

Title Toward developing a sea-freight supply chain for delivering Pakistan mangoes to European supermarket: a private-public sector model

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Abstract

Exporting mangoes by sea is a commercially attractive proposition for traders throughout the world. The same is true for Pakistan, since sea-freight is 4-5 times cheaper than air freight and large volumes can be delivered, which is not possible by air. Pakistan, being the 4th largest mango producer internationally, has never had access to European supermarkets. However, with the opening up of their stores in Pakistan, and having evaluated the response of European customers to Pakistani mangoes, these supermarkets (Metro) are now trying to develop a sea-freight supply chain for supplying Pakistani mangoes to their stores in Europe and other countries. This opportunity provided an impetus for changes in industry practices to improve quality and also provided an opportunity for public sector involvement to support such initiatives through capacity building of stakeholders. Since sea-freight takes extended time (24-28 days to Europe), mangoes need to undergo special pre-and postharvest/shipping protocols, so that at destination the delivered quality and shelf life meet required supermarket standards. In this internationally collaborative initiative, both simulated and physical experiments have been performed using Controlled Atmosphere (CA)-technology. Studies were performed using a mobile CA-lab, provided by the European collaborators, enabling performance evaluation of mangoes under different CA conditions. Trial shipments to Metro Germany, using a MAERSK CA-container, explored weaknesses in the overall supply chain logistics both in-country and on the European side, which had never handled Pakistani mangoes shipped by sea-under CA-conditions. This presentation provides an account of this multi-dimensional project, being funded and technically supported by several local and international organizations. While the project provides an insight into the progress made in developing mango sea-freight supply chain, it also serves as model for agencies and countries targeting the development of similar fresh produce supply chains.