

Using mixed methods to assess food security and coping strategies among smallholders in the Andean region

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International organizations and national governments in resource-scarce settings regularly support programs for the control of animal diseases as a means to improve smallholder food security. However, the impact of such programs on smallholder food security remains unclear. Instruments currently available only assess availability and access. Therefore, there is a need to evaluate the impact of animal diseases on smallholder food security with a methodology capable to capture the 4 dimensions: availability, access, utilization and stability.

Purpose: The study aim was to conduct a systematic and comprehensive investigation of smallholder food security and their main coping strategies when food security is compromised, in the context of a transnational FMD control program in the Andean region.

Methods: A mixed method design based on the join collection, analysis and interpretation of quantitative and qualitative data was used. It was carried out in 3 selected areas of the central Andean region (Peru, Bolivia and Ecuador) and involved interviews to 632 smallholders. Data were analysed at the household level using multivariate analysis which identified 3 clusters in each study area. Themes were identified using thematic analysis.

Results: Food acquisition capacity and coping strategies varied greatly across clusters. Food produced in the household, season, financial capacity, household demographics and food price were the main factors influencing variation in food consumption. Off-farm income was positively correlated to herd size and coping capacity in shock situations. Although only 1.6% households had a Food Consumption Score below the acceptable threshold, food stability was compromised across study areas.

Conclusions: By using a mixed methods approach we succeeded to assess the four dimensions of food security. The qualitative strand was crucial to evaluate food stability, a dimension frequently ignored in food security evaluations.

Relevance: These results suggest that the impact and benefits of animal disease control programmes on smallholder food security would differ across smallholders. Thus, smallholders should not be considered as single homogeneous group.