

# Traceability of horticultural produce in Kenya: Situation and Trajectory

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## WHAT IS TRACEABILITY?

Traceability is the ability to track a product through all stages of production, processing and distribution (including importation and at retail). In the context of horticultural produce, if consumers become ill from the food they have eaten, or food is found to contain a harmful chemical, traceability allows this food to be traced from the shop where it was purchased, to the trader who delivered it, to the factory that processed or packed it, and ultimately to the farm where it was grown. In this way, the source of the problem can be identified, and corrective action can be taken [1]. While traceability does not itself guarantee food safety, it is considered a fundamental component of modern food safety systems.

In traceability systems, it is good practice to use unique codes to identify blocks of land, individual farms, farmer groups, intermediaries, packers and processors. Each crate of carrots, for example, has its own unique code. By entering this code into a database, one can see on which parcels of land the carrots were grown.

## What is the Situation in Kenya?

Most of the domestic market for fruits and vegetables in Kenya currently lacks a system for ensuring traceability. While some retailers may have direct contracts with large farms for produce in which they trade in large volumes, they typically rely on intermediaries such as aggregators and marketing agents to fill gaps when demand spikes, and for lower-volume produce. Since these intermediaries source from a large and ever-changing pool of suppliers, some of whom in turn purchase from other intermediaries, traceability breaks down at this point. In the event of an outbreak of foodborne illness, this lack of traceability would make it difficult to correct the situation. The widespread lack of traceability therefore contributes to the challenge of food safety management in Kenya [2].

However, a standard that incorporates traceability of fruit and vegetable produce has been developed and its implementation has begun. The Crops Act (Horticulture) Regulations 2017 and the

2016 Horticulture Industry Code of Practice for Fruits and Vegetables, also known as Kenya Standard 1758-2:2016 or simply KS1758-2, require full traceability of marketed fruits and vegetables.<sup>1</sup> Under these rules, agricultural input providers, farmers, processors and packers, traders and aggregators are required to put in place a traceability system that tracks product flow starting with the procurement of inputs. Growers, traders and processors are responsible for the safety of their produce and products, which must be labeled at the source with a code that indicates the farm location, block number, and other required parameters. Food produce traders and processors must be able to identify the businesses from which they obtained produce, and the businesses they have supplied with the same. Fresh produce and products found to be unsafe may not be offered for sale and must be withdrawn from sale or distribution or recalled from consumers if already sold. The implementation of KS1758 will affect participants in Kenya's food system from farm to retail.

## Exporters Lead the way

Exporters adopted private traceability systems in the early 1990s to comply with the food safety standards demanded by their target markets [3,4]. More recently, the Agriculture and Food Authority (AFA), with donor support, developed the National Horticulture Traceability System (NHTS) to standardize traceability for export purposes, particularly among small-scale growers. This new system has been piloted among horticulture exporters since 2016. Since the pilot exporters already had traceability systems in place, implementing the new, harmonized system was relatively smooth. The AFA intends to expand the NHTS to 100% of exporters. However parallel traceability requirements of importing countries, as well as the proprietary nature of some information required by the system, pose implementation challenges for many exporters.

## Who's Next: Major retailers, hotels, and caterers

The first firms serving the domestic Kenyan market that will be required to adopt KS1758-2 are formal sector retailers, caterers, and hoteliers who are members of the Retail Trade Association of Kenya (RETRAK) or the Kenya Association of Hotelkeepers & Caterers (KAHC). Collectively, these organizations include most of the major supermarket chains, hotels, and catering companies in Kenya.

Adherence to the new rules will mean changes to how retailers source their produce, and how their suppliers do business. Suppliers will be required to register with HCD, and to demonstrate compliance with both the Crops Act Regulations 2017 and KS 1758-2. Compliance can be demonstrated through one of three mechanisms: (1) testing of produce; (2) internal or third-party audits; (3) inspection by a government entity, third party, or the firm itself if accredited to perform this function.

It remains unclear how adoption of the new standard will unfold in practice. If tomorrow retailers were only allowed to source from firms that comply with KS1758-2, many shelves would be empty. There is a need to train farmers and intermediaries on the requirements of the new standard before it can be implemented, and to certify their compliance. This could imply higher costs for produce sold through formal outlets compared to informal street markets.

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<sup>1</sup> The code is available for purchase at <https://webstore.kebs.org>

## Voluntary compliers

Some aggregators of horticultural produce, often with current or past involvement in the export sector, already have traceability systems in place and hope to use this advantage to expand their domestic market share. These firms work closely with farmers to ensure they comply with food safety and other standards demanded by export markets and high-end local buyers. During times of the year when demand in Europe is low, or simply to secure a reliable market, these companies also sell domestically. Harmonizing the traceability systems of voluntary compliers to engage with the National Horticulture Traceability System should be straightforward, as the systems share common principles. However, these firms may face similar challenges as the exporters mentioned above, in terms of conflicting requirements of other systems with which they are required to comply, as well as concerns about sharing information.

Such firms are seeking certification for compliance with Crops Act (Horticulture) regulations and KS 1758-2, and hope to fill the gap when enforcement of the standard begins. In the meantime, the Society of Crop Agribusiness Advisors (SOCAA), through a project that aims to improve the food safety of Kenyan horticultural produce, plans to promote high performing firms in terms of food safety as ‘approaching compliance’.

A recent study found that even though produce offered for sale in Kenya by farmers who also are certified for export meets high standards for food quality and safety, the produce does not attract a premium price on the domestic market because intermediaries mix it with that of other, non-certified suppliers [5]. Implementation of the new rules could mean opportunities for such farmers to sell their produce at a premium price. While compliance will not result in a premium per se, if the availability of compliant fruits and vegetables is constrained, this will put upward pressure on its price.

In addition, a new business model has recently emerged in Kenya using smartphone technology to link farmers directly to retailers. One example is Twiga Foods Ltd., which currently moves approximately 100 MT per day of bananas, potatoes, and other crops between small-scale vendors in Nairobi and farmers in rural areas. Because Twiga buys directly from farmers, food sourced through its platform is fully traceable. Other firms offer similar technologies as platforms for ensuring traceability and facilitating payment and information within supply networks.

The current ability of voluntary compliers to reliably supply major retailers and hotels is below total anticipated demand once enforcement of KS1758 begins. The number of firms meeting the standard, the market share of those that already do, or – most likely – both, will have to increase.

## What do the new rules mean for...

### Consumer-facing firms?

Consumer-facing firms (retailers, hotels, and caterers), will be required to keep records of the firms from which they source any horticultural products, and these firms must be registered with HCD. For most firms, this will require investing in a computer-based traceability system, including software, hardware, and employee training. In practice, firms will only be required to know from whom they

sourced and to whom they supplied. If firms do not have operational relationships with registered suppliers by the time traceability requirements are enforced, disruptions to business operations will likely result.

Public resources are not currently in place to support compliance by the private sector with traceability requirements. The onus is therefore on regulated firms (starting with those serving consumers directly) to demand, and potentially help build, capacity among their suppliers. Building this capacity will take time and resources. Costs of goods may increase due to the additional requirements imposed on suppliers.

While the task may seem daunting, beginning to build capacity for compliance with traceability requirements early is likely to be a strong competitive advantage.

### Intermediaries and farmers?

Agricultural intermediaries will need to work closely with farmers to ensure that all produce is labeled with the required identification codes on-farm. Like consumer-facing firms, intermediaries will need to invest in traceability systems to keep track of their suppliers.

As noted above, much of the investment in building capacity for traceability downstream will likely be made by upstream firms. Such firms may not find it profitable to work directly with individual small-scale traders and farmers, who may as a result face the risk of exclusion from formal-sector supply chains [6]. For farmers, membership in farmer organizations (groups, associations, or cooperatives) with links to formal sector intermediaries will be an important strategy for accessing these markets.

While farmer groups, cooperatives, and associations are recognized under KS1758-2, there is no mention of groups at other levels of the value chain, implying some ambiguity in the rules. Small-scale intermediaries could also form membership organizations in order to share compliance costs if group-based registration of intermediaries is allowed.

Intermediaries that are already implementing traceability, or who have taken steps toward this capability, will be well-placed to grow their share of the market as enforcement of AFA regulations (2017) and implementation of KS1758-2 takes off in Kenya. These firms will also face lower risks of recalls and liability for food found to contain hazards.

### County governments?

To ensure continued access of their farmers to the largest retailers in the country, county Departments of Agriculture and Trade can help farmers and intermediaries prepare to adopt the National Horticulture Traceability System. In particular, programs that help farmer organizations achieve compliance with KS1758-2 will reduce the risk of small-scale farmers being excluded from formalizing food value chains. This will be important for long-term economic growth, as formal markets tend to offer higher prices to farmers, and the trajectory of formalization is likely to continue. However, such support will require the expansion of budgetary allocations by the responsible government departments. County governments can contact AFA for assistance with capacity building of their staff.

### National government?

Once fully implemented, the Crops Act (Horticulture) Regulations and KS1758-2 will bring the largely informal agricultural sector in Kenya under government regulation. Compliance with Horticulture Regulations as specified in the Crop Act requires that food safety and traceability are implemented in accordance with relevant sections of KS1758-2. Inspection and registration of operators in this regard is the responsibility of the AFA. While certification of compliance with KS1758-2 will largely be by third-party certifiers, ensuring that these bodies perform their roles as expected will require significant government oversight. Additionally, inspections and certification against regulatory requirements mentioned in the standard (such as compliance with health, safety and environmental regulations) will be carried out by the respective competent governmental authorities. Significant support from the AFA will be needed to help both affected firms throughout the value chain and county governments understand the new requirements. This will allow the private sector and other government bodies effectively build capacity for compliance.

## Recommendations

- AFA should adopt a group certification system similar to that of GLOBALG.A.P. Both producers and intermediaries should have the option of individual or group certification.
- There is a need to train firms at all levels that are subject to the Crops Act (Horticulture) Regulations and KS1758-2 on the new requirements. Training could be designed by the AFA and implemented through platforms such as RETRAK, KAHC, and other industry groups.
- To avoid major disruption to food markets, enforcement of new rules should be implemented gradually, so that affected firms are able to build capacity for compliance in advance
- County governments have a role in building capacity for compliance among agricultural producers and traders. Building capacity of farmer groups is especially important as these represent many vulnerable citizens. Public support for such capacity building at this critical juncture will contribute to the long-term, broad-based growth of county economies.
- Firms that are ready to comply with the new rules will have a significant competitive advantage once enforcement begins. Industry associations can assist their members by facilitating access to information on the Act and code of practice and developing industry plans for compliance.

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