to comply with all applicable requirements of the Standard and all other elements of the Product Verification Program.

Viable Microorganism

A microscopic organism (such as a bacterium, yeast, fungus, or alga) that performs metabolic functions and reproduces/multiplies.

Weight Percentage

The percentage by weight of a material as represented in or present in a finished Product after the removal of salt, added water, qualifying Processing Aids, and purified CO₂.

Appendix B – High-Risk List

Organisms, and Products, Ingredients, and Inputs derived from organisms, for which GM versions are widely commercially available; this includes certain crops, their derivatives, and animal-derived materials.

B.1 Testable and Non-Testable High-Risk Inputs and Ingredients

B.1.1 Crops

The following list of Testable and Non-Testable High-Risk crops is exhaustive:

Crop	Testable	Non-Testable
Alfalfa	✓	
Apple		✓
Canola	✓	✓
Corn (except popcorn)	✓	
Cotton	✓	
Eggplant		✓
Papaya	✓	
Pineapple		✓
Potato		✓
Soy	✓	✓
Sugar beets	✓	
Sugarcane		High Risk beginning December 1, 2028
Zucchini and yellow summer squash	✓	

B.1.2 Animal-derived Inputs and Ingredients

	Testable	Non-Testable
Meat, dairy, eggs, wool, hides, honey, aquatic animals, and any other materials or substances originating from animals	✓	✓
Livestock and poultry feed	✓	✓
Bee forage and feed	✓	✓
Fish and other aquatic animal feed	✓	✓

B.1.3 Microorganism and Enzyme Inputs and Ingredients

	Testable	Non-Testable
Algae		✓
Bacteria		✓
Enzymes		✓
Microbial cultures and starters		✓
Yeast		✓

B.1.4 Ingredients or Substances with Synthetic Biology Counterparts

	Testable	Non-Testable
		✓

Examples of Inputs and Ingredients that could be derived from the High-Risk organisms in Appendix B can be found in the publication [High-Risk Inputs: Examples](#). Inputs and Ingredients that could be derived from High-Risk organisms are High Risk under the Standard and shall be sourced Non-GMO where required.

Appendix C – Biotechnology Techniques

Appendix C serves as a classification resource by identifying some techniques falling under points (a) and (b) of the definition of Biotechnology in [Appendix A](#). Point (a) encompasses both genetic modification techniques and their associated delivery methods, as delivery methods facilitate technique implementation and are an integral component of in vitro nucleic acid techniques.

The techniques specified in Appendix C are not exhaustive; all techniques falling under the [Appendix A](#) definition of Biotechnology are covered under the Standard.

C.1 In Vitro Nucleic Acid Techniques

C.1.1 Engineered Molecular Techniques and Approaches

- Recombinant DNA techniques
- Gene editing techniques (e.g., CRISPR-Cas systems, including base editing, prime editing, and epigenome editing; TALEN, ZFN, meganucleases)
- Synthetic genomics (construction of whole genomes and chromosomes)
- Oligonucleotide-directed mutagenesis (ODM)
- RNA interference (RNAi) and RNA-dependent DNA methylation (RdDM)
- Directed evolution techniques, when involving in vitro nucleic acid techniques
- Gene drives (e.g., CRISPR-based systems designed for super-Mendelian inheritance)
- Transgenesis, cisgenesis, intragenesis, and reverse breeding
- Synthetic biology (including precision fermentation)

C.1.2 Nucleic Acid Delivery Methods

- Transformation (e.g., heat shock, calcium chloride, electroporation)
- Agrobacterium-mediated transformation
- Biolistics (gene gun, nanobiolistics)
- Protoplast transformation (e.g., PEG-mediated uptake of nucleic acids)
- Transfection (e.g., chemical methods, lipofection, calcium phosphate)
- Transduction via viral vectors (e.g., adenoviral, lentiviral, retroviral systems)
- Microinjection

C.2 Cell Fusion

- Protoplast fusion between cells from different taxonomic families