Traceability—A Step too Far?

By Martin Doherty1

1. Introduction

The general EC principles and requirements for traceability are set out by Regulation 178/2002/EC of 28 January 2002 (the General Food Law Regulation2). However, whilst this Regulation entered into force on 21 February 2002, Art. 65 relating to traceability only came into force on 1 January 2005.

Traceability is defined by Art 3(15) as ‘the ability to trace and to follow a food, feed, food producing animal or substance intended to be or expected to be incorporated into a food or feed, through all stages of production, processing and distribution’. Art. 18 specifies that food and feed business operators must be able to identify any person from whom they have been supplied. To achieve this food and feed business operators must have in place systems and procedures, which allow for this information to be made available to the Competent Authorities on demand.

The requirement covers all stages of production, processing and distribution, i.e. from the point of import or primary production up to the retail outlet.

It is important to note however that the traceability provision of the General Food Law relates only to the EU. In addition the scope is limited to the “one step forward, one step back” principle, which means that each EU food business operator must be able to identify its immediate supplier and immediate customers.

No obligation is imposed under the Regulation for the food and feed business operator to keep records all the way back down the supply chain to the farmer. This applies whether the farmer is with the EU or in a third country.

However in practice it would seem that importers are requiring their suppliers to go beyond the Regulation’s strict legal requirements and are seeking full traceability right back to the field in which the produce originated. This practice is not in itself entirely new but the introduction of the

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2 Regulation (EC) No 178/2002 of the European Parliament and of the Council laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety. This defines the basic responsibilities of EU member state Authorities and of feed and food businesses to ensure that all feed and food for sale in the EU is safe, accurately described and where appropriate complies with defined standards.
Regulation seems to present an opportunity to an increasing number of importers to enforce requirements that are based more on commercial advantage and convenience than any legislative requirements.

Traceability often requires introduction of sophisticated and expensive tracking and recording systems. These may be suitable for the developed countries of the EU but impose disproportionate costs on firms in the supply chain in developing countries. It seems clear that these traceability requirements could be unnecessarily expensive for some developing countries’ producers to meet. There does not however seem to be any WTO law or policy, which provides an effective area of regulation/governance in this area. What is needed is law and/or guidelines that recognise that whilst traceability is an entirely acceptable practice its demands must necessarily reflect the degree of risk presented by differing supply chains delivering different produce.

It is possible to view the activities of the increasingly powerful group of importers in requiring traceability further down the supply chain, when this is not actually required by the EU legislation, as a new form of NTB. The requirements may be regarded as part of a food business’s normal commercial strategy and be purely voluntary but in the relationship between small suppliers in the developing world and large EU import chains “voluntary” becomes mandatory.

This article looks at the impact on developing countries of what is seen as an “extended” requirement for traceability beyond what the EU legislation actually stipulates. The principal drivers of this extended requirement are also examined and the question raised as to whether the existing powers of the WTO (and other relevant bodies) which is charged with the orderly regulation of international trade should be enhanced to deal with the impact on international trade of the current unregulated impact of extended traceability through private sector importers.

In so doing it is not the intention to imply that EU importers are in any way deliberately imposing measures with the intention of impeding the economic progress of developing countries. It is however the intention to highlight the appearance of what is considered to be a new and discriminatory trade barrier. This trade barrier needs to be tackled not on the basis that traceability in itself is wrong but on the basis that the way it is being implemented may be creating an unnecessary cost burden on firms /sectors which can ill afford the added burden.

It is acknowledged that specific provision already exist in other sectors, eg Beef and GMOs but Reg 178/2002 now extends traceability into the horticultural sector for which the scientific basis for the fully demonstrated existence of risk between products and geographical location is different. The comments made, therefore, relate primarily to this segment of the agricultural sector, both because of its primary importance to the vast majority of developing country suppliers to the EU and the high proportion of small producers in the supply chain.

2. The Changing Global Food Safety Environment

The global trading environment and the major players in it have changed significantly over the past twenty years. Alongside this the character of the food supply system and the nature of food policy itself have also changed. Important constituents of this change are trade globalisation and liberalisation, advances in technology and food production systems and the appearance of new animal related communicable diseases (avian flu, BSE etc). These have all contributed to the creation of a new paradigm bringing with it new problems which require new solutions. This new trading environment leaves one to question whether the bodies (WTO/UNCTAD) established some years ago to govern international trade generally and food safety measure in particular (SPS Agreement) are in fact fully able to be responsive to the trading needs of the 21st century. The author considers that the responsibilities and powers entrusted to these organisations need to be updated and reconciled with what is now happening in the international market place.
The food system can no longer be understood simply as a way of moving basic commodities from farm to plate\(^3\). Today food is increasingly produced by commercial growers, feeding long and sophisticated supply chains which market processed and branded products to mainly urban consumers. There are a variety of changes, ranging from how food is grown and animals reared, to the mass marketing of food brands. Of particular importance to the issue of traceability however is the increased concentration of power in food manufacturing and marketing. The top ten food manufacturers in the world are considered to have a combined turnover of around US$ 225 BN whilst the top thirty retailers have a combined turnover of US$ 930 BN.

This concentration has been said by Lang and others to be\(^4\), “strongly linked to power, and the concentration of power over the food system is now remarkable, whether one looks nationally, regionally or globally. A web of contractual relationships turns the farmer into a contractor, providing the labour and often some capital but never owning the product as it moves through the supply chain”. In Europe Gunther\(^5\) forecasts that eventually, “fifteen huge retail chains will control 80% of the fresh produce sales to the expanded EU population of 450m”.

Supermarkets play a key role in this situation and not just as exporters to the developed world. In Latin America supermarkets controlled 50-60% of food marketing in 2000 (Reardon and Berdegue 2002). The share is smaller in Africa but is growing. In South Africa supermarkets control 55% of food retailing (Weatherspoon and Reardon 2003) and the pattern is the same in India. Wherever supermarkets enter the market, the supply chain is greatly changed and becomes driven by issues such as quality standards and traceability. The need to deliver large quantities to tight schedules whilst maintaining a firm grip on quality throughout the products’ journey means that these large import chains are turning to increasingly sophisticated traceability systems.\(^6,\)\(^7\)

Food safety is now an extremely ‘hot topic’ not only in the EU but also across the entire developed world which constitutes the main outlet for the agricultural produce of the developing world. Figure 1 details some of the issues that form the background to the problems being created for exporters by increasing food safety requirements (SPS) generally and traceability specifically. As a result, retailers do not wish to be held accountable for the food safety of the wide range of produce they have serviced from across the globe. Instead the trend is to shift responsibility towards the producer and all companies’ international supply chains are forced to comply with the latest product and process requirements. Traceability forms a critical part of those requirements to transfer responsibility in a transparent fashion.

3. **Traceability and Developing Countries**

Whilst retailers/importers may see the requirement for traceability as a tool to maintain consumers’ trust as well as protecting themselves from legal liability, it is the other participants in the supply chain who have to meet the downstream costs. These can be both financially and commercially negative in nature and also reflect the domestic infrastructure and economic position of the suppliers’ country e.g.,

1. Reliable and successful tracing systems require money for equipment, educated human resources and the availability of infrastructure, hardware etc.

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\(^5\) D Guenther, Deutsche Gesellschaft für Technische Zusammenarbeit (GTZ)

\(^6\) Schlosser E. Fast Food Nation; “The Dark Side of the All American Meal” Penguin Press April 2001

\(^7\) Traceability comes in two forms, real time (tracking) and off line (tracing). Tracking means that at each moment it is possible to determine in real time the exact location and status of a product in the chain. Tracing refers to off line, afterwards, reconstructing the history of the product. The more sophisticated the system the more it is possible to trace back the conditions to which the product has been exposed, apart from the physical location.
Figure 1

The Changing Global Food Environment

- Tariff Barriers have faded in significance for most agricultural products for all developing countries
- New non-tariff barriers such as Sanitary and Phytosanitary (SPS) have grown in importance
- Exclusive partnerships (based on trust and audits) between supply chain partners are increasing
- Technology is allowing the detection of previously unmeasurable amounts of contaminants and ever stringent standards are following
- NGOs (consumer, animal welfare and environmental organisations) closely monitor the food chain sectors and actively campaign against all activities they consider might endanger sustainable food supply
- Retailers have become more powerful but also more vulnerable to media companies and have to protect their socially responsible image to a wider consumer market
- Governments are introducing new food safety aspects, eg bio terrorism (USA) and allergies (EU)

2. A wide knowledge base of food safety risks is required which may necessitate investment in education, training etc.
3. Monitoring and operating the system involves audit and certification costs, which will be particularly high if foreign experts have to be used.
4. Preferred supplier chains may be good business for a producer but the investment necessary creates a high dependency on one importer, his systems and his preferred market.
5. Importers increasingly prefer countries that already have a good infrastructure (laboratories, education, transport system, etc), which makes entry into new markets (or maintaining existing market share) difficult for those developing countries less able to meet the new demands.
6. As no standard international definition exists of what constitutes a traceability system, different countries and importers have different demands, this increases the difficulty of switching from a buyer who may be exerting undue pressure in other areas eg price, social, environmental.

4. Smallholders are especially vulnerable

Parallel with the process of concentration there seems to have been some reduction in the use of smallholders for production. For example, the level of smallholders supply had historically been higher in Kenya (Dolan and Sutherland 2002) than in other countries. It has been estimated that in the late 1990s large exporters in Kenya sourced 18% of their output from smallholders, most of who were organised into outgrower schemes. This compared to only 6% in Zimbabwe. Interviews with the same exporters in 2001 indicated that none were expanding smallholder supply and some were reducing it.

Whilst it is possible to organise smallholders in outgrower schemes in ways that can guarantee traceability as well as quality consistency, this is expensive and possibly only justifiable commercially when large exporters have restricted access to land. Overall the costs of ensuring and demonstrating compliance as well as convincing export customers that this compliance can really be achieved are tending to undermine sourcing from smallholders. These are therefore not only being “frozen out” of the EU export market but some may also be prevented from growing into large enterprises which might potentially have aspirations to move further up the value chain. The
damage therefore is not restricted to individual firms but may potentially extend to sectoral
development in countries predominantly dependent on small outgrower production.

5. The Present Situation

Whilst the EC traceability requirements in respect of Beef and GMOs can be seen to be based on
identifiable and specific concerns, the case for their wholesale application in other agricultural
sectors on purely food safety grounds is not so obvious. It is clear that the insistence on traceability
by large importers in these other sectors is based solely on commercial grounds and is not an EC
requirement. If it were an EC backed legislative requirement it might be challengeable under the
provisions of the SPS and/or TBT Agreements. Certainly it would seem open to debate whether
these requirements are in every case the least restrictive option available to importers to satisfy
what may well be legitimate objectives. If this is not the case then these measures could be
regarded as disguised restrictions to trade.

However, the commercial activities of private sector importers do not fall directly under the SPS or
TBT Agreements, which are concerned with the activities of signatory states. They thus escape the
formal requirement under these Agreements:

The TBT Agreement seeks to ensure that technical barriers to trade are eradicated and that a level
playing field for international trade is created. The Agreement recognises the right of WTO
members to adopt the standards they consider appropriate but imposes on them an obligation to
pursue a legitimate objective (a non exhaustive list of objectives is provided) and to ensure that the
standards they adopt are the least trade restrictive measures available to achieve the objective. The
application of international standards is also encouraged.

The SPS Agreement regulates the adoption by member states of measures designed to “protect
human or animal life or health … from risks arising from additives, contaminants, toxins or
disease-causing organisms in foods, beverages of feedstuff”. Among other rules the existence of a
food safety measure must be connected to the risk identified and it must be the least trade
restrictive reasonably available to overcome that risk. Critical for market access purposes is the
requirement for transparency under which members must base their SPS requirements on strict
scientific research results.

The present situation therefore is that while all food safety related legislation needs a scientific
basis, private companies are free to define their own standards as long as these do not run contrary
to any specific legislative requirement. The same degree of scientific research and risk assessment
that is required in relation to legislation is not a prerequisite for the private sector. Without such a
requirement, however, similar traceability demands may be imposed on supply chains for different
produce that may represent entirely different levels of risk. Different geographical location, local
infrastructure etc suggest that some differentiation in the definition of what constitutes acceptable
traceability, for the purposes of demonstrating food safety is required.

6. The Role of WTO and other International Bodies

It might be argued that organisations like the WTO (SPS and TBT Agreements) Codex
Alimentarius, International Plant Protection Convention (IPPC) and International Organisation
for Standardisation (ISO) all have relevance to the need for standards to regulate trade. This is
true in that the Standards that do exist in this area incorporate tracing and tracking requirements
as an integral instrument to realise and safeguard the implementation of formulated goals. Codex
Alimentarius FICS (Food Import and Export Inspection and Certification systems) and ISO have
produced general papers on the subject of traceability. In particular the latest proposed ISO 22000
standard is intended to standardise food safety management systems based on traceability directives but establishes a very high entry point.

Nevertheless there is no specific internationally accepted standard of what constitutes traceability of food products. The thrust at present appears to be for conformity and this begs the question of whether it is necessary and justified on food safety grounds alone to impose a standardised system on all developing country importers. Different risks exist within each supply chain and this should be recognised in the degree of record keeping, precautionary measures/testing etc that is required. In particular the question of mixage (where the output of various producers and processors are combined to obtain commercially viable volumes) needs to be examined to identify precisely what degree of record keeping is actually warranted by the degree of risk presented in some sectors.

Regulation 178/2002 (Art.13) does in some part recognise that developing countries have different needs and capacities than the more developed world, which can more easily adopt sophisticated tracking and tracing mechanisms in their food supply chains. The article states that the Community must contribute to the development of international technical standards for food and feed standards undertaken by international and non-governmental organisations. Importantly it also emphasises that particular attention must be given to the special development, financial and trade needs of developing countries with a view to ensuring that international standards do not create unnecessary obstacles to exports from developing countries.

It is arguable that the activities of the large international importer chains in relation to traceability are, because of their power, imposing an international standard in practice that does not recognise the special and differing needs of developing countries and consequently their activities do constitute an unnecessary (on food safety grounds alone) obstacle to exports.

It has been suggested that the introduction of traceability by the EU itself is challengeable under WTO rules, O'Connor says that the lack of scientific justification, proportionality and risk assessment are powerful allegations that could be made but these would have to be adequately backed up by corroborating evidence and ultimately might depend on a case by case basis. O’Connor says that it could be argued that on the basis of full or partial breaches of Article 2.2, 2.3, 5.1, 5.4 and 5.6 of the SPS Agreement that the EC traceability system is not based on scientific principles and that it is applied in a manner which constitutes a disguised restriction on international trade. Its application in particular circumstances is also not based on appropriate risk assessment. In addition it does not minimise negative trade effects and is more trade restrictive than required to achieve the appropriate level of SPS protection.

It is not the intention of this paper to suggest that the EC legislation itself be challenged but rather to make the point that if the above is accepted as being a valid basis for concern regarding the EU legislation (which is subject to official surveillance) then it should certainly be a concern that the same measures can be taken outside the EU and imposed on supplier chains which have no regulators to assess whether the demands are reasonable in the light of the prevailing circumstances and risks.

The problem arises, however, in that these private sector traceability standards are not based on government measures with which the WTO is concerned but are standards voluntarily adopted.

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8 Technical Committee ISO/TC34 calls for a sophisticated tracing system. Thus any business wanting to comply with ISO 22000 would need to have full batch traceability. The Centrale Fur Co-organisation (German Standards Organisation) considers that a food business should have at least 50 employees before a batch traceability system is economically viable.

9 “Traceability and Equivalency under EC and WTO Law” 2002 – O’Connor and Company. O’Connor does not however consider that any formal challenge in the WTO would be a productive use of resources. The author agrees with this assessment and considers that it is in the application and management of traceability systems in the particular circumstances existing in developing country supply chains that any problems lie, rather than in the totality of the concept.
and imposed by all in the supply chain. The retailer voluntarily takes on the standard and his supplier does the same. The fact that the “voluntary” nature of the supplier’s acceptance of the standard is open to question is irrelevant. O’Connor also notes that as traceability basically deals with production processes and methods this puts the issue outside the remit of the GATT.\textsuperscript{10}

The WTO SPS Agreement should not, however, be ruled out as a possible avenue for the consideration of whether any remedial measures are required to tackle the issues of whether the requirements by large distribution chains for traceability may be constituting an unfair and discriminatory barrier to international trade in certain instances.

The SPS Agreement came into force in 1995 after much discussion and some disagreement about its coverage and remit. The possibility that its implementation in practice might reveal inadequacies was recognised by the insertion of Art 12.7 which provided that,”The Committee shall review the operation and implementation of this Agreement three years after the date of entry into force and thereafter as the need arises. Where appropriate the Committee may submit to the Council for Trade in Goods proposals to amend the text of this Agreement having regard inter alia to the experience gained in its implementation”. The 2001 Ministerial Conference in Doha reaffirmed the importance of reviewing the operation and interpretation of the Agreement and agreed that this would occur every four years. As part of this ongoing process the Committee commenced a review in July 2004 that will end on 29/30 June 2005. (G/SPS/32 25/6/2004).

Although the submission date for formal papers has passed the Committee represents an appropriate entry point for any future requests to re-examine the application of the SPS Agreement.\textsuperscript{11}

7. Conclusion

Whilst this article has primarily been about the specific issue of traceability, it also encapsulates the challenges that the developing world faces in trying to integrate itself into the constantly changing global market place of the 21st Century.

Much of this change has occurred as a result of changes in trading practices within the developed world of which the EU constitutes an important element for developing countries. The developed world is largely responsible for the creation of the rules and guidelines that govern the international trading environment and must necessarily also accept responsibility for ensuring that these rules keep pace with the changes that arise.

This article contends that this responsibility to ensure a level playing field for all has not been fully met. The way the EU requirement for traceability (which is limited to within its borders) is being exported down the supply chain through the medium of an ever reducing number of powerful import chains is clear evidence of this. The WTO appears to have no power to restrict or exert governance over this extended private sector requirement. This situation exists even though these unrestricted private sector practices may in some instances result in an unwarranted distortion and/or blocking of the normal international trading channels for vulnerable exporters from developing countries.

\textsuperscript{10} See US Shrimp (WT/DS 58) and Tuna – Dolphin GATT case DS21 (www.wto.org/english/envir)

\textsuperscript{11} In addition to the WTO and SPS Agreement it is useful to note that the Trade and Development Board (UNCTAD) may also have an interest in examining the issue. A meeting of experts in November 2003 discussed the general topic of the impact of large distribution networks in the context of competitiveness and developing countries. This meeting raised concerns regarding competition issues in connection with the participation of large chains and the increasing concentration of the industry. In this connection it was considered that an adequate regulatory framework is considered a precondition for achieving better outcomes in terms of efficiency and benefits for consumers as well as providing appropriate solutions for anti-competitive behaviour. See the report of the Expert Meeting on Market Entry Conditions Affecting Competitiveness and Exports of Goods and Services of Developing Countries Large Distribution Networks taking into account these special needs of LDCs. (TD/B/Com.1/66. TD/B/Com.1/EM/23/3 19 January 2004.)
The author considers that the EU should use its position as a key member (negotiating on behalf of its 25 countries) of the WTO to raise this issue. Failure to do so will not only result in an increasingly negative impact on many of the developing country producers supplying agricultural produce to the EU but is also likely to cause difficulties in the wider forum of the ongoing Multilateral Trade Negotiations - Doha Development Agenda.

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