

**Title** The role of engineering in the process of traceability of food products

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### **Abstract**

**Purpose of review:** The conversion from agrarian, local, fully integrated food systems to industrialised, monocultured agricultural production has created a distance between the consumer and food production, resulting in consumers lining up in supermarkets to array of food products about which they know very little. The objective of this paper is to briefly describe traceability, why traceability is necessary and how traceability processes work. The paper will describe the current regulatory means and the missing links required for a meaningful implementation and suggests the possible contribution of engineering to this process.

**Recent findings:** Food labels often do not provide enough information to allow a consumer to know what is in our food and how and where it is produced. No labels are required, as yet, to inform consumers about the pesticides and other chemicals used on crops, or the residues still left on those foods at time of purchase. At the same time, consumers are becoming more involved in food marketing systems, demanding levels of safety assurance, purity and authenticity and even information on production or environmental practices. Some means to protect the consumer are already part of legislation existing in most European and associated countries. However, there is an increased demand by the consumers for an accurately documented history of any product in the food chain to ensure food safety and make food producers and handlers accountable for their product. ‘traceability’ is a process, which provides the necessary component of the food production chain to mean the goal of food safety. Yet, a clear definition is still missing regarding what products, what information and which agri-food chains are to be traced, in order to develop the appropriate traceability protocols, both within and between chains. While a lot of work has already been done worldwide, primarily in developed countries, many gaps are still remaining wide open. Engineering offers a major tool for closing many of these gaps.