Formal Recommendation
From: The National Organic Standards Board (NOSB)
To: The National Organic Program (NOP)

Date: May 1, 2025
Subject: Residue Testing for a Global Supply Chain
NOSB Chair: Amy Bruch

The NOSB hereby recommends to the NOP the following:
Rulemaking Action:
Guidance Statement: X
Other:

Statement of the Recommendation:
NOSB recommends that NOP update the guidance documents in the NOP Program Handbook that pertain to residue testing, specifically NOP 2610, NOP 2611, NOP 2611-1, NOP 2613, and NOP 5012.

This table outlines the proposed changes. The recommendation passed unanimously at the Spring 2025 meeting further details the recommended updates.

Guidance document	Proposed changes
NOP 2610 – Sample Procedures for Residue Sampling	- Sampling Equipment - Inspector Training and Competencies - Duplicate Sampling and Sample Retention - Chain of Custody Integrity - Sample Collection Diversity & Sample Amounts - Time is of the essence - Additional Resources - Specific Redline Corrections
NOP 2611 – Laboratory Selection Criteria	- Expand Testing Guidance - Specific Redline Corrections
NOP 2611-1 – Prohibited Pesticides for NOP Residue Testing	- Expand What to Test - Retitle the Document (expanded focus) - Information Layout - Regional and Crop Specific Information - Test for Metabolites - Companion Testing - Fertilizer Authenticity Testing - Access to Most Current Information
NOP 2613 – Responding to Results	- Detection without Tolerance Level - Dehydrated, Extracted, or Concentrated - Other Prohibited Substances or Excluded Methods - Notifying Down Stream Buyers When Levels are above EPA Tolerance / FDA Action Level - Gaps in Decision Making - Specific Redline Corrections
NOP 5012 - Approval of Liquid Fertilizer for Use in Organic Production	- Specific Redline Corrections

Guidance document	Proposed changes
Additional Guidance Documents	- Residue Sampling Decision Tree - Residue Sampling of Non-Crop and Non-Harvested Crop Products - Validation and Verification Guidance for 205.273(d) - Additional Instruction Considerations

Rationale Supporting Recommendation:
The rationale used to support this recommendation includes the Board's responsibility to "advise the Secretary concerning the testing of organically produced agricultural products for residues caused by unavoidable residual environmental contamination" per Section 6518(k)(5) of the Organic Foods Production Act.

Section 205.670 of the NOP regulations requires that certifiers "must" sample and test 5% of operations they certify annually at their own expense. This requirement was the result of the "Pesticide Rule" that became effective on January 1, 2013. The focus of the residue testing rule wasn't necessarily to identify fraud. Instead, it was used more as a tool to verify that an operation's organic system plan was sufficient to prevent commingling and contamination. Certifiers built their residue sampling and testing programs with that premise in a way that complied with the requirements while attempting to be as cost-effective as possible since certifiers were required to bear the testing costs (pursuant to § 205.670(c)). At the time the rule became effective in 2013, the NOP also published a suite of guidance documents aimed to assist certifiers with the implementation of this rule, which covered more detailed instruction in sample collection, lab selection and how to respond to results.

Over ten years later, the organic industry has grown, and supply chains have become longer and more complex. There are fraudulent actors that have and continue to benefit from our thriving industry. As a result, the NOSB in conjunction with stakeholder feedback identified several required updates that are necessary to keep our processes and instruction to certifiers regarding residue sampling aligned with the current reality so that residue testing can remain a critical verification tool in the certification process.

The updates focus on the following main themes and goals:

1. Broaden out to include guidance and instruction on other prohibited substances beyond pesticides, along with resources to enable certifiers to pick the best test for the given product and scenario (i.e. the NOP Target List may not always be the best test for the specific crop)
2. Address how certifiers should handle scenarios of low levels of detection of substances without a tolerance (current instruction defaults to .01ppm) as well as various drift situations
3. Apply a risk-based approach to residue sampling programs
4. Keeping fraudulent product out of the marketplace

The unanimously passed recommendation provides a few options that NOP can further explore in order to determine the best solution to address the identified issue as presented in the proposal.

NOSB Vote:
Motion to accept the proposal on Residue Testing for a Global Supply Chain: Guidance Documents.

Motion by: Amy Bruch
Seconded by: Carolyn Dimitri
Yes: 14 No: 0 Abstain: 0 Recuse: 0 Absent: 1

Motion Passed

National Organic Standards Board
Certification, Accreditation, and Compliance Subcommittee
Residue Testing for a Global Supply Chain Proposal

Note: The National Organic Standards Board's (NOSB or Board) Certification, Accreditation, and Compliance Subcommittee (CACS) is working on many fronts regarding residue testing. This document discusses several topics, including proposed updates to Guidance Documents NOP 2610, NOP 2611, NOP 2611-1, NOP 2613, and NOP 5012. Additionally, CACS has put forth a discussion document exploring regulatory updates pertaining to residue testing.

Executive Summary of Changes to Existing Guidance Documents:
This table outlines the changes proposed to each of the current guidance documents in the National Organic Program (NOP) Program Handbook, which are discussed in more detail throughout this proposal. Also summarized are recommendations for additional guidance documents.

NOP 2610 – Sample Procedures for Residue Sampling	• Sampling Equipment • Inspector Training and Competencies • Duplicate Sampling and Sample Retention • Chain of Custody Integrity • Sample Collection Diversity & Sample Amounts • Time is of the essence • Additional Resources • Specific Redline Corrections
NOP 2611 – Laboratory Selection Criteria	• Expand Testing Guidance • Specific Redline Corrections
NOP 2611-1 – Prohibited Pesticides for NOP Residue Testing	• Expand What to Test • Retitle the Document (expanded focus) • Information Layout • Regional and Crop Specific Information • Test for Metabolites • Companion Testing • Fertilizer Authenticity Testing • Access to Most Current Information
NOP 2613 – Responding to Results	• Detection without Tolerance Level • Dehydrated, Extracted, or Concentrated • Other Prohibited Substances or Excluded Methods • Notifying Down Stream Buyers When Levels are above EPA Tolerance / FDA Action Level • Gaps in Decision Making • Specific Redline Corrections
NOP 5012 - Approval of Liquid Fertilizer for Use in Organic Production	• Specific Redline Corrections
Additional Guidance Documents	• Residue Sampling Decision Tree

	• Residue Sampling of Non-Crop and Non-Harvested Crop Products • Validation and Verification Guidance for 205.273(d) • Additional Instruction Considerations

Introduction:
The Certification, Accreditation, & Compliance Subcommittee (CACS) presented discussion documents at the Fall 2023, Spring 2024 NOSB, and Fall 2024 NOSB meetings on Residue Testing for a Global Supply Chain (RTGSC). Many commenters supported continuous improvement in testing to ensure integrity, considering the size of the organic marketplace and the program's global reach.

Residue testing is an essential tool for ensuring compliance with organic regulations. Residue testing does not substitute for the certification process and verification of compliance through an organic system plan review and annual inspection. However, it can support this process with objective results related to the presence of prohibited substances or the use of excluded methods.

The RTGSC series aims to work with the community to provide a recommendation that ensures testing remains a relevant and effective tool for compliance verification in the organic global supply. At the Fall 2023 NOSB meeting, a commenter wrote, “An updated and more rigorous testing program will augment the ability for both certifiers and certified operations to verify compliance, deter fraud, and prevent contaminated/fraudulent products from entering organic supply chains.”

Foundational Focus and Timing:
Foundational work is needed first. Therefore, the CACS aims to update the foundational elements in the respective related guidance and instruction documents with this proposal to, as one commenter stated, “...ensure there can be clarity and consistency in the testing and response practices.”

During the Spring and Fall 2024 NOSB meetings, the CACS asked the community for feedback on modernizing the guidance documents corresponding to residue testing. The common theme was that the guidance scope needed to encompass prohibited substances beyond residues of pesticides (e.g., synthetic solvents, heavy metals, and other prohibited substances) in addition to expanding guidance to address samples beyond the harvested crop/raw ag commodity (e.g., soil, water, plant tissue, livestock products, processed products, etc.). Also, there was a consensus that pesticide residue tests must be expanded based on known domestic and international risks (e.g., herbicides and fumigants) and common farming practices for the region based on agronomics. A public commenter from the certifying community noted, “Broadening the list to include solvents, fumigants (particularly those used at the borders), conventional fertilizers, herbicides, and other prohibited substances used in conventional food production would give us more useful tools without increasing the burden of testing.”

The “Pesticide Rule” that became effective January 1, 2013, clarified that certifiers “must” conduct periodic residue sampling of products to be sold, labeled, or represented as organic, expanded the amount of testing by clarifying that sampling and testing needed to be done regularly, and specified that certifiers must sample and test 5% of operations they certified annually. The focus of this residue testing rule wasn’t necessarily to identify fraud. Instead, it was used more as a tool to verify that an operation’s organic system plan was sufficient to prevent commingling and contamination. Certifiers built their residue sampling and testing programs with that premise in a way that complied with the requirements while attempting to be as cost-effective as possible since certifiers were required to bear the testing costs. Over ten years later, the organic industry has grown, and supply chains have become longer and

more complex. There are fraudulent actors that have and continue to benefit from our thriving industry. As a result, we must update our processes regarding residue sampling to align with current reality. This means taking a more risk-based approach to operation and sample selection and updating what we are testing for to keep pace with science and input development.

Additionally, the Board recognizes that other residue sampling and testing resources are not utilized as readily as the NOP Program Handbook documents. These include the Periodic Residue Testing of Organic Products (Notice to Certifiers) and the Organic Integrity Learning Center (OILC) NOP-190: Sampling and Testing course. Linking these resources together will assist certifiers in executing their sampling programs.

Updates to the guidance documents on these topics are necessary to support the work of inspectors, who collect samples, and certifiers, who analyze results. The guidance documents must provide certifiers and inspectors with the resources and information to collect samples confidently, ensure the appropriate type of test is ordered, and consistently respond when samples test positive for prohibited substances.

The goal of this proposal is to aid the NOP in updating guidance documents so residue sampling can remain a critical verification tool in the certification process. We also encourage the organic community, certifiers, scientists, farmers, inspectors, and NOP to share experiences of potential threats and determine best practices through testing to verify the integrity and authenticity of organic products. Below is a summary of public comments and NOSB proposals related to the various guidance documents on residue sampling.

Proposed Updates to NOP Guidance

Sampling Procedures for Residue Sampling (NOP 2610)
NOP 2610's primary focus is to outline sampling procedures. Stakeholders have identified the issue of this guidance being incomplete. NOSB acknowledges that the OILC course, NOP-190: Sampling and Testing, includes much of the information below. To resolve this issue, NOSB requests that either the information contained below be incorporated into NOP 2610 or that NOP-190 be referenced as additional information in the specific areas outlined below. Additional resources that are helpful for best practices in sample pulling, sample integrity, and sample training exist within the EPA, FDA, and other recognized and established sampling practices. Alignment helps reduce variation in approach and increase deterrents to fraud.

1. **Sampling Equipment**
    a. Sampling equipment can pose a risk of contamination of sampled products. To create a consistent sampling regime across all certifiers globally, NOP should update this guidance with a list of minimum equipment required for sampling including shipping cooler, ice packs, gloves, bags, sample collection reports, grain probe (for sampling grain bins), other specialized sampling tools, and proper cleaning methodology, as specific tests have different requirements.

2. **Inspector Training and Competencies**
    a. This guidance should specify the minimum qualifications and training inspectors need to take samples of organic operations consistently. Training should also be developed for more complicated sampling demands on higher-risk operations (e.g., imports, investigations, etc.).

3. Duplicate Sampling and Sample Retention

a. Many quality assurance programs retain a duplicate sample to retest when results are positive for residues. However, it is not currently best practice for inspectors to take a duplicate sample per §205.670. NOP 2610 should be updated to outline when this action is relevant, what steps inspectors should take to ensure the validity of results from duplicate samples, and how and where these duplicates should be retained.

4 Chain of Custody Integrity/Documentation

a. A residue sample chain of custody is essential in obtaining actionable sample results. If there is any breakdown in this chain of custody, the validity of the results can be questioned, and certifiers may not be able to take action if a positive outcome is found. The current guidance outlines the best practices for sealing bags, tamper-evident tape, and ensuring that shipping labels demonstrate a chain of custody. However, the updated guidance could include instructions for adequately identifying samples, ensuring integrity, and documenting the chain of custody including additional information such as the sample collector's name, client sample ID, name of certified operation representative present during the sampling, description of the sampling site, the reason for sampling, and testing requested (e.g., NOP pesticide screen, glyphosate, etc.). A clear set of procedures would assist certifiers with their staff training and potentially develop agreements with 3rd parties other than inspectors to conduct residue sampling activities.

b. Additionally, it is recommended that the inspector submit a report to the certifier that includes a copy of the sample collection information submitted along with the sample sent to the lab, whether a control sample was collected, a site or field map identifying where the sample was collected (e.g., GPS data), shipping documentation, a completed chain of custody form, and photos.

5. Sample Collection Procedure, Diversity, Sample Amounts

a. As mentioned in the lead-in, it is vital to provide references for best practices on sample collection within the OILC, FDA, EPA, laboratories, or other respected industries. We do not have to recreate the wheel to provide more detail on collecting a sample.

i. Include additional information regarding:

1. Proper sampling techniques and testing methodology

a. Outline that the auditor or certifier representative must collect the sample.

b. Indicate appropriate purge or best practices for avoiding sample site contamination and the collection scenario based on lot, origin, and commingling of multiple lots or sources.

i. NOTE: Sweeping up a sample from a bin, collecting off the top of a bulk tub, collecting from carryover crop storage of a crop already sold, or failure to adequately clean equipment before sampling may result in inaccurate results or results without compliance value to the program or to the operation, cost time and resources, and fail to support effective compliance decisions and defensible results.

c. Additional information on when to obtain composite or single samples

ii. NOP 2610 clearly describes the sample size necessary for obtaining valid pesticide residue results based on the commodity type. It provides some narrative guidance

on what part of the plant should be sampled if sampling occurs in the field or how to document a composite sample if several samples from different bulk containers are used to create a single composite sample. However, the instructions must clarify how samples are collected in various situations and include pre-collection preparatory information such as purging or best practices for avoiding sample site contamination. For example, collecting a grain sample in the field would dramatically differ from collecting a grain sample in a bulk ship. As we look to expand the handbook documents beyond prohibited pesticides, the guidance should include specific processes and amounts for collecting samples in inspectors' various situations. Hence, inspectors and certifiers have the confidence to take samples in many situations. At a minimum, NOSB would like to see specific sampling procedures for the following commodities and situations:

1. Produce in the field.
2. Produce in packed boxes.
3. Grain and oilseed in the field
4. Grain and oilseed in storage (bins, tanks, covered piles)
5. Grain and oilseed in transit (rail cars, containers, bulk ships)
6. Liquid processed products
    a. Oils
    b. Juice and other extracts
    c. Milk
7. Herbs and spices
8. Non-crop and non-harvested crop samples (soil, water, tissue, inputs, seeds)
9. All other crops appropriate to their condition

Note: A note of caution about sampling size can also differ depending on the lab's specific requirements.

b. Additionally, NOSB recommends that section 4.2 Sample Selection be revised to outline factors that certifiers may consider as part of their risk-based sampling program, which may include, but are not limited to, the factors below. The OILC course “NOP-190: Sampling and Testing” lists risk factors that certifiers should apply when developing their annual sampling plan:
    i. suspected risk of contamination from adjoining land use, commingling, or cross-contamination during handling.
    ii. repeat noncompliances that reflect potential systemic failure.
    iii. significant supply chain traceability concerns (i.e., unsuccessful mass balance or traceability exercises) that indicate the system is not auditable.
    iv. parallel production or handling of organic and non-organic commodities, especially visually indistinguishable varieties of a commodity or parallel processing with manufacturing systems that present difficulties for clean-out.
    v. regions presenting increased or unprecedented phytosanitary challenges.
    vi. production or handling of commodities that are experiencing sudden or unprecedented market growth, demand, and/or fluctuations in price.
    vii. located in or sourcing from areas of known risk (history of fraud or contamination).

c. Lastly, NOSB proposes the incorporation of determining what and where to sample depending on the type of contamination they are trying to find. As stated in NOP-190: Sampling and Testing, the certifier or inspector can ask, “Can I reasonably think that I can

determine the source of the contamination and the responsible parties if this sample is positive?" If the answer to this question is "No," then the certifier should instruct the inspector, or the inspector should take a sample farther back into the supply chain to ensure that positive results are actionable.

6. **Time is of the Essence**
    a. Sample collection and preparation must be thorough and expedient to minimize sample decay, pesticide losses, and contamination of products entering the chain of commerce. Best practices for sample holding and submission timeframes should be included.

7. **Additional Resources:** In addition to OILC, laboratories, and Extension offices, many sampling plans and best practices are available and can be selected by matrix.
    a. U.S. Department of Defense Military Standard Sampling Procedures and Tables for Inspection by Attributes MIL-STD-105E: (https://archive.org/details/MIL-STD-105E_1)
    b. U.S. Department of Defense Preferred Methods for Acceptance of Product MIL-STD-1916: (https://www.sqconline.com/sites/sqconline.com/files/MIL-HDBK-1916.pdf)
    c. USDA Grain Inspection Handbook: (https://www.ams.usda.gov/sites/default/files/media/Book1.pdf)
    d. UC Davis Analytical Lab Sampling and Preparation: (https://anlab.ucdavis.edu/Home/SamplingAndPreparation)
    e. AOAC International Resources: (https://www.aoac.org/resources/)

8. **Specific Redline Corrections:**
    a. Update section 4.4: Certifiers are called upon to record the variety of a crop and the brand name. However, circumstances may arise in which the individual collecting the sample cannot access this information. We recommend changing to "recording information when available."
    b. Evaluate that reference material is current, and that reference links are functional.
        i. Codex Alimentarius Commission links are broken in the reference section.
        ii. Reference links should be expanded to reflect best practices in sampling.
        iii. Add a reference to NOP-190: Sampling and Testing.

During the Fall 2024 meeting, the NOSB asked a series of questions about NOP 2610. The responses are summarized below and assisted in the formation of the proposed solutions above:

- Additional Comments: Overall, most stakeholders were focused on expanding the information found in NOP 2610 to encompass the breadth of the organic supply chain, not just commodities produced in crop production. In addition, providing information for alignment to aid in consistent enforcement decisions beyond the consumed or harvested commodity (i.e., foliarly) is critical. Referencing the OILC course will ensure that up-to-date information can be accessed even if the frequency of updates on the actual instruction is limited.
- Collaboration: A few stakeholders indicated that NOP staff should work with Pesticide Data Program (PDP) staff in developing sampling procedures that can fulfill the missions of both programs. We also encourage certifiers to use analytical labs for residue testing that utilize the PDP's testing protocols, setting the stage for certifier test results to be readily comparable to results from annual PDP testing.
- Internalizing Testing: Generally, the certifier and other organic stakeholders did not favor sub-contracting out sampling to a third party other than the inspector. There was an alternative opinion from one advocacy group and one consultant that did support involving third-party

experts, indicating that they could provide deeper insight technically into sample collection, and then training could be reduced for certifiers and inspectors in this area, and bandwidth for certifiers could be increased.

Laboratory Selection Criteria (NOP 2611)

NOP 2611 primarily focuses on ensuring the laboratories used for residue analysis are accredited to conduct multi-residue pesticide screens. As NOP expands guidance related to testing for other types of pesticides and prohibited substances, the laboratories conducting these analyses must be competent and consistent. Stakeholders have identified that NOP 2611 has not been updated to keep pace with these advancements and expand into testing for other prohibited substances. Therefore, to resolve this issue, NOSB requests that additional specific laboratory selection requirements accompany any additional tests described in handbook updates. Again, NOSB acknowledges that some of the information listed below currently exists in the OILC course NOP-190: Sampling and Testing. NOSB supports updating the guidance document or updating NOP-190 and linking to that resource in the guidance document.

1. **Issue: Only Contains Information on Pesticide Testing**
    a. **Solution:** Expand Testing Guidance, Best Practices, and Rename Document
        i. Identify labs that can test for specific risks across all organic scopes: crops, livestock, wild crops, and handling.
            1. Crops Scope—Guidance is needed for laboratory selection to include prohibited materials in inputs, synthetic herbicides, fertilizers, and other substances prohibited in organic production.
            2. Additional items to test outside pesticide residue must be included.
                a. For example, testing oilseed meal for prohibited synthetic solvents requires laboratory competencies in oil chemistry, and certifiers will need to determine if the laboratories they currently use for multi-residue pesticide screens have the necessary competency and accreditation to conduct these additional tests.
        ii. Identify current best practices for a broader set of needed test methods, matrices, and sample methodologies (remove specific focus on QuEChERS).
            1. Testing within the agricultural and food industry is routine and well-researched.
                a. Benchmarks with ISO, GAFTA, FOSFA International, Regulation EC No 619/201, and other respected institutions may be consulted as resources to help inform what type of lab accreditation and testing methods are needed across the NOP scopes.
                b. Benchmark with the USDA/AMS laboratories that conduct PDP testing for quality control and verification of procedures.
    b. **Solution:** Specific Redline Corrections
        i. Expand Scope and Rename Document: The Title of 2611 focuses solely on pesticide residue testing, and the instruction concentrates mainly on the QuEChERS (**Q**uick, **E**asy, **C**heap, **E**ffective, **R**ugged, **S**afe) method. With the recommended scope expansion changes suggested above, the title of this document will need to change to reflect the updated content.
            1. Note: The QuEChERS method is an analytical approach that vastly simplifies the analysis of multiple pesticide residues in fruits, vegetables, cereals, and processed products.

ii. Update Section 4.1: Revise the language from “should” to “must” in the last paragraph, which states, “If certifying agents suspect a prohibited substance was used that is not included on the NOP “target” list, they should initiate sampling/testing and investigation.”
    1. If testing is not conducted, an explanation as to why a test was not conducted should occur.
    2. NOTE: NOSB recommends that 2611-1 be updated and the limited/out-of-date "target list" retired; therefore, this language would need additional revising.
iii. Update Sections 4.1 and 4.2.3: Revise the scope of testing beyond QuEChERS and update to reflect the revised title and format of 2611-1.
iv. Update Section 4.2.1: Revise the Laboratory Selection Criteria to require “a current copy of the lab’s accreditation certificate on file” versus the need to have “lab accreditation certificates attached to each lab test.”

Note: Industry and regulatory collaboration must exist to ensure the current methodology is approved promptly. Clarifying requirements is also important to ensure consistency globally.

During the Fall 2024 meeting, the NOSB asked a series of questions about NOP 2611. The responses are summarized below and assisted in the formation of the proposed solutions above:

- Scope Expansion Critical: Public comments supported expanding the instruction to include testing beyond pesticide residues and renaming the document. Several stakeholders recommended establishing a working group of experts to develop recommendations for expanding this instruction beyond pesticide residue laboratory selection, including prohibited materials in inputs, synthetic herbicides, fertilizers, and other substances prohibited in organic production. Tests, in addition to the QuEChERS methodology, which are AOAC-approved lab methods, need to be recognized.
- Laboratories: Laboratories that maintain ISO 17025 compliance are approved for the recognized (AOAC or international equivalents) methods, and are in good standing with their accreditations, blind check samples vs. proficiency samples, and performed values of test methods vs. the written methodology. Industry and regulatory collaboration remain vital to ensuring methodologies are approved promptly.
- Redline Corrections: Several comments supported the redline correction in 4.1 that pointed to revising the language from “should” to “must” in the last paragraph, which states, “If certifying agents suspect a prohibited substance was used that is not included on the NOP “target” list, they should initiate sampling/testing and investigation.”
- Redline Corrections: One certifier commenter did not agree with the redline change proposed to 4.2.2. They stated that certifiers should not need to maintain the lab’s current proficiency test results and resolve corrective action. This is not within a certifier’s jurisdictional oversight and creates an undue and unnecessary burden for certifiers. Lab compliance should be determined and managed by the lab's accreditation body. The NOSB removed this recommended redline change from the proposal.

Prohibited Pesticides for NOP Residue Testing (NOP 2611-1)

NOP 2611-1 provides certifiers with a list of prohibited pesticides commonly included in multi-residue pesticide screens. The list offers a baseline multi-residue screen so that certifiers implementing pesticide residue sampling as a compliance tool request the most comprehensive list of substances possible from the laboratory. NOSB received substantial comments from stakeholders with suggestions for additional

substances that could be tested for and types of tests that could be performed. One commenter mentioned, “We believe that the list of prohibited substances provided is incomplete and including it as guidance could lead to the mistaken impression that it is comprehensive. Analyses should be based on the most likely pesticides found on the crop in the region where it is grown.” NOSB proposes the below edits to resolve the issue of the list being limited and out of date. Alternatively, all of the below information could be added to NOP 2611, and NOP 2611-1 could be archived.

1. **Issue: “Target list” is limited to only certain pesticides and is out of date**
    a. **Solution: Expand What to Test -** The list of what to test should not be prescriptive with substances that go out of date but rather be informed to reflect the breadth that the 2012 periodic residue testing memo has pointed to including, but not limited to, the items listed below. This list has been updated (i.e., strikethrough text) to reflect current substance status (e.g., removal of the acceptance for antibiotics in apple and pear production) as well as to align with the proposals being recommended in this document (e.g., deleting reference to “target list”).
        i. Prohibited pesticides ~~- possible target list at NOP 2611-1~~
        ii. Arsenic or other contaminant metals
        iii. Genetic engineering – review policy in Policy Memo 11-13
        iv. Synthetic hormones
        v. Antibiotics~~, except in organic apple and pear production per USDA organic regulations~~

    NOSB proposes, in addition to the substances and methods listed above, that the following also be added:
        vi. Solvents
        vii. Prohibited inputs, including synthetic nitrogen and other fertilizers
        viii. Etc.

    b. **Solution: Retitle the Document to Reflect its Expanded Scope.** For example: “Testing Methodology Selection Criteria for Residue Testing.”

    c. **Solution: Information Layout—**NOSB proposes that NOP update the structure to include specific testing methodologies for particular substances and the rationale for electing a specific test to accomplish this need. The following tips will help revise this guidance document to be more beneficial for certifiers engaged in broader residue sampling activities.

    For more information, please refer to the EPA index for pesticide types and families, which provides more information on the active ingredient/type/family/common name. Also, be aware that substances could be banned in the USA but are still available to be used overseas.

    Format for ease of use so that certifiers and inspectors can better identify the most appropriate type of test to select for the particular sampling scenario.

Test Type	**Specific Analyte Tested**	**Rationale for Selecting Test**

Multi-residue pesticide screen (ex. QuEChERS)	1-Naphthol, 3-Hydroxycarbofuran, 5-Hydroxythiabendazole, Acephate, Acetamiprid, etc.	Choose this screen when testing the efficacy of buffers on specialty crops grown near conventional production. When ordering and designing multi-residue screens, consider the product's origin. Tests should focus on the pesticides typically used in the country of origin.
Single analyte herbicide Screen	Glyphosate (with AMPA and Glyphosine), 2,4-D, Dicamba	Choose this screen when inspectors observe herbicides or when sampling a crop (e.g., wheat) where herbicides are routinely used, but other pesticides are not. Note: this is not a panel screen.
Residual Solvent Panel	Hexane, Acetone, Methanol, Dichloroethane, etc.	Choose this screen when sampling oilseed meals in transit or at handling facilities. Consider adding the fat content percentage to provide insight into whether the seed meal was expeller-pressed or solvent-extracted.
Heavy Metals	Cadmium, Arsenic, Lead, etc.	Choose this screen when determining the presence of heavy metals and the effectiveness of the OSP.

d. **Solution: Include Regional and Crop-Specific Information -** Understanding the region and what pesticides or processing aids are commonly used on conventional farms can provide insight into what to test for to identify the presence of residues. Some pesticides are illegal in the U.S. but still permitted in certain countries. One stakeholder mentioned, “We recommend using pesticide-use data to develop a list of prohibited substances that are most likely to be used for a specific crop in a production region.”
    i. A multi-residue single-panel screen is suitable for use in some scenarios; however, the target list is limited, and pesticides often do not appear on the crop's harvested portion.
        1. Foliar and soil tests are valuable; for example, if a producer sprays corn with fungicide before the ear has set, the grain may not contain the fungicide.
    ii. The NOP is expanding guidance on the types of tests that certifiers can perform to address broader contamination and fraud concerns.

iii. For example, solvents are ubiquitous in conventional production. Consider testing organic soybean meal for solvents. Guidance for testing livestock products (milk, eggs, fiber), livestock tissue, processed products, agricultural inputs, etc., must be considered.

iv. A commenter stated, "The prescriptive nature of this list creates an overtly focused emphasis on screening for pesticides instead of testing for any or all likely present prohibited substances. Testing needs to be targeted to the likely risk to a specific type of operation or the potential contamination observed on site."

e. **Solution: Testing for Metabolites -** Testing for metabolites can also have value. One commenter stated, "The metabolites aminomethylphosphonic acid (AMPA) and glyphosine should also be included. These degradants are more likely to persist in the soil and would be strong evidence that glyphosate had been applied recently on a given field."

f. **Solution: Companion Tests -** As the table states above, when examining a solvent test to identify the illegal use of a processing aid for soybean processing into soybean meal, a fat % test could provide an additional indication of fraud.

g. **Solution: Fertilizer Authenticity Testing**—This is an example of testing innovation that could potentially be a powerful tool for compliance verification within the organic community. A professional group has engaged AOAC to discuss opportunities for developing new approved testing methods to determine organic authenticity.

h. **Solution: Access to Most Current Information—**Certifiers should consult with laboratories and local extension offices regarding currently approved testing methods and substances to use in case-by-case scenarios (e.g., what is the best substance to test for in a particular region for a particular crop).

During the Fall 2024 meeting, the NOSB asked a series of questions about NOP 2611-1. The responses are summarized below and assisted in the formation of the proposed solutions above:

- General: The stakeholder community consensus is that this "target list" is outdated, limited to only a few pesticides, and the community wants more frequent updates. The instruction documents, unfortunately, are not the vehicle to receive frequent updates; therefore, the NOSB outlined solutions above to convert 2611-1 into a critical thinking and sample methodology document and encourages outreach to industry experts and labs to provide the current "threats" to sample.
- Note: Several commenters mentioned the power of a multi-screen residue test and its limitations. One commenter stated, "The QuEChERS method and variations on it have several advantages in conjunction with multi-residue analytical methods; it is not necessarily the best approach in every case nor the sole approach that should be utilized."
- Pesticide Data Program: The PDP is a resource that the organic industry should leverage, specifically to identify at-risk crops and their associated pesticide(s). Targeting high-risk pesticides and vulnerable crops could help the industry and certifiers develop appropriate risk assessments.
- Risk: Certifiers should have established programs to evaluate risk based on region, crop types, current input, and production practices for organic and non-organic production systems. Specific details about the time, place, and crop sampled & production practices, common pests,

common diseases, and everyday materials used for controls – wind direction, adjacent land use, and land history need to be considered.

Responding to Results (NOP 2613)

NOP 2613 provides guidance to certifiers when responding to results from multi-residue pesticide screens on raw agricultural commodities. However, this guidance document is not without its gaps. This proposal aims at solving the following issues and, therefore, resolving current gaps:

1. **Detection without Tolerance Level:** Positive results for pesticides not registered for the crop on which they are found (i.e., No EPA tolerance/FDA action level) are assessed at .01 ppm, which doesn't consider drift or UREC. It may also not be available for minor crops and non-food crops and may feel too strict.
2. **Dehydrated, Extracted, or Concentrated Organic Products:** Residues found in dehydrated, extracted, or concentrated plant material can be misleading and result in a loss of organic status for that product.
3. **Other Prohibited Substances or Excluded Methods**: Several other prohibited substances are not pesticides (e.g., solvents, heavy metals), and they are not currently addressed by NOP 2613.
4. **Notification of downstream buyers when levels are above EPA Tolerance/FDA Action Level.**
5. **Gaps in Decision-Making/Specific Redline Corrections:** Decisions pertaining to land status are not included. Additionally, some specific redline corrections are recommended.

We expand on the issues identified above and propose solutions below.

1. **Issue: Detection without Tolerance Level -** When detected pesticides are not registered for the crop on which they are found at any level above 0.01 ppm, the current guidance indicates that certifiers should exclude the crop from the organic marketplace and alert the appropriate authorities, including the EPA and FDA. This approach assumes that any detection of a prohibited pesticide when there is no established tolerance indicates that the product no longer qualifies for organic status and that there is a human health and safety concern. This approach is problematic in the following circumstances:
    a. **Minor Crops and Non-Food Crops:** The EPA is working on an ongoing project to update crop groups. That said, some minor crops may still not have tolerances established for many pesticides. NOP should develop alternative corrective action approaches when residues of pesticides not registered for the crop are detected on "minor crops" (EPA defines minor crops as crops grown on fewer than 300,000 acres nationwide). Criteria should also be developed to determine tolerance levels for non-food crops, such as cotton seed meal, other plant parts (e.g., leaves, stems, etc.), and soil.
        i. **Solution:** NOSB proposes that NOP develop criteria for certifiers to determine organic compliance for minor crops using established EPA tolerances for broader crop groups, and for non-food crops using established EPA tolerances for the edible portion of the crop. The criteria and procedure for using them would then be incorporated into NOP 2613.

        Additionally, NOP should clearly describe in NOP 2613 and the OILC course NOP-190: Sampling and Testing how to use the existing structure of Crop Groups [(§108.41) > Crop (specified in the Specific Tolerances tables in Subpart C) > Crop Definition (§180.1(g))] to assess positive detections on various commodities. Incorporating examples and interactive learning mechanisms will help certifiers better understand how to navigate the EPA regulations and appropriately evaluate positive detections.

b. **Drift or Inadvertent contamination:** The current guidance does not allow certifiers to factor drift or inadvertent contamination events versus fraudulent activities into their assessment if there is a positive detection but no EPA tolerance or FDA action level. The current guidance also does not provide clarification to certifiers for evaluating whether the presence of a residue is due to unavoidable residual environmental contamination (UREC). Certifiers are assumed to equate this to less than 5% of EPA tolerances. This approach is problematic when there is no EPA tolerance.

   For example, §180.129 o-Phenylphenol lists the tolerance for cucumbers at 10 ppm. This means that tests could show residues of up to 0.5 ppm (5% *10 ppm = 0.5 ppm) for cucumbers, and they'd still be allowed to be sold as organic. However, broccoli is not listed in this table, so if a test came back positive for broccoli for o-Phenylphenol, it could not exceed .01 ppm. This is seemingly unfair to an organic operation in an inadvertent drift scenario in that produce that might be in very close proximity (no difference in the operation's buffers, etc.) could have very different outcomes by having to rely solely on the inclusion of crops in the EPA tables.

   NOSB further explores UREC in our "Residue Testing for a Global Supply Chain: Regulation Review Discussion Document," which includes revising the current definition.

   i. **Solution:** NOSB proposes that NOP explore the following policy solution options:
      1. Utilize 40 CFR Subpart 180 paragraph (d) "Indirect or inadvertent residues":
         a. Recognize the values in 40 CFR Subpart 180 paragraph (d) "Indirect or inadvertent residues" as equivalent to 5% of EPA Tolerance for the purpose of responding to residue tests to determine organic compliance (i.e., 5% of the tolerance listed in (d) should not be taken given that these are already at inadvertent levels; evaluate compliance directly against values as they appear in (d)); and,
         b. Provide guidance to stakeholders for the process of requesting EPA to establish tolerances in paragraph (d) in cases where there isn't a current tolerance listed in paragraph (d) for that substance.
      2. Utilize crop group structure:
         a. NOSB requests that NOP provide guidance to certifiers on how to utilize the crop group structure for the purpose of determining organic compliance including but not limited to:
            i. Adding additional crops (that are missing) to crop groups with like characteristics.
            ii. State that if a crop is listed for a particular substance, all the crops in the corresponding crop group would have the same tolerance (e.g., for o-phenylphenol, cucumbers have a tolerance of 10 ppm). Since cucumbers are part of crop group 9 - cucurbit vegetables, all crops listed in crop group 9 would have the same tolerance as cucumbers).

3. Explore if other reliable data sets could be used to set action and inaction thresholds as an alternative to .01 ppm. These may include, but are not limited to, the USDA Pesticide Data Program or the Dietary Risk Index.

2. **Issue: Dehydrated, Extracted, or Concentrated Organic Products -** When sampling dehydrated, extracted, or concentrated organic products, positive results can be amplified and misconstrue the raw agricultural commodity's contamination level. For example, a fresh hop sample may indicate no pesticide residue detection. However, that same hop sample that is dehydrated and concentrated may reveal positive results. Another common example is grapes vs. raisins. EPA tolerances are established for various agricultural commodities, typically specific to the form (e.g., fresh, dried, etc.). However, this system only sometimes supports taking action on a positive sample result. It should be noted that, sometimes, the lab has specific testing methodologies for fresh vs. dried crops. However, this would not be helpful if the EPA tables only list one vs. the other.

    a. **Solution:** NOSB proposes that NOP develop a specific section in NOP 2613 related to responding to positive results for dehydrated, extracted, or concentrated products.
        i. NOSB proposes the following as potential paths and recommends NOP look into both as viable opinions:
            1. United States Pharmacopeia (USP) 561 as a guideline for establishing thresholds for dried/extracted products (e.g., dried herbs and spices; botanical extracts used in dietary supplements) that account for differences in water content between dried and fresh products. This would provide a value from which certifiers can apply the 5% threshold instead of defaulting to .01 ppm for extracted or dried products.
            2. The European Union model and the factor used to convert fresh to concentrated.

    These proposed approaches are built on models already in use—one by the FDA for over-the-counter drugs and one by the EU, which allows for international harmonization. NOSB acknowledges that these approaches introduce a complex intersection between FDA, EPA, and USDA regarding oversight of residues in NOP-certified food and supplements.

    NOP 2613 section 5.3.5(b) “Using EPA Tolerances” would also need to be revised depending on the chosen solution. It states, “Unless a specific tolerance exists for the processed product, certifying agents should use the tolerance for the raw commodity.” This would no longer be accurate if one of the above solutions were utilized.

3. **Issue: Other Prohibited Substances or Excluded Methods -** Periodic Residue Testing of Organic Products (Notice to Certifiers) and OILC Course NOP-190: Sampling and Testing acknowledge that certifiers can and should test for prohibited substances beyond pesticides. However, NOP 2613 only outlines how to respond to positive results of pesticide residues. It does not provide direction on responding to positive results of other prohibited substances. Additionally, the current regulations only exclude organic sales when residues are detected above the FDA action level or above 5% of the EPA tolerance. CACS is also exploring regulatory revisions in the tandem “Residue Testing for a Global Supply Chain: Regulation Review Discussion Document.”

a. **Solution:** Add a section to NOP 2613 that clarifies how certifiers should respond to positive results outside of pesticides (e.g., other prohibited substances and excluded methods). NOP-190 states that in situations where there is the presence of a prohibited substance, certifiers should "consider whether the presence of these prohibited substances:
    i. Was a result of unintended contamination, and future corrective actions by the operator could reduce or eliminate the contamination,
    ii. Was the result of a willful violation."

Based on the answer to the above questions and perhaps others, certifiers would follow the compliance process outlined at §205.662 and in accordance with NOP 4002: Enforcement of USDA Organic Regulations: Penalty Matrix.

4. **Issue: Notifying downstream buyers when levels are above EPA Tolerance/FDA Action Level -** The current guidance indicates that certifiers should notify the operation that the product is not eligible to be sold as organic and alert the appropriate authority (e.g., EPA or FDA). The guidance does not require that operations notify their downstream buyers. This additional communication could lead to increased oversight and testing downstream. Additionally, fraud has resulted in significant quantities of contaminated or illegitimate products being placed into the stream of commerce. NOP and certifiers currently do not have the ability to initiate stop-sale action on fraudulent products.
    a. **Solution:** NOSB proposes that 2613 be updated to require that operations inform downstream buyers of crops or products with exclusion level contamination.
    b. **Solution:** NOSB proposes that NOP explore the allowance to initiate sequencing for a stop sale action by certifiers or the NOP.

5. **Issue: Gaps in Decision-Making and Specific Redline Corrections**
Again, NOP 2613 does a good job guiding certifiers in their decision-making regarding the product eligibility for the specific sample tested, except as identified above. The guidance document does not provide certifiers with guidance on determining the land status due to positive residue samples.

For example, suppose a crop from a field is tested and returned positive for enough prohibited residue to remove the crop from certification. In that case, it wouldn't necessarily also require farmers to retransition their land, unless there was evidence of an application of a prohibited substance (e.g., it was determined the presence was due to drift). However, if a farmer self-reports a drift event, it must be re-transitioned by some certifiers. Clarification around decision-making in these scenarios would help certifiers make consistent decisions.

Additionally, now that the Strengthening Organic Enforcement final rule requires operations to include an organic fraud prevention plan (OFPP) in their organic system plan, it is unclear how the operation's adherence to their plan impacts the issuance of noncompliances when residues are found. NOP 2613 could be updated to specifically reference that noncompliance for not adhering to one's OFPP may be issued, as applicable. Alternatively, if certifiers found that an operation was adhering to their OFPP and/or the requirements listed currently in NOP 2613, then noncompliances related to those items would not be issued.

    a. **Solution:** NOSB proposes that NOP clarify how certifiers determine the status of land vs. the eligibility of the crop in the case of drift.

b. **Solution:** NOSB proposes that NOP 2613 be updated throughout regarding the issuance of noncompliances for not following other parts of the organic regulations, as applicable, such as 205.201(a)(3) - not adhering to their OFPP.
c. **Solution: Specific Redline Corrections**
    i. Update 5.3.2.b to clarify if it should also include detections "at or above" the FDA action level.
    ii. Update 5.3.3.a to clarify if it should also include detections "at or above" 0.01 parts per million.
    iii. Update 5.3.3 to clarify how to respond to positive results for materials that are not pesticides.

During the Fall 2024 meeting, the NOSB asked a series of questions about NOP 2613. The responses are summarized below and assisted in the formation of the proposed solutions:

1. How should a certifier select a reference EPA tolerance when the commodity or group is not listed with an established tolerance?

   The Board received several answers to this question, ranging from stating that certifiers should not use a reference crop or commodity that wasn't tested, to the opposite stance of using a like crop. One commenter highlighted why this issue requires a solution with an example: "The benchmark detection level of 0.01 ppm is minuscule and often cannot be associated with fraud or failure of an Organic System Plan (OSP). Unless there is direct evidence that material was willfully applied or a failure of an OSP, it seems unfair to prohibit organic sales at such low detection levels. Unintentional environmental contaminants cannot always be managed by an OSP, even the most robust. It would be sound and sensible if a reasonable threshold (e.g., 10 ppm) were used for materials that lacked an EPA tolerance or FDA action level for a particular commodity."

   Another proposed option was to average the tolerances for the listed crops, locate a similar substance (i.e., a substance in the same class of pesticide), and then average the tolerances of those crops for the like substance.

   Lastly, one commenter indicated that we should shift away from EPA tolerances and use cRfD values instead.

2. How should a certifier review metabolite detection?

   We received limited answers to this question. One commenter indicated that NOSB should confirm that metabolites are not included in the QuEChERS screen or a single analyte pesticide screen, as they were under the impression that they were included. Some commenters stated that metabolites should be reviewed against the tolerance for the parent pesticide. Most, however, indicated that more research was needed as some pesticides break down into naturally occurring substances. Therefore, it is unclear which metabolites are from the pesticide breakdown, and which are not.

3. What should a certifier do when results come from third-party operations with unknown sampling methodology?

Most commenters indicated that certifiers should use these results as the basis for investigation, which may include conducting additional inspections (announced or unannounced) and/or collecting additional samples for residue sampling. Most indicated that in cases where the methodology was unknown, or the chain of custody could not be verified, the results should not be used to initiate adverse action.

4. How should a certifier interpret samples of a multi-ingredient product or a tested lot composed of several lots from suppliers?

   Most commenters indicated that pulling multi-ingredient or multi-lot samples should be avoided as determining compliance is complicated. However, several indicated that when this situation occurs, certifiers should further investigate by determining which ingredient is the likely culprit, conducting a full supply chain audit on that ingredient, or testing that single ingredient or all ingredients in the product.

5. What should a certifier do with multiple tests for a single lot, but the test results conflict?

   There were varied answers from those received. Some commenters pointed out that this is where duplicative samples could come into play. Some commenters indicated that the lab should be contacted to determine next steps. Most stated that a case-by-case approach would be required and that certifiers would need to investigate more into the specifics of the scenario.

6. How should a certifier interpret and respond to results from foliage versus commodity tests?

   Some commenters indicated that certifiers needed to work within the bounds of the EPA tolerances in these situations. Some commenters indicated that certifiers could follow the compliance path (e.g., issue noncompliance or adverse action) but that the immediate exclusion from sale only applied to the edible portion of the crop. Due to that, some commenters indicated that it is the best practice to only sample the edible portion. In contrast, another showed that if a sample of the non-edible portion was taken, a subsequent sample of the edible portion could be taken.

7. How should a certifier address tests conducted outside the U.S. for materials not on the “NOP panel” multi-residue screen panel?

   Some commenters acknowledged that 2611-1 is not an exhaustive list. Most commenters indicated that the presence of any prohibited substance warrants an investigation.

8. How can instruction be improved to supply guidelines for prohibited material applications before harvest (intentional and unintentional) since EPA and FDA tolerances are established based on the consumption of the harvested commodity and what existing tools and resources are needed or available to inform the scenarios below:

   a. Identify what might have been applied when concerns exist so that appropriate testing can be conducted.

      Commenters indicated that guidance could include a list of chemicals, and their effects, commonly used in conventional agriculture—for example, chemically induced tobacco

suckering, fruit ripening, or oil extraction—so that certifiers could target testing based on the specific crop or commodity.

b. Evaluate the concentration of the material on commodities that aren't at the harvest stage so investigations can determine whether an application intentionally or unintentionally occurred.

   Commenters agreed that, ideally, certifiers would have guidance on determining what levels indicate an intentional vs. unintentional application. They also recognized the challenge of proving intent.

c. Determine whether crop or field status should or should not be impacted.

   Commenters were aligned in the sentiment that drift scenarios and their impact on land status must be addressed.

   One commenter stated, "Guidance documents or the regulations should address drift contamination and applications of prohibited materials, accidental or otherwise, and how certifiers should address these incidents. For example:

   - Direct and intentional application of a prohibited substance would normally constitute organic fraud, resulting in exclusion from sale and revocation of the operation's certification (Direct and intentional application of an input material that contains small amounts of the prohibited substance, such as a synthetic wetting agent in an otherwise natural potting mix, should not result in revocation or exclusion from sale. Plenty of gray areas exist between spraying a field with glyphosate and using a potting mix with a wetting agent.).
   - Direct but unintentional application of a prohibited substance should normally result in exclusion from sale, but not in adverse action unless the operation has repeatedly failed to address identified contamination risks.
   - Indirect application, such as by drift or flooding, should result in exclusion from sale if the residue is over 5% of the EPA tolerance, but would not result in adverse action unless the operation has repeatedly failed to address identified contamination risks.

Approval of Liquid Fertilizer for Use in Organic Production (NOP 5012)

This guidance clarifies the approval and use of liquid fertilizers in organic production. With innovation in testing methodology and early discussions regarding the possibility of developing an AOAC method for Organic Authenticity Testing, it is important that we also include an update to this document during the suite of testing guidance document updates planned by the NOP.

1. **Issue: Missing Reference to fertilizer authenticity test**
   a. **Solution: Specific Redline Suggestions**
      5.2 Approval - Add in 3A. Conduct a fertilizer authenticity test if an approved testing methodology exists for authenticity determination.

      5.3 Criteria for approval of fertilizer manufacturers—Add in 3A. Conduct a fertilizer authenticity test if an approved testing methodology exists for authenticity determination.

Suggestions for New Guidance Documents:
The discussion around residue testing as a compliance verification tool has identified gaps in the current guidance. In the sections above, we provided suggestions for improving the existing guidance. Below, we give some ideas and context for new guidance documents that could assist certifiers in deploying residue testing more effectively in the organic marketplace.

1. **Residue Sampling Decision Tree:** Overall, stakeholders commented that it would be tremendously helpful to certifiers if NOP developed a decision tree that could assist certifiers in determining when to sample, what to sample, where to sample, what types of tests to run, and how to respond to positive results from each situation. Guidance might not capture the nuance of every situation, but having a decision tree could support certifiers in understanding how to apply residue testing in a supply chain most effectively.
    a. Three samples from our stakeholder community are found in the appendix:
    b. Risk-Based Decision Tree
        i. Critical Aspect of Selecting the Product to Sample
            1. Testing targets are high-value large shipments, country of origin, market footprint, and split or parallel production.
        ii. Multi-ingredient processed products
    c. Residue Test Result Decision Tree based on Current Instruction
    d. Notice of Detection and Next Steps Decision Tree

2. **Validation and Verification Guidance for Importer Requirements 205.273(d):** The Strengthening Organic Enforcement rule now requires importers to have a prohibited substance prevention plan. For certifiers to validate and verify the efficacy of these plans, they must have some guidance related to how residue testing can support these validation and verification efforts. We welcome stakeholder comments on essential elements to guide validating and verifying importers' prohibited substance prevention plans.

In addition to guidance document updates, other comments from the public centered around:

- **Collecting and Aggregating Positive Test Result Information:** Testing results must be aggregated and disseminated to certifiers. Some commenters pointed to a unified reporting format and a centralized point for posting positive residue test information (e.g., ORG-Tracker). This would help transparency and inform the certifier's risk assessments and decisions on what to sample. Other commenters indicated that NOP should regularly communicate high-risk commodities to certifiers. NOSB proposes this in the Risk-based Certification Proposal (also on the Spring 2025 NOSB agenda). Lastly, one commenter referenced the provisions in the organic regulations that allow certifiers to share lab analysis results for residues of pesticides and prohibited substances. It was suggested that guidance be updated or that ACA incorporate into their best practices a process to share information at specified intervals to inform the creation of their sampling program for the following year.
- **Working Group:** Several members of the stakeholder community mentioned the value of a cross-functional working group consisting of inspectors, certifiers, laboratory personnel, and specialists in the field to identify and outline the industry's best practices and certifier policy for sampling and testing specific to the matrix sample and the test required. The ACA established a working group in Fall 2024. It is currently made up of certifier members. We understand that other ACA members may be invited to participate in the future.

- **Risk-Based Testing:** To maximize the impact of testing while managing costs and not overburden low-risk small producers, certifiers should focus on high-risk areas such as large shipments, products from regions with known contamination issues, or products/production sources/processing facilities with a history of fraud. A risk-based decision tree would be an effective tool to help certifiers decide when, where, and what to test.
- **Harmonization with International Standards:** The suggestion to align U.S. pesticide residue testing protocols with international standards will reduce discrepancies between domestic and international testing standards, promoting smoother trade relations and reducing barriers for U.S. organic products.

Conclusion:
Testing, as a tool, has played a crucial role in the organic program since the implementation of the 2013 Residue Testing rule, and was further enforced with the Strengthening Organic Enforcement (SOE) rule. SOE not only assists certifiers in validating compliance but also provides the ability to rapidly detect evidence of commingling/contamination in operations deemed to be high risk, thereby enhancing the program's proactive nature.

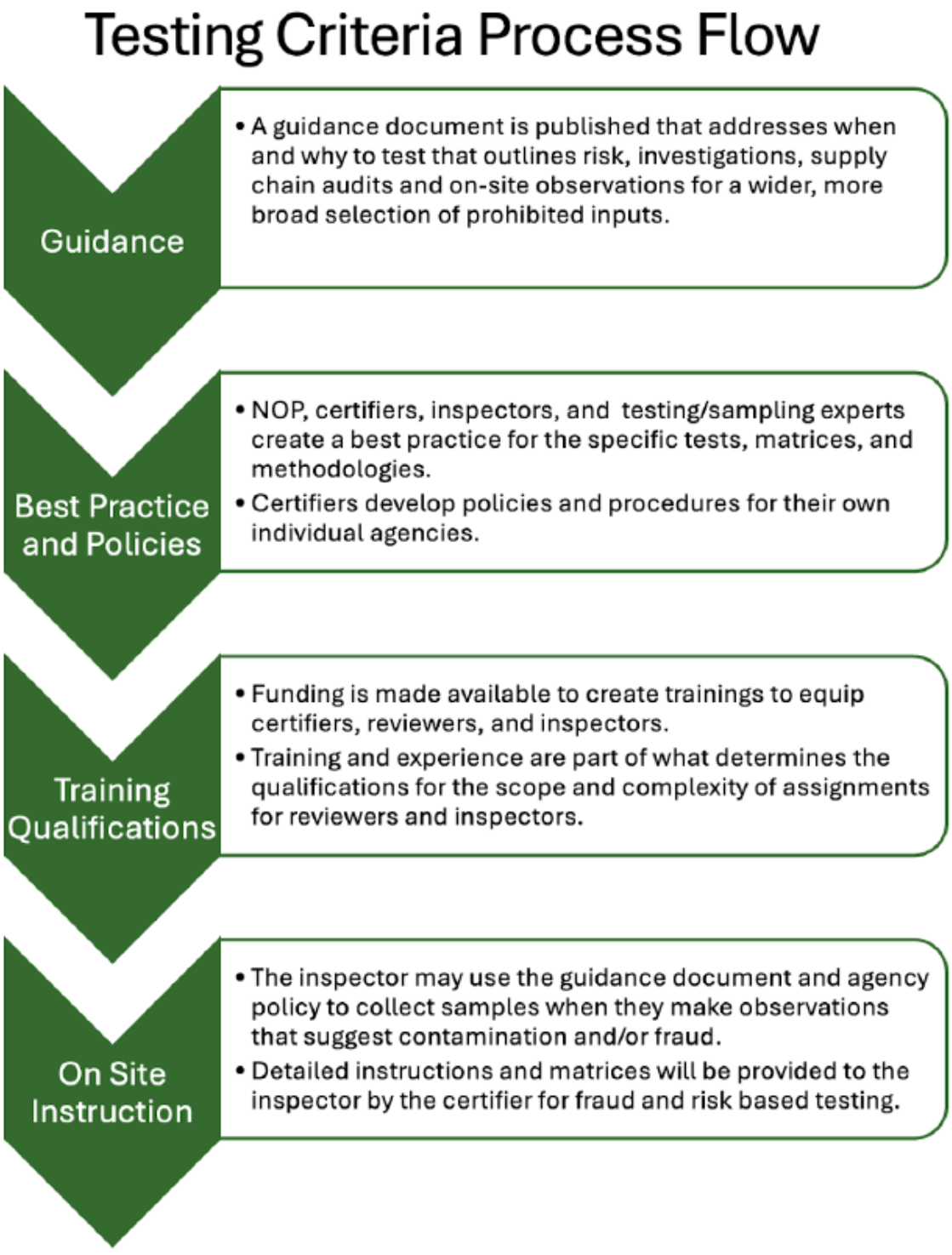
However, modern-day threats do not just come from pesticide residues. A one-size-fits-all test (e.g., “target list” specified in NOP 2611-1) is sometimes the correct tool for the job. Threats can also come from fumigants and conventional processing aids, such as solvents.

In the spirit of continuous improvement, CACS recommends a full revision of existing guidance regarding prohibited substance residue testing as specified in this proposal to protect organic integrity, unlock the power to assist in compliance verification, and help create consistent enforcement decisions.

Subcommittee Vote:
Motion to accept the proposal on Residue Testing for a Global Supply Chain: Guidance Documents
Motion by: Amy Bruch
Seconded by: Carolyn Dimitri
Yes: 4 No: 0 Abstain: 0 Recuse: 0 Absent: 2

Appendix - Decision Tree Framework Ideas from Stakeholders

Decision Tree Example #1: Risk-Based Decision Tree



Decision Tree Example #2: Residue Test Result Decision Tree Based on Current Instruction

A. Residue Detected
    a. No
        i. Notify the certified operation of the test results and indicate that the product may be sold as organic.
    b. Yes
        i. Residues Detected at less than 0.01 ppm
            1. Notify the certified operation of the test results and indicate that the product may be sold as organic. Asses Why the residue is present and follow up with the operation as appropriate
        ii. Residues Detected at or above 0.01 ppm
            1. EPA tolerance is established
                a. Yes
                    i. If residue is detected at or below 5% of the EPA tolerance
                        1. Notify the certified operation of the test results. Assess why the residue is present. If appropriate, consider a notice of noncompliance for the following violations: 205.202(b), 205.202(c), 205.272. If residues are not a result of the application of prohibited pesticides, the product may be sold as organic.
                    ii. If residue is detected above 5% of the EPA tolerance but not above the EPA tolerance level
                        1. Immediately Notify the certified operation of the test results and indicate that the product may not be sold as organic. Assess why the residue is present. Issue a notice of noncompliance for the violation of 7 CFR 205.671. Additional violations may include a notice of noncompliance for the following violations: 205.202(b), 205.202(c), 205.272.
                    iii. If residue is detected above the EPA tolerance level
                        1. Immediately notify the certified operation of the test results and indicate that the product may not be sold as organic. Immediately report the violation to the appropriate agency as described in section 5.3.4 of NOP 2613. Assess why the residue is present. Issue a notice of noncompliance for the violation of 7 CFR 205.671. Additional violations may include a notice of noncompliance for the following violations: 205.202(b), 205.202(c), 205.272.
                b. No
                    i. FDA Action Level Exists?
                        1. Yes
                            a. If residue is detected below the FDA action level

i. Notify the certified operation of the test results. Assess why the residue is present. If appropriate, consider a notice of noncompliance for the following violations: 205.202(b), 205.202(c), 205.272. If residues are not a result of the intentional or direct application of prohibited pesticides, the product may be sold as organic.

b. If residue is detected at the FDA action level
   i. (needs defined as requested above)
c. If residue is detected above the FDA action level
   i. Immediately notify the certified operation of the test results and that the product may not be sold as organic. The FDA or a foreign equivalent may provide guidance on addressing these products. Immediately report the violation to the appropriate agency as described in section 5.3.4 of NOP 2613. Assess why the residue is present. If appropriate, consider a notice of noncompliance for the following violations: 205.202(b), 205.202(c), 205.272

2. No
   a. If residue is detected at 0.01ppm
      i. (needs to be defined as requested above)
   b. If testing detects a residue of prohibited pesticides above 0.01ppm
      i. Immediately notify the certified operation of the test results and indicate that the product may not be sold as organic. Immediately report the violation to the appropriate agency as described in section 5.3.4 of NOP 2613. If appropriate, consider a notice of noncompliance for the following violations: 205.202(b), 205.202(c), 205.272.

Example #3 Decision Tree: Notice of Detection and Next Steps Decision Tree

1. Receive a notice of detection.
2. Verify lab results, methods, date of test, and authorized signature to determine how actionable the residue testing may be.
3. Review the material and brand name association products, comparing the affected crop type.
4. Confirm if the crop is allowed in organic production.
5. Confirm the EPA tolerance level and the amount of detected material.
6. Initiate a trace to determine the grower, ranch, lot, facility, and shipping locations.
7. Place the product on hold as applicable.
8. Review the grower application records to determine the source and whether the material is permitted in the affected crop.