



Enabling food safety through traceability

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Executive Summary

Indian Agri sector connected with horticulture has not been able to realise its full potential in terms of productivity, profitability and export market share on account of several challenges it faces today. Many of these challenges relate to high wastage losses in the supply chain, inadequate, inappropriate storage and distribution infrastructure, lack of technical support and knowledge on Good Agricultural Practices (GAP) etc. A major challenge also relates to fragmented and small farm holdings by millions of marginal farmers which results in poor cost competitiveness of this sector due to its uneconomic scale of production.

Besides the abovestated challenges, there are important issues related to food safety which have arisen due to almost regular and frequent global food crises. This has raised serious concerns amongst consumers and in turn Regulators worldwide on how to prevent monitor the incidence of such crises and minimize their impact on human lives, livelihoods and production of food.

An essential component of food safety relates to implementation of track & trace systems by trading partners from “farm” to “fork” which enable full visibility of produce, production and seamless information exchange/access between them.

The Indian Horticulture Development Alliance (IHDA), a United States agency for International Development (USAID) under Michigan State University (MSU), USA undertook a project in India to study current food safety practices related to traceability in the fresh fruit category and implement a pilot traceability system based on global standards and best practices which would enable small, medium and marginal horticulture producers to gain entry into global markets which demand stringent food safety standards.

GS1 India, a not-for-profit standards organisation under Ministry of Commerce, Government of India and an affiliate of GS1 was commissioned by IHDA for undertaking the study and implementing a traceability system based on open, global traceability standards (GTS) developed by GS1 in collaboration with Industry which would enable meet food safety and traceability requirements of buyers and Regulators worldwide.

Two fruit categories, namely, pomegranates and bananas were chosen for the pilot studies and for traceability implementation since they represented major export items with differing characteristics on product shelf-life etc. The locations selected were based on the major production zones for the two categories in the country, namely Ahmadnagar in Maharashtra for pomegranates and Theni in Tamil Nadu for bananas.

Significant findings at the two locations were as below:

- Bananas – Supply Chain processes could only monitor food supplies despatch and receipt from farm to processing units. They were not designed from perspective of track & trace which is required for food safety.
- Pomegranates – While Supply Chain processes were configured to monitor traceability internally besides despatch/receipt operations, it could not help in monitoring the same across multiple trading partners since the processes used internal product, location coding practices which prevented unambiguous product identification and seamless information exchange between trading partners.

The traceability system configured and implemented at the two locations and based on GS1 Global Traceability Standards comprised the following elements:

- Unique and universal Identification of food produce, entities using GS1 unique identifiers.
- Automated data capture using barcode scanners which scanned barcode labels applied on produce, consignments to enable unique and universal identification of produce and its various attributes using GS1 standards.
- Access to traceability and product movement information electronically by various trading partners through a web-based portal application hosted by GS1 India.

The pilots were successful and demonstrated on how traceability could be implemented by food growers, producers in India in an effective, affordable and a common, uniform manner by all trading partners to meet diverse requirements of buyers and Regulations worldwide.

A product recall system could be overlaid on the robust track & trace system implemented as above which would enable fast, accurate and localized product withdrawals/recalls in event of outbreak of food crises. GS1 is involved in development of standards for product recall as well which could be adopted and implemented by the Indian agri and processed food sectors to meet recall requirements worldwide in a single, uniform and affordable manner.

In conclusion, the report recommends pro-active adoption and implementation of GS1 Traceability Standards to inspire greater consumer confidence and gain entry into stringent quality and safety conscious markets worldwide.



Background

In 2011, over 23 million consumers were affected by the melamine food fraud caused due to deliberate addition of melamine to foods in China.

In this year, in 16 countries, nearly 3,000 people fell sick and 29 of them died due to *Escherichia coli* outbreak on account of contaminated Spanish cucumbers. It took more than 45 days to identify the cause of contamination. Earlier, outbreak of *Salmonella spp.* had struck down more than 250 people in U.K. while 23 died and 116 fell ill in the U.S. after consuming *Listeria* -tainted cantaloupes (rock melons) [1]

Food safety has thus been a major issue worldwide which is exercising the attention of Regulators and Industry.

Traceability is a risk-management tool which enhances visibility and reduces the chance of unsafe food distribution while allowing food business operators or authorities to withdraw or recall products which have been identified as unsafe.

Policymakers have also begun evaluating the usefulness of making traceability systems mandatory so as to address issues ranging from food safety and bioterrorism to consumers' right to know food information.

Being one of the world's biggest producers of horticultural products (growing nearly 11% of all the world's vegetables and 15% of all fruits) [2], India cannot ignore the importance of food safety and traceability which could become non-tariff trade barriers.

There have been many instances when horticulture produce exported by India has been rejected by importing countries on account of high pesticide residue levels, as reported for example for grapes within EU. Another rejection happened in the U.K for beetle leaves from India due to presence of pathogenic micro-organisms (*Salmonella Spp.*) etc [3]. Strict monitoring from production, processing, handling, packing, etc. become necessary across the entire food supply chain to produce safe and quality food for exports.

Agricultural and Processed Food Products Export Development Authority (APEDA), Government of India's agro-trade promotion body, has already been providing traceability services to improve the confidence of importing countries in Indian agricultural products. Implementation of GrapeNet, an internet based residue traceability service offered by APEDA, for monitoring fresh grapes exported from India to the European Union, has already increased export revenue to a great extent [4].

There is need for a uniform, robust traceability system for the entire fruit and vegetable sector in India which can facilitate compliance with varied global/domestic regulatory and buyer requirements. Such a system would need to be based on global standards to enable full visibility of goods in the food supply chain and seamless information exchange/sharing between trading partners.

Towards this objective, The Indian Horticulture Development Alliance (IHDA), a United States agency for International Development (USAID) under Michigan State University (MSU), undertook a study of the current food safety and traceability systems followed by food producers from India and implemented a pilot traceability system amongst trading partners to demonstrate on how small, medium and large exporters/suppliers could comply with domestic and global requirements to gain market shares and competitive edge.

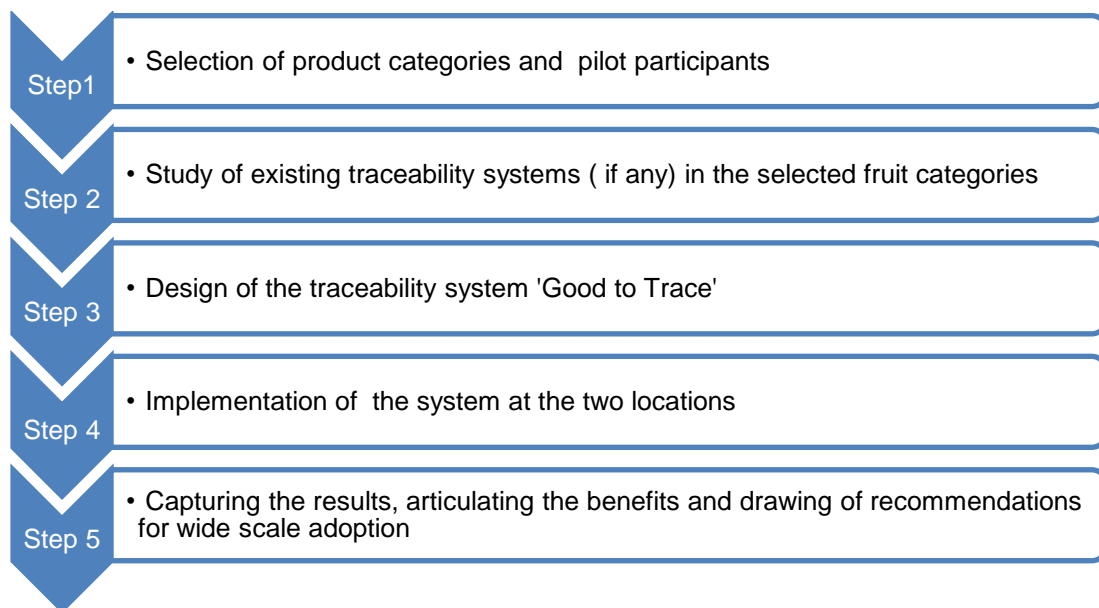
GS1 India, a not-for-profit standards body, affiliated with GS1, Belgium, was commissioned by IHDA for undertaking the above study and for implementing the pilot traceability system across a couple of major fruit categories using GS1 traceability standards developed with active participation of global food industry and regulators [5]



Project scope

The project scope entailed study of existing supply chain operations from perspective of track & trace from 'farm to fork' and ability to link physical supplies with traceability related information held by each stakeholder. A traceability system was then designed and implemented based on GS1 global traceability standards across the selected fruit categories to demonstrate on how a live pilot could be run between trading partners leading to full scale implementation to meet the overall objectives of traceability and food safety.

The steps followed in the study are detailed as below:



Selection of product categories and pilot participants

Pomegranates and bananas were selected for the study in light of their export potential and due to wide variations in their shelf-lives (5 days for bananas and 30 days for pomegranates). Major producing hubs for these two fruit categories are Ahmednagar, Maharashtra for pomegranates and Theni, Tamil Nadu for bananas.

Participants should typically include the following:

1. Suppliers of feed, fertilizers, seeds, ingredients
2. Food grower (Farmer)
3. Test laboratory
4. Aggregators/pack houses/exporters
5. Buyers/retailers
6. Freight forwarders/logistics providers
7. Importers (where applicable)
8. Export Inspection agencies

For the pilots conducted, participants were limited to the following:

1. Food grower (Farmer)
2. Aggregators/pack houses/exporters
3. Buyers/retailers

Two leading exporters who functioned as aggregators and pack houses as well were selected. These included:

1. **Kay Bee Exports:** A leading integrated fruits and vegetables grower-cum-exporter from Maharashtra of pomegranates, mangoes, sapota, musk melon, okra, chillies, bottle gourd and other seasonal vegetables. It exports to Retail chains in EU countries, to Mid-East and supplies to local markets/retail chains in India. It is GlobalG.A.P & Tesco Nature Choice (Gold) certified.
2. **Farm Fresh Banana:** A leading grower-cum-exporter of bananas from Tamil Nadu with exports to Mid-East and supplies to local markets which supplies to Middle East through its exporters and also to local markets/retail chains in India.

Study of existing traceability systems

Existing traceability systems at the two exporter locations were studied and findings were as below:

Kay Bee Exports

An internal produce coding system was being used for identification and traceability which comprised the following:

Traceability code - **11 172 001 A1**

11 – representing produce (crop) code for pomegranates

172 – representing date of packing (17th Feb)

001 – representing farm/grower code

A1 – representing plot number

Traceability codes as above were stickered as labels in human readable form on cartons containing produce picked from farms.

The use of internal traceability codes stickered as human readable labels prevented unique and universal identification by other food supply chain trading partners. Minimum traceability attributes were also not captured and shared amongst trading partners. For example, year of packaging was not captured while recording the month/date of packaging.

Record maintenance on produce dispatched in cartons and processed by pack house was undertaken manually which was time consuming and error-prone.

Farm Fresh Banana

Existing business processes only enabled monitoring total produce movement from farm to pack house. This helped only in reconciliation of produce dispatched and received without providing track & trace related information.

Design of the traceability system 'Good to Trace'

Using Global Traceability Standards (GTS) developed by GS1 collaboratively with food producers, retailers worldwide, a traceability system was designed which comprised of the following components:

- **Identification:** using unique and universal identification of traceable units and trading partners, locations.
- **Data capture:** through automated data capture through barcodes stickered on cartons, which encoded unique produce identifiers with traceability related attribute information following GS1 standards.
- **Data sharing:** by providing access to all trading partners on traceability related data and produce movement through the supply chain, using a web based portal application. Data related to the same was uploaded by each trading partner into the web based portal application which could be viewed by all other trading partners who required to be granted access rights.

Identification

The tables below illustrate traceable units identified alongwith GS1 identifiers used for the same.

Traceable units & attributes	Definition	GS1 identifiers used
SKU/product variant/type	Any item meant for sale at retail outlets to consumers	Global Trade Identification Number (GTIN)
Case/carton	Intermediate packs	Global Trade Identification Number (GTIN)
Consignment/shipping unit	Each consignment comprising multiple cases/cartons with SKUs inside meant for transport and storage	Serial shipping Container Code (SSCC)
Batch/lot	Batch/lot picked from a farm and sent onwards for processing (cleaning & sorting)	Application Identifier (AI-10) used to indicate batch/lot

Entities	Definition	GS1 Identifier used
Each entity/stakeholder	Unique and universal identification of legal entity	Global Location Number (GLN)

Data Capture

To enable automated data capture with speed and 100% accuracy, barcodes were printed on labels and stickered to produce packages comprising cartons/shipments.

Different barcode symbologies were used for different levels of product packaging as per table below:

Symbology	Data encoded	Packaging level
GS1 Data Bar	GTIN, Lot Number, Net weight, Quantity	Consumer retail packs
GS1-128	GTIN, Lot Number, Net weight	Cases/Cartons
GS1-128	SSCC	Shipping units

At the consumer pack level, GS1 DataBar enables capture of information related to identification and other product attribute information within limited space available on consumer retail packs.

At the case/carton level, GS1-128 symbology is used for capturing identification and any other product attributes desired.

At shipment level, GS1-128 symbology is used for identifying each shipping unit uniquely through the use of SSCC (serial shipping container code).

Infrastructure (hardware) required for data capture was limited to barcode printer at packhouse/exporters' end for generating barcoded labels and a barcode scanner for capturing barcode information

stickered on the labels at different packaging levels. Additionally, a shared computer resource with an internet connection was required to store the data captured.

Data sharing

For the purpose of recording and sharing of traceability information between trading partners, a web based portal application was developed and hosted by GS1 India during the pilot phase.

Infrastructure (hardware) required by each participant for uploading of data into the web portal application was limited to a shared computer resource with internet connection.

Implementation of the system at the two locations

Kay-Bee Exports

- a. In the first instance, various entities involved were allocated unique identification numbers using GS1 standards. These included farms and the pack house using GLN (global location number).
- b. Pomegranates were segregated based on quality and allocated unique product codes using GTIN's (global trade identification numbers).
- c. Plastic crates sent by Kay Bee Exports in which the fruits were collected from a farm were uniquely identified using GRAI's (global returnable asset identifiers) and linked with the pomegranates fruit quality through GTIN's allocated to them earlier.
- d. At the packhouse, a batch/lot of pomegranates from a particular farm was created, linking it to the farm GLN, crate GRAI, date of harvesting to facilitate linkage with specific farms and to reconcile supplies despatch from farms with their receipt at the packhouse.
- e. At the packhouse, fruit packs were created depending on their final destination. This included consumer retail packs for sale through domestic Retail chains and intermediate packs meant for conversion to value added fruit products or for sale as loose produce in domestic/international markets.

The barcode labels generated and stickered on fruit packs are illustrated as below:

Consumer retail packs – for sale through Retail chains in India and for exports under brand name of Kay Bee exports.



(01)	GS1 AI to indicate that data following it is the product code (GTIN)
8906031940030	GTIN – product code
(3103)	GS1 AI to indicate that the data following it is the weight of the retail pack (given in kg with last digit indicating position of decimal)
003500	Weight of the product in kg (3.5 kg in this case)
(10)	GS1 AI to indicate that the data following it is batch or lot number of the retail pack.
1108000038	Batch / lot ID of the consumer pack
(30)	GS1 AI to indicate that the data following it is the quantity of fruits inside the consumer pack
12	Quantity of fruits inside the consumer pack (12 nos. in this case)

Intermediate packs – for conversion to value added fruit products or for sale as loose produce in domestic/international markets.



(01)	GS1 AI to indicate that the data following is the product code (GTIN)
98906031940047	GTIN – product code
(3102)	GS1 AI to indicate that the data following it is the weight of the retail pack (given in kg with last digit indicating position of decimal)
001600	Weight of the product in kg (16 kg in this case)
(10)	GS1 AI to indicate that the data following it is the quantity of fruits inside the intermediate pack
1108000038	Batch/lot of the product.

Shipping unit creation:

Shipping units/pallets are created by consolidating consumer packs or intermediate packs. Each shipping unit is identified uniquely by using SSCC (Serial Shipping Container Code).

Shipping units were marked using GS1-128 BarCode encoding SSCC. GS1-128 BarCode label used on a shipping unit at Kay Bee Exports is shown as below:



(00)

GS1 AI to indicate that the data following is the SSCC

089060319400000471

SSCC to uniquely identify each shipping unit/pallet

Consignment creation

A consignment comprised multiple shipping units. A unique consignment ID was generated for each consignment and linked with SSCCs of the shipping units contained in that consignment.

Identification for physical supplies and entities

Physical supplies and entities	Identifiers used
Farms	GLN
Pack house	GLN
Produce	Lot ID(System generated)
Crates	GRAI *
Retail packs	GTIN
Distribution packs	GTIN
Shipping unit	SSCC on each pallet
Consignment	Consignment ID (System generated)

Data capture

Infrastructure (hardware/software) required for data capture is as below:

Trading partner	Infrastructure
Farmer/Grower	Nil
Exporters/Pack house	<ul style="list-style-type: none">- Barcode printers for generating barcoded labels,- Barcode scanners to scan and capture barcodes- Software application for storing scanned data
Retailer	<ul style="list-style-type: none">- Barcode scanners- POS/backend warehouse application

Data sharing amongst trading partners

Data was uploaded in the 'Good to Trace' web portal by Kay Bee Exports. Other trading partners were provided with defined access rights to view the uploaded traceability and product movement data.

Retailers/buyers were required to acknowledge receipt of consignments using the web portal application. They could view traceability and product movement data at their end through this application.

Web portal application snapshots of Kay Bee Exports

Lot/Batch ID	GLN (Farm Reg. No.)	Status	Farm Owner	Grader at Farm	Grader at Packhouse	Lot Qty. (Kgs.)	Qty. Accepted (Kgs.)	Qty. Rejected (Kgs.)
1108000038	8906031940077	Residue Free	Kaushal Prakash Khakhar	Ali Hasan	Munsi	21143.000	9571.500	0.000

Grade	Pack Type	Box Type	No. of Cartons/Crates	Weight Per Carton/Crate (Kgs.)	Total Quantity (Kgs.)	Count	Available No. of Cartons/Crates
Class I	Cartons	Auto KB Levender Box (3.500 Kg.)	294	3.500	1029.000	12	4
Class I	Cartons	Auto KB Levender Box (3.500 Kg.)	318	3.500	1113.000	14	118
Class I	Cartons	Auto KB Levender Box (3.500 Kg.)	949	3.500	3321.500	16	129

Linkage of Lot ID with farm ID (GLN) and date of harvesting

Lot ID	GLN (Farm Reg. No.) & Farm Owner	Status	Packer Name	No. of Cartons / Crates	Grade	Pack Type	Box Type	Weight Per Carton / Crate (Kgs.)	Count	Total Qty. (Kgs.)	SSCC (PalletID)
05/08/2011 1108000019	8906031940091 Kaushal Prakash Khakhar	Residue Free	Munsi	60	Class II	Cartons	Pomo 18 kg Box	18.000	1	1080.000	089060319400000778 Pallet#1
05/08/2011 1108000019	8906031940091 Kaushal Prakash Khakhar	Residue Free	Munsi	60	Class II	Cartons	Pomo 18 kg Box	18.000	1	1080.000	089060319400000884 Pallet#2

Linkage of Lot ID with farm ID (GLN) and shipping unit (SSCC)

Exclusions

The following were outside the scope of the pilots undertaken:

1. Lab report generated through testing of samples by NABL (National Accreditation Board for testing and calibration Laboratories) certified laboratories prior to harvesting to ensure residue free status of fruits.
2. Phytosanitary certificates issued by the plant quarantine Department after inspecting the sample fruit.
3. All reports related to farm inspection and quality control processes.
4. Suppliers of seeds, fertilizers, feed etc.

Farm Fresh Banana (FFB)

Traceability system was implemented at Farm fresh Banana in a similar manner to the one undertaken at Kay Bee Exports but with the following exceptions:

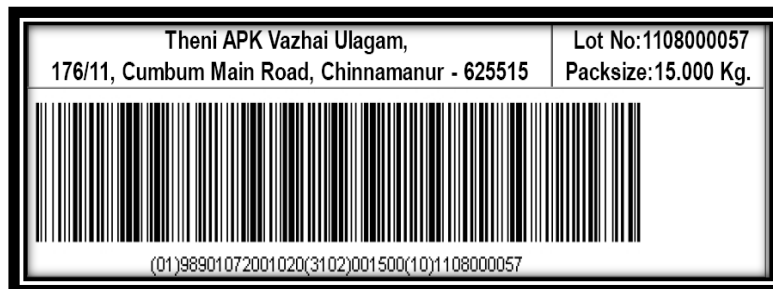
- a. Crates used for harvesting were not supplied by the exporter as fruits were delivered by growers using their own crates.
- b. Only intermediate packs were prepared for international and domestic sales as loose produce.

All other business steps were same as for Kay Bee Exports.

The barcode labels generated and stickered on fruit intermediate packs are illustrated as below:



GS1 128 BarCode label used on intermediate packs



GS1 128 BarCode label used on shipping units

Web portal snapshots for FFB

The screenshot shows the 'Lot(s)/Batch Summary' page. At the top, there are logos for USAID INDIA, GOOD TO TRACE (Traceability System for Horticulture Produce), and MICHIGAN STATE UNIVERSITY. The user is logged in as 'Packhouse-Incharge from Theni Farm Fresh Banana'. The navigation menu includes Home, Farm Registration, GRAI, Harvesting, Consignment, MIS, and Logout. The search criteria are set to 'GLN (Farm Reg. No.)' with a search button and a 'Show All' link. The main data table is as follows:

Lot(s)/Batch Summary								
Search By: <input type="text" value="GLN (Farm Reg. No.)"/> <input type="button" value="Search"/> <input type="button" value="Show All"/>								
Lot/Batch ID : 1108000143								
Lot/Batch Date	GLN (Farm Reg. No.)	Status	Farm Owner	Grader at Farm	Grader at Packhouse	Lot Qty.(Kgs.)	Qty. Accepted (Kgs.)	Qty. Rejected (Kgs.)
31/08/2011	8901072001183	General	Thiru.Paramasivam	selvakumar	sivaprakash	9144.000	9144.000	0.000
Packing Details								
Grade	Pack Type	Box Type	No. of Cartons/Crates	Total Quantity (Kgs.)		Count	Available No. of Cartons/Crates	
Class I	Crates	Crates 18 Kg.	508	9144.000		0	0	
Consignment(s)								
Consignment ID	Grade	Pack Type	Box Type	No. of Cartons/Crates	Weight Per Carton/Crate(Kgs.)	Total Quantity (Kgs.)	SSCC (PalletID)	
201111234865	Class I	Crates	Crates 18 Kg.	508	18.000	9144.000	089010720000000033	

Linkage of Lot ID with the farm identifier (GLN) and date of harvesting

The screenshot shows the 'Consignment Summary' page. The user is logged in as 'Packhouse-Incharge from Theni Farm Fresh Banana'. The navigation menu is the same as in the previous screenshot. The search criteria are set to 'Consignment ID' with a search button and a 'Show All' link. The main data table is as follows:

Consignment Summary															
Search By: <input type="text" value="Consignment ID"/> <input type="button" value="Search"/> <input type="button" value="Show All"/>															
Consignment ID	Total Qty. (Kgs.)	Mode Of Dispatch	Country	Packing Details											
				Lot ID	GLN (Farm Reg. No.) & Farm Owner	Status	Packer Name	No. of Cartons / Crates	Grade	Pack Type	Box Type	Weight Per Carton / Crate(Kgs.)	Count	Total Qty. (Kgs.)	SSCC (PalletID)
09/09/2011 201135499547	18000.000	N.A.	India	05/09/2011	8901072001169	General	Suresh	510	Class I	Crates	Crates 18 Kg.	18.000	0	9180.000	08901072000000139
				1109000019	Thiru Riyaz Meeran										
				05/09/2011	8901072001183	General	Suresh	490	Class I	Crates	Crates 18 Kg.	18.000	0	8820.000	08901072000000153
				1109000020	Thiru.Paramasivam										

Linkage of Lot ID with the farm identifier (GLN) and shipping unit identifier (SSCC)

Findings/Results of the pilots conducted

- Traceability system using global best practices and standards was successfully implemented at both the locations. It seamlessly traced back fruits right upto the farm level.
- The pilots enabled linking of physical movement of fresh fruits in the supply chain from farm to buyer associating it with information exchanged between trading partners related to traceability and physical movement of supplies. This in turn provided end to end visibility of all produce from farm till buyer.
- The pilots demonstrated that traceability systems based on global GS1 traceability standards could be implemented seamlessly and in a common, uniform manner by all trading partners across different horticulture produce categories.

Benefits

1. Implementation of traceability systems based on global traceability standards (GTS) would facilitate compliance with varied global regulations on food safety and traceability and requirements of buyers/retailers in a single, uniform manner. This in turn would help Indian food producers to gain domestic and international market shares which have stringent requirements on food quality assurance and safety.
2. Use of barcodes for enabling automated data capture enables speed and 100% accuracy in data capture and its recording by all trading partners.
3. Product recall systems can be overlaid over traceability systems to facilitate fast, localised and accurate product recalls/withdrawals by trading partners in a uniform, seamless manner.
4. The cost for implementation of traceability system based on GTS is minimal, without causing any major disruption in existing internal traceability business processes.
5. Infrastructure requirements (hardware/software) by each trading partner are nominal and affordable by all sizes of companies in the food supply chain.

Recommendations

1. Global traceability standards (GTS) are recommended for adoption by the Indian agri and food sector comprising suppliers of feed, ingredients, growers, aggregators, exporters, buyers/retailers, laboratories, inspection agencies etc.
2. Data sharing/access could be undertaken between trading partners through development of web based portal applications which could be owned and operated by trade bodies/regulatory bodies etc.
3. Trading partners could modify their existing business processes to enable linkage of produce with individual farms and recording of information on same. Mixing of produce from different farms should be avoided so that traceability till individual farm is not lost. If this is not possible due to marginal production from small, fragmented farm holdings, batches/lots may be created prior to processing from an identified cluster of farms. This would enable localising any problem related to offending batches/lots to a cluster, preventing total loss of produce from several unidentified and unlinked farms.
4. Different trade bodies associated with different fresh produce categories (fruits & vegetables) could simultaneously undertake implementation traceability system based on GTS.
5. Inspection authorities, laboratories, Regulators may link with the web based portal application created for different fresh produce categories to access an upload data pertinent to product sample test reports, issue of phyto-sanitary certificates, inspection clearance etc.
6. Web based portal applications could be created with user friendly interfaces in different regional languages for ease of usage by different food producing communities.

Testimonials

Good to trace system helpful to improve pack house management system for fruits. This barcode traceability system display your product as unique to whole world.

It is helpful to minimize error that happens due to manual work.

It makes total transparency between exporter and importer that exporter following a very standard unique bar coding traceability system.

It creates basic system for your pack house and Anyone can easily access/ trained as per process.

Mr. Manohar Sawrate
Certification Officer
KayBee Exports

The GS1 Good To Trace system is a very useful real time software application for traceability of banana. The software is simple to use and very much useful to maintain the daily activities in our organization (Farm Fresh Banana).

The barcode system is very useful in the traceability process. The barcode printer and other hardware were easy to use.

The support provided by the technical team was excellent. They helped in operating the system with much ease.

Manikandan 21/09/11
KP Manikandan
Unit-Incharge
Farm Fresh Banana.




Customer sign-offs


Farm Fresh Banana

TIN No. 33195102789

CST No. 139977/01 11.02.09



farm fresh banana
INTEGRATED COLD CHAIN UNIT
(Procurement, Processing & Marketing)
170 / 1 B, Cumbum Main Road, Chinnamanur - 625 515.
Theni District, Tamilnadu, INDIA.
Cell : 094435 01732, 094430 21886
e.mail :- ffbanana.theni@gmail.com



To,


Mr.Vipin Sahni,
GS 1 India

Sub: **Customer Sign off for 'Good To Trace' (A Traceability system for Horticulture Produce) from Farm Fresh Banana.**

Sir,

1. We are glad to inform that we have implemented the Traceability System for Banana at Farm Fresh Banana, Theni. The daily activities at Farm Fresh Banana, Theni are captured in the 'Good To Trace System'.
2. As part of complete traceability using Good To Trace System, we have created consignments with GS1-128 labelled crates and have scanned it using the MEMOR. The MEMOR scanned file has been attached and uploaded as part of the dispatch details section.
3. We have participated in this software implementation developed by **Logicsoft International Private Limited, New Delhi** and satisfied with the project. The software helps us in tracking and consolidating our supply chain process.
4. We would like to thank **GS1 India** for the cooperation and guidance in the implementation of the project.

Regards,



A.P. Karupiah

A.P.Karupiah,
Managing Partner
Farm Fresh Banana.

Branch,Unit :-
479/1c, Thalli Main Road, Kalugondapalli (P.o.), Hosur (T.K.)
Krishnagiri (Dt.) Tamilnadu, INDIA
Cell : 099809 11601, 099456 43029.



Kay Bee Exports
10, Ground Floor, Prestige Precinct,
Near Nitin Company, Panchpakhadi,
Thane (W) 400 602, Mumbai, India
Tel. : +91 22 415 789 00 / 2536 8446
Fax : +91 22 2537 6610
info@kaybeexports.com
www.kaybeexports.com

Date: 12/08/2011

To,

Mr. Vipin Sahni,

GS 1, India

Sub: Customer Sign off for 'Good To Trace' (A Traceability System for Horticulture Produce)

from Kay Bee Exports.

Respected Sir,

As we complete the trail consignments for domestic, air and sea we are going to acknowledge our sea consignment from our buyer. The changes / suggestions done during this implementation are still going on. Coming forward I will update the all information as per consignment goes. Regarding remaining changes as per our recommendation will be done ASAP and now Logisoft is very well known about our each and every process of pomegranate now. So we will contact to them if make any changes in future.

The co-operation of all team is very good during this project and still need same. We have given participation as per our best level. So, we are satisfied from this project and current software system that is developed by logisoft International Pvt. Limited, New Delhi.

Thanks to all of team.

(Please keep printer and its material still pomegranate end of this season so that I will scan the one sticker of remaining consignment to scan and load it.)

Regards,

Manohar V. Sawrate

Certification Officer

Kay Bee Exports

manohar@kaybeexports.com

Mob. No. +91 9823056256



References

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2. <http://www.worldbank.org.in/WBSITE/EXTERNAL/COUNTRIES/SOUTHASIAEXT/INDIAEXTN/0,,contentMDK:21301026~pagePK:141137~piPK:141127~theSitePK:295584,00.html>
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6. Statistical Report published by FAO in 2009
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About GS1 India

GS1 is a neutral, not-for-profit organisation that facilitates collaboration amongst trading partners and technology providers, in order to solve together business challenges that leverage standards and to ensure safety, efficiency and visibility along the entire value chain.



Headquartered at Brussels, GS1 oversees a global network of over 100 GS1 organisations serving over 150 countries. GS1 India is one such organisation.

GS1 India was setup as a not-for-profit standards body in 1996 by the Ministry of Commerce, Government of India and leading Chambers of Commerce comprising CII, FICCI, ASSOCHAM, IMC, FIEO besides BIS, IIP, Spices Board and APEDA. It promotes awareness on GS1 standards and solutions and supports their implementation in line with the overall global objectives of GS1.

About IHDA

The Indian Horticulture Development Alliance (IHDA) is a broad based and inclusive coalition established to address Horticulture market Development in India. IHDA is a United States agency for International Development (USAID) funded project led by a specialized team of Michigan State University (MSU).



The IHDA focuses on developing value chains for horticulture products that have high potential for expanded distribution and sales in India's rapidly expanding retail sector and high value export markets. The overarching goal of this alliance is to increase profits of producers and processors of selected Indian Horticulture commodities.

The IHDA achieves this overall goal by capacity building of Indian producers and processors to meet market driven International Standards (e.g. food safety, quality, traceability) and by linking these producers and processors to high value markets. The IHDA also dedicates considerable effort to institutional strengthening and establishing sustainable electronic systems for knowledge delivery, prioritizes involvement of women and other traditionally disadvantaged groups in these development activities.