FDA Traceability Readiness Tabletop Exercises Final Report

Executive Summary:

The U.S. Food and Drug Administration (FDA) Food Traceability Rule (FTR)—established under Section 204 of the FDA Food Safety Modernization Act (FSMA)—requires covered entities that manufacture, process, pack, or hold foods on the FDA Food Traceability List (FTL) to maintain additional records that allow FDA to more rapidly and accurately trace food through the supply chain.

To help the food industry prepare for this requirement and to fulfill a Congressional directive under the Continuing Appropriations, Agriculture, Legislative Branch, Military Construction and Veterans Affairs, and Extensions Act, 2026 (P.L. 119-37), FDA conducted a series of Traceability Readiness Tabletop Exercises (hereafter referred to as "exercises") between March 9 and April 1, 2026. This report summarizes the findings and is publicly posted in accordance with that directive.

Fifteen companies voluntarily participated across six supply chain scenarios, spanning producers, processors, distributors, retail food establishments, and restaurants. Exercises centered on a request from FDA asking firms to provide traceability records in an electronic sortable spreadsheet within 24 hours, along with a Traceability Plan (if available). Participants were instructed that they could invite technology partners to support their efforts in these exercises. FDA analyzed submissions by assessing Key Data Element (KDE) availability for each Critical Tracking Event (CTE) the firms performed.

The exercises revealed meaningful progress toward meeting FTR requirements alongside significant gaps in information retention and sharing. For example:

- While response times were rapid, collaboration further accelerated end-to-end supply chain visibility.
- Supply chain alignment mattered more than technology.
- Traceability Lot Code (TLC) and TLC source availability is encouraging.
- Firms showed uneven readiness for sharing TLC and TLC source information together.
- Initial packers should pay close attention to where a TLC is assigned.
- Data quality and completeness require attention across all CTEs a firm performs.
- Traceability Plans help test readiness.
- Inconsistent buyer requirements create significant challenges.

FDA intends to use the findings of these exercises to help inform its ongoing outreach, education, and technical assistance efforts, including through public meetings and listening sessions, as the industry moves towards compliance. These findings offer meaningful and actionable insight for companies of all sizes as they assess and build their own traceability readiness initiatives—both within their organizations and in coordination with their supply chain partners.

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Background

The FDA Food Traceability Rule (FTR)—established under Section 204 of the FDA Food Safety Modernization Act (FSMA)—requires covered entities that manufacture, process, pack, or hold certain foods on the Food Traceability List (FTL) to maintain additional records that allow FDA to more rapidly and accurately trace food through the supply chain. Foods on the FTL include fresh leafy greens, soft or semi-soft cheeses, shell eggs, fresh-cut produce, certain fresh produce items, deli salads, nut butters, and certain seafood items. The FTR also requires covered entities to maintain a Traceability Plan, which, among other things, describes the firm's procedures for maintenance of FTR records, identification of FTL foods handled, and assignment of Traceability Lot Codes (TLC) (if applicable). The final rule covers domestic as well as foreign entities producing food for U.S. consumption along the entire food supply chain. The rule will promote faster identification and rapid removal of potentially contaminated food from the market, resulting in fewer foodborne illnesses and deaths.

At the core of the FTR is a requirement that persons subject to the rule maintain records containing Key Data Elements (KDEs)[1] associated with specific Critical Tracking Events (CTEs)[2] and provide that information to FDA within 24 hours in an electronic sortable spreadsheet, when required.

The TLC is an integral component of the rule's KDE requirements. It links to the other KDEs required, including the TLC source, which provides the physical location where the TLC for an FTL food was assigned. Unless the relevant entity is exempt from the rule, the TLC is assigned when the food is initially packed (for raw agricultural commodities not obtained from a fishing vessel), received by the first land-based receiver (for food obtained from a fishing vessel), or transformed. Once a TLC is assigned, it must stay the same as the food moves through the supply chain, unless transformation occurs.

The original compliance date for the FTR was January 20, 2026. FDA proposed to extend the compliance date by 30 months to July 20, 2028, to afford covered entities additional time to ensure coordination across the supply chain in order to fully implement the final rule's requirements. Subsequently, the Continuing Appropriations, Agriculture, Legislative Branch, Military Construction and Veterans Affairs, and Extensions Act of 2026 directed FDA not to enforce the FTR prior to that same date. FDA intends to comply with this Congressional directive.

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[1] Key data element means information associated with a critical tracking event for which a record must be maintained and/or provided in accordance with the FTR. - 21 CFR 1.1310 "Key data element"

[2] Critical tracking event means an event in the supply chain of a food involving the harvesting, cooling (before initial packing), initial packing of a raw agricultural commodity other than a food obtained from a fishing vessel, first land-based receiving of a food obtained from a fishing vessel, shipping, receiving, or transformation of the food. - 21 CFR 1.1310 "Critical tracking event"

For more information on the FTR, please visit: https://www.fda.gov/food/food-safety-modernization-act-fsma/fsma-final-rule-requirements-additional-traceability-records-certain-foods.

Methods

The Traceability Readiness Tabletop Exercises were designed to simulate an FTR records request from FDA. The exercises tested whether participants could locate and provide traceability records associated with the handling of a specific product during a short, defined date range in an electronic sortable spreadsheet within 24 hours. Participants were also asked to submit a Traceability Plan, if available. Although mock outbreak scenarios were not utilized during these exercises, the traceability data requested reflected a simplified version of data FDA may request during an outbreak or recall event, as FDA only asked for data that is required under the FTR. FDA reviewed submissions to assess KDE availability for each CTE performed, whether the firm provided their traceability data within 24 hours, and whether a Traceability Plan was available.

Retail food establishment and restaurant participants were recruited to participate in these exercises through the Partnership for Food Traceability (PFT) and affiliated trade associations representing grocers, restaurants, and convenience store distributors. Participation was entirely voluntary, and PFT played no role in conducting the exercises. Once retail food establishments and restaurants agreed to participate, they were asked to invite their suppliers to join the exercises. These suppliers were predominantly not part of PFT. FDA held pre-exercise calls with all initial participants to explain the purpose and expectations, and firms were encouraged to consult technology vendors, data standards organizations, and/or other traceability experts for support with completing the exercise.

Exercises were conducted between March 9 and April 1, 2026, across six distinct supply chains involving soft ripened/semi-soft cheese, wild-caught finfish, whole head leafy greens, fresh-cut leafy greens, and nut butter. Participants included a national retail chain, a medium-sized regional retail chain, two national restaurant chains, a small-sized regional restaurant chain, and a small-sized convenience store chain, along with their associated distributors, producers, and processors.

Each exercise began with FDA sending a data request by email to a retail food establishment or restaurant, the logical starting point for the exercise since outbreak investigations typically begin at a retail food establishment or restaurant. If a firm could not provide the required KDEs, including the TLC and TLC source, FDA issued a follow-up data request to that firm's immediate supplier. This process continued upstream through the supply chain until FDA was able to receive information from the original TLC source, at which point the exercise concluded. After the exercises were concluded, FDA held debrief conversations with each supply chain participant to better understand their experience during the exercises and how they used technology to support their efforts.

While efforts were made to include businesses of varying sizes across different supply chain sectors and commodities, the findings should not be generalized to the industry as a whole. They are, however, intended to offer practical insights to help companies and their supply chain partners assess and strengthen their own traceability readiness.

Industry Segments:

The Traceability Readiness Tabletop Exercises engaged a cross-section of the food industry intended to encompass the full supply chain. Participants included:

- **Retail food establishments** – grocery stores and other retail food establishments (e.g., convenience stores) that sell food directly to consumers. Generally, this supply chain entity is not required to assign a new TLC to FTL foods they handle.
- **Restaurants** — food service establishments that serve food to the public. Generally, this supply chain entity is not required to assign a new TLC to FTL foods they handle.
- **Distributors** — companies that transport and distribute food from producers and/or processors to retail food establishments, restaurants, or other buyers. Generally, this supply chain entity is not required to assign a new TLC to FTL foods they handle.
- **Processors** — facilities that transform commodities into a new item that is on the FTL (e.g., processing raw finfish into packaged fillets or whole iceberg lettuce into shredded iceberg lettuce) and assign a new TLC.
- **Producers** — farms responsible for initially packing raw agricultural commodities and assigning the initial TLC.

Key Takeaways:

- **While response times were rapid, collaboration further accelerated end-to-end supply chain visibility:** Most firms responded with traceability data within the 24-hour window, an encouraging sign of overall readiness. Notably, in at least two instances, retail food establishments and restaurants voluntarily coordinated with their suppliers to submit the entire supply chain's data for the given scenarios within that initial 24-hour period. While the FTR only requires retail food establishments and restaurants to provide to FDA their own Receiving KDEs (and not a full pedigree), this kind of proactive collaboration dramatically reduced the time needed to identify the TLC source and receive information from the TLC source, compressing what might have taken 48 to 96 hours, or longer, across multiple data requests, into a single day and a single request.
- **Supply chain alignment mattered more than technology:** Participants used a wide range of tools—from traditional business records (e.g., invoices, purchase orders, bills of

lading, and advanced shipment notices) to Warehouse Management Systems, Enterprise Resource Planning, RFID tags, and GS1 barcodes. Larger firms tended to use more advanced data carriers (like RFID or 2-D barcodes), but the technology itself was less determinative of success than whether supply chain partners had agreed on what data to collect, maintain, and share—and how. Even smaller and mid-sized firms had access to most of the required data through traditional business records. For information not already captured in existing records (predominately, the TLC and TLC source), participants discussed how it will be important for trading partners to communicate how data will be transmitted, whether by barcode, paper record, email, or another method. Two scenarios in this exercise demonstrated this concept clearly: when supply chain partners had coordinated and set shared expectations upfront (prior to the start of the exercise), KDE availability was notably stronger than when firms simply waited on their suppliers for information that may or may not be available to them and ultimately left spreadsheet fields blank when information did not arrive. This points to a broader lesson that applies not just to individual supply chain trading partners, but across every supply chain impacted by this rule—readiness will depend less on any particular technology and more on trading partners aligning on how necessary information flows down the supply chain and how to obtain information you are expecting from your trading partners if that data does not currently arrive in traditional business records or other current operational practices.

- **TLC and TLC source availability is encouraging:** Although the TLC and TLC source proved to be the most challenging KDEs to capture across exercises, the overall readiness framework is encouraging. The TLC was available or inconsistently present in 80% of participants' records, and the TLC source appeared in 73% of participants' records. However, only 40% of participants' records captured the properly assigned TLC across each CTE they performed and 27% of participants' records captured the complete TLC source for each CTE they performed. Missing or inconsistent TLC and TLC source data made it more difficult to trace products from the retail food establishment or restaurant back to the supplier, but when they were fully available, the traceback process led to more efficient and accurate identification of products and locations. Inconsistent KDE availability was documented if data was available in some aspects of their data submission, but absent or incorrect in other portions of their data submission. These statistics indicate that most firms participating in these exercises have already begun laying the groundwork for traceability readiness. Still, refinement and greater coordination is needed to reduce missing or inconsistent capture of TLC and TLC sources.

- **Firms showed uneven readiness for sharing TLC and TLC source information together:** Across some exercises, TLC and TLC source information did not always move together. Some firms demonstrated an ability to capture and/or share a TLC but struggled

to accurately document where that TLC was originally assigned. Others showed the reverse—reliable location documentation for where the TLC was assigned (the TLC source) but without an actual TLC. These patterns make clear that lack of a TLC and TLC source, while closely related pieces of information, represent two separate readiness gaps. Firms should assess their ability to capture every KDE required at each CTE, rather than assume that capability to maintain one KDE guarantees readiness to maintain the others.

- **Initial packers should pay close attention to where a TLC is assigned:** Under the FTR, for foods that undergo the "initial packing" CTE (such as fresh produce), a TLC is assigned at the point of initial packing. In some exercises, firms indicated in their Traceability Plan that produce was field packed (correctly identifying the farm as the physical location where the TLC was assigned) but then listed a cooling facility as the TLC source in their submitted spreadsheet. Initial packers should ensure that their submitted records are consistent with their operational practices such that the location description for the TLC source accurately reflects the physical location where the food was packed.

- **Data quality and completeness require attention across all CTEs a firm performs:** Some firms submitted comprehensive records for certain CTEs but were missing data for others they were also responsible for – for example, providing shipping information but failing to include initial packing, or omitting input and output quantities where required. Firms should carefully review every CTE they perform and ensure the corresponding data is captured and documented completely. It is possible that some firms did capture this data but simply did not include it in their submitted electronic sortable spreadsheet. In that case, the fix is straightforward. If the data is not captured at all, firms should work with their internal teams and supply chain partners to close those gaps before the compliance date.

- **Traceability Plans help test readiness:** Only a small number of participants submitted a draft Traceability Plan. Some firms had not yet begun drafting one, often citing a preference to wait until they had finalized technology vendor selections. Others cited having a plan, but they didn't share it with FDA for this exercise. For those that did provide a plan, it proved very useful in helping FDA interpret their data accurately and efficiently. Developing a Traceability Plan prior to the compliance date could help firms test their readiness and assess any gaps.

- **Inconsistent buyer requirements create significant challenges:** Several distributors and suppliers flagged that while the rule requirements on their own may be achievable, inconsistent buyer requirements complicate implementation. Because these buyer requirements can vary by company and often go well beyond FTR requirements (including specific formatting for advance shipping notices, and, in some cases, mandatory case-by-case scanning for outbound shipping events at the distributor level),

suppliers often must build custom solutions for each customer relationship. Greater standardization and harmonization between buyers and suppliers could meaningfully reduce these challenges.

Limitations:

The findings of these exercises should be interpreted with the following limitations in mind:

- **Not based on an outbreak scenario:** Data requests were not tied to mock foodborne illness outbreaks. As a result, some refinements to the request (i.e., timeframes, specific products, and date ranges) were necessary in some instances to generate usable data. The exercises also did not account for product shelf life or typical turnaround times, though the dates used were representative of real shipping and receiving windows.
- **Simplified request process:** The data request process used in these exercises was simplified and did not fully mirror the process FDA would use during actual outbreak investigations or other for-cause situations, which would involve complex coordination between multiple FDA offices, other federal agencies, and state and local authorities.
- **Small sample size:** Due to timing and resource constraints, the number of participating firms was small and not representative of the broader food industry. Efforts were made to include companies of all sizes, but the findings regarding company size, role in the supply chain, and commodities traced is not generalizable to the industry as a whole.
- **Compliance is not yet required:** As of this report's publication date, firms are not yet required to comply with the FTR. "Traceability Readiness" is therefore variable and company dependent.
- **Not every Traceability Readiness Tabletop Exercise scenario could be completed:** Several exercise scenarios ended without identifying a TLC source. In one instance, a distributor agreed to participate but ultimately did not submit data in response to FDA's request, and they stopped responding to FDA's follow-up emails. In another instance, a participating retail food establishment could not obtain supplier agreement to participate in the exercise, although a TLC source was preliminarily identified in the retail food establishment's records. Finally, in a third exercise, a supply chain with several layers of distribution left the participating firm unable to definitively identify the immediate previous supplier for the shipment(s) of interest, which resulted in FDA not being able to issue any further assignments.

Conclusions:

The Traceability Readiness Tabletop Exercises were designed to assess whether food businesses could locate, compile, and deliver traceability records to FDA within 24 hours, simulating the kind of data request that would occur during an actual foodborne illness investigation.
Most firms met the 24-hour response window, and supply chains where trading partners communicated and collaborated proactively moved significantly faster than those that did not.
While participants showed progress on capturing the TLC and TLC source, more refinement is needed to ensure these data elements are consistently captured across the supply chain.
Traceability Plans serve as essential roadmaps for both firms and FDA in describing how required records are kept. Data quality issues, including misidentified TLCs and TLC sources, and other incomplete KDEs, further highlight gaps in industry readiness.

Overall, the findings of these exercises make clear that traceability readiness is improving, but significant work remains among trading partners and the broader supply chain to enhance coordination and harmonization. FDA intends to use the findings of these exercises to help inform its ongoing outreach, education, and technical assistance efforts, including participation in public meetings, listening sessions, and presentations, as the industry moves towards compliance. FDA encourages all covered firms to treat these findings as an opportunity to assess their own traceability readiness and take action to ensure they are coming into compliance with the rule.