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## The Role of Yak for the Livelihood of the People of Gilgit-Baltistan, Pakistan

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### Abstract

The yak (*Bos grunniens* L.) is a long-haired multipurpose bovid animal that can survive in the harsh high mountain areas of Pakistan, where this species is traditionally reared by subsistence-level agricultural households. To study the role of yaks for people's livelihood, a detailed survey was conducted in the Gilgit-Baltistan region of Pakistan, from September 2016 to November 2017. Using a semi-structured pre-tested questionnaire in face to face interviews, information from 200 yak farmers in eight valleys (25 farmers per valley) was collected. Of the interviewed yak farmers, 189 (94.5 %) were males with an average farming experience of  $20 \pm 13.1$  years. They kept an average of  $9.7 \pm 10.01$  yaks, thereof 3.6 adult females. Mostly, yaks were kept for generating offspring (68 % of households), for live animal sale (55 %), and for manure supply (50 %); furthermore, yaks also served to fulfil regular meat requirements (37 %) and those of particular events and festivals (40.5 %). Only 17.5 % of the households milked their female yaks, with an average daily yield of 1.36 liter cow and a significant difference between the 8 valleys ( $p < 0.001$ ). Only 12.5 % of the households sold milk products, for a total annual revenue of 57 € per household. Selling yaks mainly served cash purposes (95.2 % of all cases), and buyers were mostly other farmers (62.7 %), especially from the own municipality (63.9 %). Trading, that is purchasing and reselling of yaks, provided an average gain of 140 € per household and year, with significant differences between valleys ( $p < 0.01$ ), while direct selling of own yak provided an average annual revenue of 577 € per household. Compared to the average annual household revenue from surplus crop sales of 70 Euro, selling of yak, yak products and yak trading proved to be much more relevant income sources. But since the overall productivity of the yak husbandry systems in Gilgit-Baltistan is low, options to improve yak breeding and feeding as well as rangeland management are currently investigated.

**Keywords:** Gilgit-Baltistan, income, livelihood, productivity, sale, yak