Managing Food Safety Risk: Traceability, Good Agricultural Practices and Record-keeping

PAUL HARDMAN
Industry Affairs Manager

INTRODUCTION: This article does not seek to provide a detailed explanation of traceability requirements since these have previously been discussed in this Journal. However it does seek to explain practical traceability for risk management purposes and as a compliance issue in light of the main food safety risks facing citrus growers, and developments in Food Safety Regulations.

An improved understanding of the traceability requirements within a broader food safety context will hopefully help exporters, packhouse managers and growers to identify gaps in their current traceability systems at farm or packhouse level.

It cannot be stated more plainly than to say that each player in the supply chain MUST be able to trace each trade unit (lot or consignment) of fruit under their control. Traceability is the responsibility of each player in the supply chain, but as the owner of the product, growers are particularly vulnerable to losses when there is a break in traceability. Therefore growers must ensure that their supply chain partners can provide assurance that their fruit is traceable beyond the farm gate.

Equally important, it must be understood that traceability, as a legal requirement, cannot be treated in isolation or separated from the key human safety drivers.

TRACEABILITY DRIVERS: Bio-terrorism and the need for safer food, spurred on by events such as the BSE scare and even the avian flu crisis, remain the two key drivers for tighter monitoring of food and feed movement across the world. It follows that all international traceability requirements are embodied within either food safety or bio-terrorism legislation (e.g. EU/1148/2004 in Europe and the Bio-terrorism Act 2002 in the United States). In South Africa the STANDARDS REGARDING FOOD HYGIENE AND FOOD SAFETY OF REGULATED AGRICULTURAL FOOD PRODUCTS OF PLANT ORIGIN INTENDED FOR EXPORT came into effect on 1 May 2005, which compelled all food business operators (FBOs) to have had, by 1 January 2006, traceability...
systems in place. Prior to this Standard traceability requirements were awkwardly included in each commodity’s Standards and Requirements under the Agricultural Product Standards Act (1990).

What are the Real Risks? Food consumers face three main types of food safety risk; physical, chemical and microbiological contamination. Exceedances of safety tolerances for any of these categories could initiate a process of tracing fruit back to the source/grower, or in a severe exceedance case also trigger a rapid recall of all contaminated fruit.

RISK 1: failure of the traceability system to quickly identify the fruit implicated and supply chain players involved.

Management of Key Risks: Discuss traceability with your exporter: The scope and cost of managing the food safety incident and recall are significantly greater, and more complex, when traceability systems fail. Again growers are encouraged to discuss traceability beyond the farm gate with their exporter to confirm that all the legal and practical arrangements are in place to facilitate effective traceability.

Given the favourable properties of citrus fruit (naturally acidic and covered by thick skin) citrus growers are far more likely to be called upon to defend their use of plant protection products (chemical contamination) on citrus than deal with a microbiological or physical contamination.

RISK 2: not being able to demonstrate responsible use of plant protection products.

Management of Key Risks: Good Agricultural Practices: Growers are strongly encouraged to implement the RECOMMENDED USAGE RESTRICTIONS FOR PLANT PROTECTION PRODUCTS ON SOUTHERN AFRICAN EXPORT CITRUS (RUR) jointly published by CRI and CGA as a tool to help reduce the chances of chemical contamination - a severe exceedance of the Maximum Residue Level (MRL). Drawing on the experience of CRI scientists and associated research bodies over the last fifteen years the RUR document specifies usage restrictions that are to be expected to result in acceptable residues in the fruit.

Input from a wide range of public and private sources help to keep the MRL list up to date. In the last four years, the revocation of the 2,4-D and Carbendazim MRLs lead to significant changes to local practices, and highlight the need for growers to be linked to the communication distributed by CRI and CGA. Growers should contact Paul Hardman (031-7652514) to receive the latest editions of the RUR.

Management of Key Risks: Record-keeping: The following extract focuses on appropriate record-keeping, and was taken from the checklist compiled in order to audit a growers’ level of compliance to the cc. PPECB are conducting these food safety audits and will be investigating each of these aspects when they visit your operation. The list of questions cover the “major” requirements - those where no tolerance is applied.

Management of Key Risks: Discuss traceability with your exporter: The scope and cost of managing the food safety incident and recall are significantly greater, and more complex, when traceability systems fail. Again growers are encouraged to discuss traceability beyond the farm gate with their exporter to confirm that all the legal and practical arrangements are in place to facilitate effective traceability.

Given the favourable properties of citrus fruit (naturally acidic and covered by thick skin) citrus growers are far more likely to be called upon to defend their use of plant protection products (chemical contamination) on citrus than deal with a microbiological or physical contamination.

RISK 2: not being able to demonstrate responsible use of plant protection products.

Management of Key Risks: Good Agricultural Practices: Growers are strongly encouraged to implement the RECOMMENDED USAGE RESTRICTIONS FOR PLANT PROTECTION PRODUCTS ON SOUTHERN AFRICAN EXPORT CITRUS (RUR) jointly published by CRI and CGA as a tool to help reduce the chances of chemical contamination - a severe exceedance of the Maximum Residue Level (MRL). Drawing on the experience of CRI scientists and associated research bodies over the last fifteen years the RUR document specifies usage restrictions that are to be expected to result in acceptable residues in the fruit.

Input from a wide range of public and private sources help to keep the MRL list up to date. In the last four years, the revocation of the 2,4-D and Carbendazim MRLs lead to significant changes to local practices, and highlight the need for growers to be linked to the communication distributed by CRI and CGA. Growers should contact Paul Hardman (031-7652514) to receive the latest editions of the RUR.

Management of Key Risks: Record-keeping: The following extract focuses on appropriate record-keeping, and was taken from the checklist compiled in order to audit a growers’ level of compliance to the cc. PPECB are conducting these food safety audits and will be investigating each of these aspects when they visit your operation. The list of questions cover the “major” requirements - those where no tolerance is applied.

Growners should consider these questions, compare them to their current operations, and make the necessary changes to the way they conduct their operations where they cannot provide a positive answer. Effective record-keeping is a critical function that will help growers to better manage the use of plant protection products, and could also be vital documentation proving their innocence in a food safety incident (i.e. show they have used the product as registered).

Conclusions Fruit producers face considerable uncertainty, including climatic conditions, exchange rate movement and changing sanitary and phytosanitary requirements. Food safety incidents are also bound to increase with increased monitoring of food hygiene, challenging farmers’ and packhouse managers’ ability to produce safe food. This article simply emphasises the need for effective traceability systems in light of the most significant food safety risks faced by growers, chemical contamination (compared to physical and microbiological). By ensuring they have effective traceability, have adopted the RUR document recommendations and by applying effective record-keeping, citrus growers can make significant steps towards reducing the likelihood of a MRL non-conformance.