

Title Supply chain mapping - A tool for determining where intervention is warranted for improving quality out-turn

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Abstract

Supply chain mapping is a useful tool for determining where the major losses are occurring and where new technology and/or supply chain modifications may improve quality out-turn. A case study looking at stone fruit supply chains in North West Vietnam is used to demonstrate this concept. In the major stone fruit areas of Son La and Lao Cai, successive international projects have focused on improving cultural techniques and this has started to have an impact on fruit quality. However, postharvest losses remain high, with 25-40% of fruit being unsaleable or discounted on arrival at market. In our current ACIAR-funded project (CP/2002/086), we have used a number of approaches to map the Tam Hoa plum supply chain from Bac Ha to Hanoi, including tracking consignments of plum from farm to market; collecting price and quality deficiency data from key local, regional and city markets; and interviewing supply chain partners. The tracking experiments revealed that during sorting and packaging operations 28% of fruit were damaged physically in some way (cuts and abrasions) whilst by the time the fruit arrives in Hanoi (14 hours later) 24% of the fruit are bruised and 11% are diseased. Fruit core temperatures ranged from 25-32°C, whilst shock logger traces revealed that major impacts are occurring during the harvest, sorting and packing operations (up to 23 g), with many smaller impacts occurring during the transport phase (5 g). Quality audits of Hanoi markets for plums sourced in Bac Ha supported these results, with 12% and 29% of first and second grade fruit, respectively, suffering bruise damage and 26% and 34% of these plums considered too soft at point of sale. In this paper, we discuss the implications of these results on the subsequent research approach adopted by this project.