Muslim consumers are concerned about the status of Islamic religious requirements of products and services. The producers' ability to trace the beginning to end processes will gain the confidence of the consumers that the whole processes from the production, processing and distribution of the products are Shariah-compliant. Halal traceability provides further information about which Halal standards have been applied, allows the consumer to verify the Halal claims and ensures that the product delivered to the customer is thoyyib (wholesome, healthy, safe, nutritious and of good quality). This paper seeks to develop a Halal traceability framework for Halal food producers based on Halal traceability deployments in a Halal certified food production company. The case study method is employed to learn about the initiatives of the company in relation to traceability of Halal food production. Based on the experience of the studied case, a framework is generated that Halal food producers can refer to as a proper guideline to ensure Halal compliance along the production, transportation and distribution system. The framework has theoretical interest for replicability to other Halal food producers. © IDOSI Publications, 2012.