

# **Proposal P1052**

## **Primary Production and Processing**

### **Requirements for Horticulture (Berries, Leafy Vegetables and Melons)**

#### **2<sup>nd</sup> call for submissions consultation paper**

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## Executive Summary

### GS1s view on the proposed options for managing food safety

GS1 Australia appreciates the opportunity to participate in the second round of public consultation on P1052 and is committed to further supporting FSANZ and Industry in further discussions.

Our overall recommendation is **"Option 3: A combination of regulatory and non-regulatory measures"**.

We see this review as an opportunity to identify how global data standards (GS1) can underpin existing food safety requirements, especially in the context of perhaps the most foundational requirement, the unique identification of primary production properties. We recommend that FSANZ considers the role of the Global Location Number (GLN) in this context.

The GFSI benchmarked food safety systems applicable to the primary production of berries, leafy vegetables and melons amongst other horticultural crops are not regulated, however, mandatory for supply to the major Australian Grocery Industry and most markets.

In the same way, the GS1 system of Global standards and services, although not regulated, are mandatory for the identification, barcoding, B2B and electronic trading requirements for Woolworths, Coles and Metcash as specified in their supply standards and guidelines<sup>1</sup> (including the GLN).

The Australian foodservice, QSR and government procurement in NSW and Victoria for hospitals, correctional facilities, and aged care also require GS1 standards to complete the order to cash cycle, tender, and supply chain processes with the GLN playing a foundational part in the identification of the business or enterprise in electronic messaging or the ship to or ship from address.

The GLN allows traceability partners to define both the place (Where) traceability events have taken place and the entities (Who) that have been involved in or responsible in these events (e.g., transactions, chain of custody, etc).

The GLN provides a means for companies to meet the traceability objectives defined in food safety and quality standards for food safety systems such as Freshcare, HARPs, SQF and GLOBALG.A.P. while future proofing systems and processes to be interoperable and scalable for planned traceability systems growing significantly across Australian Agriculture.

The GLN has been endorsed by the Department of Infrastructure, Transport, Regional Development and Communications for the purpose of identifying physical locations involved in freight management, by State and Territory Health Departments and the Department of Health for the identification of healthcare locations and is currently being assessed by the Department of Agriculture and the National Biosecurity Committee for the identification of all plant properties in Australia.

The implementation of the GLN in Australia is also supported by the National Location Registry, a central registry of location master data that allows for the creation, validation and syndication of key information related to properties and facilities across industry and government. The registry has been developed by GS1 Australia with funding support from the Commonwealth and is supported by GS1 Australia as an industry solution on a not-for-profit basis.

This submission provides an introduction and overview of GS1 global data standards applicable to property and location identifiers (Global Location Numbers or GLNs). It explains how Government and Industry application of the numbering systems may enhance product traceability and food safety, whether regulatory or non-regulatory measures are installed.

## How GS1 standards can help in managing food safety

### How the proposed GS1 standards for the identification of Locations and Parties improve system compliance and strengthen the integrity of national systems and infrastructure for food quality assurance and safety

The GS1 system of standards and services deliver the following benefits to users:

- A standardised business language, terminology, symbology, and format for identifiers
- Ability to track and trace products through business processes.
- More efficient stocktake and inventory control.
- Reduction in paper-based transactions.
- Minimising of manual data entry.
- Provide industry with a solid foundation to enhance other eCommerce initiatives and applications; and
- Improved data integrity between trading partners.

Most of these benefits relate to improved business efficiency, however, the ability to track and trace produce may potentially also have benefits for enhanced food safety, traceability, and biosecurity. This has been demonstrated in recent times through retail food recalls that have, in the first instance relied on product identifiers that identify the product or brand owners.

The GLN allows traceability partners to define both where (the place) things have been observed, the critical tracking event that has taken place I.e., harvest or processing and who (the business or enterprise) that has been involved in or responsible for transactions or through the chain of custody.

As outlined in the Consultation Regulation Impact Statement - P1052 – Primary Production and Processing Requirements for Horticulture (Berries, Leafy Vegetables and Melons), the summary of the proposed standards for all commodities under traceability states:

**A primary horticulture producer and a primary horticulture processor must have in place a system that can identify:**

- (a) from whom [the commodity] were received; and**
- (b) to whom [the commodity] were supplied.**

All proposed standards applied call out the following sites, locations, assets, and businesses that are required to be identified for the management of food safety:

#### **Growing site**

Any site used to grow berries/leafy vegetables / melons – including an open, partially enclosed, or enclosed planting area, as well as open fields and other cropping arrangements in fully or partially enclosed structures, such as hydroponic set ups

#### **Harvest**

All activities related to the collection and removal of berries/leafy vegetables / melons from a growing site, and;

#### **Premises and equipment**

This includes equipment, infrastructure, structures, and vehicles

#### **Primary horticulture producer and the primary horticulture processor**

As a business or enterprise involved in the relevant activities related to growing / harvesting or processed for berries / leafy vegetables / melons.

GLNs can be used to uniquely identify any physical location or party that has meaning within a business scenario:

- **Physical Location:** This relates to a single point of access with a physical address, such as a greenhouse, growing field, packing station, packing line, particular room in a building, warehouse, warehouse gate, loading dock, delivery point, etc.
- **Parties:** This can be a legal entity and/or a specific role or activity that needs to be identified in a business scenario. Examples are whole companies, subsidiaries, or divisions, cooperative, traders, distributors, freight carriers, wholesalers, retailers etc. as well as purchasing departments within legal entities, accounting departments, returns departments, cleaning stations, wards, etc.

- This can also relate to roles like grower, packer, trader etc.
- Specific roles based on business processes and reflected in EDI comm

The GLN can therefore be applied to all sites, locations, assets, and businesses that are required to be identified for the management of food safety as outlined in the code.

We believe that the GLN and related GS1 standards, may provide a mechanism to harmonise existing systems; delivering consistency, simplicity and reduce compliance burdens for suppliers and regulators and therefore support and enhance product traceability, food safety and biosecurity measures for all industry actors, across all commodities.

GLNs, therefore, provides a means for companies to meet the traceability objectives defined in the GFSI benchmarked food safety schemes such as Freshcare, HARPs, SQF and GLOBALG.A.P. whilst meeting the requirements of the Food Standard code to uniquely identify **(a) from whom [the commodity] were received; and (b) to whom [the commodity] were supplied in their existing traceability system.**

The GS1 system has already been implemented both in Australia and globally and may be expanded to not only avoid disruptions but also enhance the interoperability of existing and planned traceability systems.

During the recent industry traceability pilots and initiatives, we see that the greatest benefits to growers and retailers are those that use GS1 enabled traceability solutions to provide the best path to interoperability, protect companies' investments and enable them to scale up. Each trading partner in the chain becomes free to choose the solution on the market that best meets its specific needs.

GS1 provides the global and common language for traceability solutions and the ecosystem for its implementation.

## About GS1 Standards and Property Identifiers.

The GS1 System is a series of standards based on Global IEC/ISO and designed to improve supply chain management. Unique product identification is at the core of the system to enable a common approach to track and trace produce by means of an internationally accepted numbering and barcoding system.

The Global Location Number (GLN) is one of the foundational elements of the GS1 System of Standards. It provides a simple and effective way to uniquely identify locations and parts of those locations. Location Identification and sharing of location master data between organisations is a critical element of supply chain traceability.

The GLN is already used extensively in Australia and internationally and it is compliant with ISO/IEC 6523. The GLN is used to identify physical or digital locations, legal entities, or business functional units.

Details of the GLN and its use is available in GS1 General Specifications or online at <https://www.gs1.org/standards/id-keys/gln>

**The identification key comprises a GS1 Company Prefix, Location Reference, and a check digit ensure data integrity for rapid number validation – and to assist in the identification of errors or misuse:**

The syntax is illustrated below



Locations identified with GLN can be a physical location such as a farm, storage facility or a legal entity such as a company or customer or a function that takes place within a legal entity. It can also be used to identify something as specific as a silo or packing shed or a paddock or block on a farm and hence is useful to enable traceability of product through complex supply chains.

GLNs provide their owners with the ability to expand on the numbering system for fine-grain management of their physical assets. In the case of a vegetable producer, a single GLN could be used to relate to the property, or for larger producers, different GLN's could be used to identify produce from different paddocks, storage sheds or even different fields or even rows within the paddocks.

### For Example: -

ABC Growers Pty Limited chooses to build an internal location reference system based on a registered GLN property identifier.

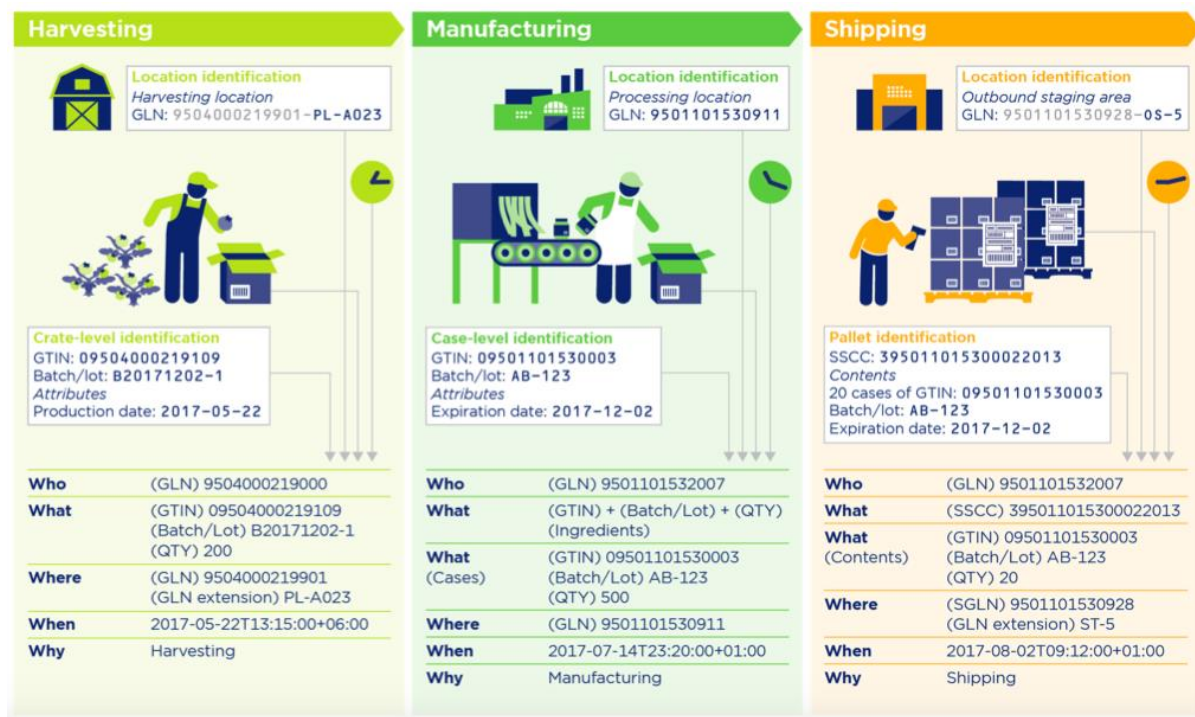
**9334560000013** – Identifies ABC Growers as a legal business entity  
 – Master data regarding the legal entity can be captured and shared with government and business partners using the GLN as the primary identifier for the legal entity. This may include their ABN/ACN, trading name, registered address, and contact details for directors.

**9334560000113** – defines the location of the farm  
 – Master data regarding the physical location or farm can be captured and shared with government and business partners using the GLN as the primary identifier for the legal entity. This may include the street address, geocoordinates, trading/opening hours, truck entry points, applicable certification schemes and contact details for the Farm Manager.

**9334560001113** – defines paddock 1 on the property  
 – Master data regarding the farm's paddock (or sub-location) can be captured and shared with government and business partners using the GLN as the primary identifier for the legal entity. This may include the

geocoordinates of the paddock, information about the types of produce or plants grown in this property, whether the plants are grown in or out of soil, etc.

The image below shows how GLN is used to define who (legal entity) and where (locations):



GLNs can also be encoded in a barcode, RFID tag or IoT device. Farmers can (and have) allocated GLNs to, for example, orchards, to track key traceability activities such as the use of pesticides or other chemicals and tracking harvest activities and managing farm yields.

Companies are allocated a GLN upon becoming a member of GS1. Additional GLNs can be assigned to the member as required. GS1 standards provide considerable flexibility for growers and others to apply property location, product, asset and other physical or digital operational attributes in ways that are useful.

GLNs can also be issued by GS1 to a government agency, for government allocation to industry. An example of this is the New Zealand Business Number or NZBN<sup>5</sup> where the NZ Government issues the NZBN to companies in New Zealand from a block of GLNs reserved by GS1 New Zealand on behalf of their government. <https://www.nzbn.govt.nz/whats-an-nzbn/about/5>

## How are Global Location Numbers used by Australian & Global industries?

Efficient order and delivery processes, recent Covid supply chain issues, flexibility, traceability, and consumer engagement, have constantly increased the demands of horticulture businesses.

The movement of produce, inputs in and off farm and through the supply chain require unique identification of parties and locations as well as the physical identification of the goods themselves.

These demands can be fulfilled by small, medium, and large size companies by the GLN; A standard already used by industry, for Retail, Foodservice, QSR operators and for export markets.

In Australia, GS1 operates and collaborates with industry end users of all types and sizes:

- Retailers across all industries
- Fresh Foods, Foodservice and Consumer Packaged Goods Companies
- Healthcare Manufacturers, Distributors, and Providers
- Apparel and General Merchandise Companies
- Transport and Logistics Companies
- Construction and Rail companies
- State and Federal government agencies, regulators, and peak industry associations

As of February 2022, there are over 22,000 current GS1 Australia members all of whom are issued with at least one GLN to identify their legal entity. 5% of our membership is made up of the fresh produce industry, businesses already using the GS1 identification numbers and barcodes on their bulk, loose or pre-packaged produce as well as for cartons/crates and pallets to satisfy the requirements of the Australian Grocery, Foodservice and QSR channel markets.

The use and adoption of the GS1 System by the Australian fresh produce industry has also been endorsed by the Australian and New Zealand Grocery Industry, the IFPA A-NZ, the Australian Avocado, Mango, APAL, Summer Fruits Associations and Citrus Australia with the 2017 implementation of GS1 DataBar on loose produce.

As a result, the number of primary producers that have access to the GS1 system has increased markedly as retailers now require farms and packhouses to use DataBar barcodes affixed to individual loose fresh produce.

All major retailers, including Woolworths, Myer, IGA, Coles and Bunnings, insist on a GS1 compliant barcode for any goods they sell and will only accept barcodes that scan first time.

In supply chain and logistics and for the order to cash scenario, the GLN is used for party and location data information in B2B electronic trading. The GLN is used on the despatch advice and delivery data from the supplier, the 3PL, freight forwarders, logistics provider and agents - or whoever does the selling with the buyer.

Recent food service initiatives with Martin Brower (McDonalds), IPCA (Subway), Compass and Foodbuy have specific reference to GS1 standards across their supply chain, this includes all fresh produce commodities.

[The FPSC ANZ 2019 Guidelines for Fresh Produce Food Safety<sup>2</sup>](#) call out the use of the GS1 system for product identification, barcoding and traceability and the [US Produce Traceability Initiative \(PTI\)<sup>3</sup>](#) provides guidance on how to allocate GLNs as they become increasingly used in North America and globally for advanced uses of traceability information, for those companies that are looking to take traceability to the next level.

Harmonisation of identification systems and adoption of global data standards is delivering efficiencies and savings for government and industry through reduced regulatory burden, clearance, and settlement delays. For example, recent USDA rules (notice 39) governing the import of red meat from Australia have approved the use of GS1 standard product identifiers for customs clearance. Prior to this rule, the product was re-labelled with time costs and delays incurred making trade less competitive. Similar rules have recently been agreed for export trade to China, reducing the cost of cross-border administration by 20%.



As part of the foundational components of the FDA's [New Era of Smarter Food Safety: FDA' Blueprint for the Future<sup>4</sup>](#) is the ability for the food system to speak the same traceability language through the use and standardization of Critical Tracking Events (CTEs) and Key Data Elements (KDEs). If you grow, receive, transform, create, or ship a food then for each food on the food traceability list, (this includes leafy greens, melons, and fresh cut fruit & vegetable) would be required to list a Location Identifier and Location Description as the Key Data Element.

The FDA are promoting and participating in governance and harmonization with U.S. and international regulatory counterparts through bodies such as GS1 and Codex.

They are specifically, working with standards bodies, technology providers and users to help ensure systems are designed with interoperability as a foundational component. The use of GS1 Standards is essential to give the industry a widespread and consistent structure to CTEs and KDEs, and to help trading partners capture and share information about the products beyond their own internal operations.

Another example already mentioned is the NZBN. The New Zealand Ministry of Business, Innovation and Employment issues GLNs to help businesses better connect and interact through a network of shared services.

Participation in GS1 for GLNs is voluntary, however, the use of GS1 GLNs is being promoted by organisations which see the potential benefits of widespread adoption of a single system. GLOBALGAP, for example, is currently investigating the option of requiring businesses certified under their QA system to adopt a GS1 GLN. If this occurs, then it is likely that other QA systems will follow suit.



## Why use GS1 standards for property locations

There has been continued focus on traceability with industry and governments initiating traceability projects and pilots in many sectors. In response to industry concern that some of these activities may lead to duplication and multiple frameworks, GS1 is supporting a national advisory group made up of GS1 members and relevant federal and state government representatives. With over 120 members, NGTAG is the only forum in Australia that allows businesses to talk about traceability from a whole of economy perspective.

End-to-end traceability requires harmonisation within and across government and industry. To achieve a harmonised approach and the benefits of traceability, an agreed set of principles are required, enabling a whole of economy adoption. The National Traceability Accord is a set of principles that the signatories have voluntarily endorsed. Support of the National Traceability Accord is open to all companies across Australia, with many associations, retailers and brands already represented as signatories.

Insufficient data identifying locations and product identification creates an inability to rapidly track and trace food and the records involved in moving fruits and vegetables through the supply chain are still largely paper-based. New digital technologies offer the potential to help us predict and prevent food safety problems and better detect and respond to problems when they do occur.

Establishing GLNs and common data standards will create the foundation for traceability that allows supply chain partners to adopt and leverage digitally enabled technologies, enable data sharing, and introduce approaches that greatly reduce the time it takes to identify the origin of a contaminated food tied to a recall and/ or outbreak. This will also create the transparency needed to anticipate and help prevent supply chain disruptions and will support interoperability across a variety of technology solutions.

### GS1 GLN and National Product Recall Systems

The existence of numerous identifiers for the same account/location requires trading partners to manage cross-references and data mappings to align party and location information with one another. In the event of a product recall, stock trace or market withdrawal, each trading partner would have to rely on manual alignment of party/location information between trading partners to find a suspect product. This slows responsiveness to market withdrawals, product recalls, or any other trace-back situation where time is of the essence.

Using GLNs for each farm or packhouse location provides one, a standards-based identifier that can be used by all trading partners to identify that location in all supply chain transactions, supply chain communications, and internal systems. This can enhance the speed and accuracy of food safety processes for the industry and enable responsive and accurate product tracking. Using GLNs supports growers, packers, processors, manufacturers, distributors, operators, and retailers quickly and accurately determining where a suspect product has been grown, processed, shipped and/or received.

### What does this mean for key industry stakeholders?

During the 1st call for submissions for P1052, many of the stakeholders that had submitted proposals noted a current need for national consistency should regulation be introduced. It was advised that increased national consistency in the food regulation system will result in cost savings for industry and governments.

For key industry stakeholders and Global Trading Partners the lack of a common language for unique identification of property locations would lead to:

- Cost to industry through inefficiency attributed to inconsistent systems of identifying locations where production, processing, storing, trading, and sale occurs
- Reduced competitiveness, through higher cost, duplication of systems and cumbersome messaging

There is also the opportunity for single window and automated/digital trading systems based on common global identifiers. From the [UNECE 6](#) a single window can be described as "a facility that allows parties involved in trade and transport to lodge standardized information and documents with a single entry point to fulfill all import, export, and transit-related regulatory requirements". "If information is electronic, then individual data elements should only be submitted once".

### **Federal and State Governments**

Standardisation and systems to identify and share information about important locations where production or trade occurs

- Recognition of shared and overlapping roles of federal and state agencies (e.g., Biosecurity/federal and agriculture/state) – duplicated or unaligned systems create cost and inefficiency
- Opportunity to streamline regulatory processes based on common/standardised business models – either between or within states.

### **Industry sectors and customer-facing retail operators?**

- Recognition that inputs from one industry (e.g., horticulture) often output from another (seedstock/nurseries). Industry-specific location identification systems are a burden
- Need to modernise legacy property identification systems to enable scaling and interoperability with other sectors of the economy
- Opportunity to improve customer services through common access to master data including property locations, product, and supply chain events

### **Quality assurance service providers**

- Use of non-proprietary location identifier that is useful (and available for other uses) by others in the industry and other sectors of the economy
- Giving users control over how locations are defined and how they may change over time – for innovation and evolution
- Opportunity to contribute to industry competitiveness through enhanced quality assurance and food safety outcomes based on a shared vision

### **Producers, processors, and supply chain participants**

- Simplification of business processes based on widely adopted standardised property and other entity identifiers
- Consistent and unambiguous messaging about places where harvest or processing events occur
- Opportunity to define locations of relevance to specific types of farming activity of commodities
- Global data standards for property identification means that there is interoperability among existing traceability systems and suppliers are not locked in to one solution.

## Summary and recommendations

A current and future state analysis with a focus on property identification systems in Horticulture follow below with an emphasis on how the Global Location Number (GLN) can help illustrate the potential approaches and related results:

Current State	Future State - Utopian	Future State – Dystopian
<p>Functional property identification codes and systems based on meaningful composite keys/codes that don't scale well and are difficult to apply to intensive industries including horticulture.</p> <p>The desire for enhanced traceability of agricultural inputs and outputs but no standardised method of property identification to trace product (input or output) movements</p> <p>Prevalence of bespoke and industry-specific solutions for quality assurance and inspections of places (locations) products and events that occur through supply chains.</p> <p>Limited consideration of the interoperability of systems between economic sectors (horticulture, agriculture, retail, healthcare, transport).</p> <p>Complex cross border issues involving translation and duplication of data – leading to inefficiency, cost, and lack of competitiveness.</p>	<p>All agricultural and horticultural properties are subject to the same identification rules and system with the ability for industry and governments to scale usage up and down depending on need (risk, events/circumstance, or other factors)</p> <p>Property identification codes serve a functional/useful purpose for land managers – enabling simple and unambiguous identification of parts of a property – fields, plots, packhouse/ processing sheds.</p> <p>Location data is accessible to an ecosystem of service providers – avoiding duplication of records sets, silos and enabling business to adapt with agility (avoiding vendor lock-in etc.)</p> <p>Public benefit and value from improved transparency and openness of systems – enabling improved risk management, safety incident response and economic efficiency though interoperability.</p>	<p>Methods for the identification of properties are industry and use case-specific – with massive duplication, and inefficiency.</p> <p>Highly siloed data, the prevalence of proprietary systems and high levels of information asymmetry Heavy regulation to control risk in the absence of consistent industry-wide data on property location, usage, and production activity.</p> <p>Secrecy and fear of trusting private or public sector agencies whose regulatory efforts to understand land use is considered an invasion of privacy.</p> <p>Inability to respond to major shocks or incidents including foodborne illness, disease outbreak, epidemics, or pandemics.</p> <p>Protectionist and defensive industry positioning to maintain status-quo – head in the sand mentality and lack of strategic vision leading to tragedy of the commons – downward spiral</p>

The Utopian state, although we feel would be in the best interest of the Australian Horticultural sector, can only be achieved through well developed, implemented, and monitored regulation.

Although our recommendation is **"Option 3: A combination of regulatory and non-regulatory measures"**, we suggest that the above Utopian states provides a northern star in the further development of P1052.

As a summary, key opportunities and benefits available to government and industry using GLNs' include:

1. The GLN is a flexible and multi-purpose identifier that is well-aligned with property identity reform principles and rules. The proposed GS1 standards for property location, improve system compliance and strengthen the integrity of national systems and infrastructure for traceability.
2. Improved quality assurance and food safety. The GLN is part of the product identifier and enables rapid messaging and response. Using GLNs supports growers, packers, processors, manufacturers, distributors, operators, and retailers quickly and accurately determining where a suspect product has been grown, processed, shipped and/or received. This system supports FSANZ regulatory oversight for fresh produce supply chains. GLNs provides a means for companies to meet the traceability objectives defined in food safety and quality standards for food safety systems such as Freshcare, HARPs, SQF and GLOBALG.A.P.
3. Enhanced biosecurity and land/asset management. Movement of product between properties and supply chain agents is a core focus of GS1. The GLN serves multiple purposes to identify and track physical, digital, business functional and legal entities.

GLN provides a flexible mechanism for property management (farms, pack sheds, greenhouses etc.) by defining locations in ways that are useful to support operational activities – not just for regulatory compliance and oversight.

4. Improved global market access. Interoperability and extensive world-wide use of the GLN as part of existing global standards by major Australian trading partners, international and domestic food processors, and retailers. GS1 is driven by over a million user companies, which execute more than six billion transactions daily in 150 countries using GS1 standards.

GLN's support FSANZs proposed preferred option of a combination of regulatory and non-regulatory measures to improve food safety management of leafy vegetables, melons and berries and will:

1. Help to enhance the ability to meet the increasing expectations of consumers, both domestic and international,
2. In the event of a food safety incident, support swift and targeted action while minimising business disruption to those unaffected or uninvolved,
3. See food safety scheme requirements operating alongside/supporting industry tracing systems and needs, avoiding unnecessary costs.

GS1 Australia would be pleased to elaborate on any of the above statements or provide a more comprehensive briefing to key stakeholders on opportunities and benefits outlined in the submission.

## **CONTACT FOR FURTHER INFORMATION:**

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MetConnect, Metcash Supply Standards, 2022

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<sup>2</sup>FPSC ANZ, Guidelines for Fresh Produce Food Safety 2019, “Product Identification, Traceability and Recall” Page 84 – 89, 2022 <https://fpsc-anz.com/food-safety-guidelines-2019/>

<sup>3</sup>Produce Traceability Initiative (PTI), Resources, 2022 US Produce Traceability Initiative (PTI)

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<sup>4</sup> US FDA, New Era of Smarter Food Safety: FDA' Blueprint for the Future, 27/1/2022

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