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“Filling gaps and removing traps
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Superfruit in the Niche - Underutilised Sea Buckthorn in Gilgit-Baltistan, Pakistan

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Abstract

Sea buckthorn is a medicinal plant with nutritious fruits, occurring throughout the temperate regions of the northern hemisphere. Given their nutritional properties considered as a “superfood”, the berries have a large international market potential, particularly in China and Europe. Although sea buckthorn is widely spread in northern Pakistan, it is a neglected species there, as collection and drying of sea buckthorn berries is only performed at a rudimentary scale. Marketing is severely hampered by low raw product quality, varying price margins, and low local demand. This study provides comprehensive information about the current situation from collection to post harvest management of sea buckthorn fruits including the analysis of vitamin C under different sun and shade drying conditions. During 2017–2018 a total of 111 collectors and 17 commission agents were interviewed throughout Gilgit-Baltistan, Pakistan using semi-structured questionnaires. Sale’s prices were low for the collectors (1.82 US\$ kg⁻¹) leading to the fact that mostly poor households are involved in harvest and sale. Traditional sun drying, and storage conditions were inappropriate resulting in a decrease of chemical fruit quality: vitamin C concentration was only 50 % in sun dried as compared to shade dried fruits, which affects sale prices for most collectors (87 %). Only 16 % of the households were involved in value addition of sea buckthorn berries. Annual subsistence through by-product development was more rewarding (378 US\$) than berry sale only (181 US\$). Based on supply chain analyses, the non-coordination among actors and missing infrastructure pose major challenges affecting the efficiency of the local businesses at large. The study also showed an urgent need to set appropriate food quality standards, to increase communication among stakeholders, and to intensify training offers especially for collectors.

Keywords: Collection, drying, *Hippophae rhamnoides*, non-regulated price, post harvest handling, vitamin C

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