



Tropentag, September 10-12, 2025, hybrid conference

“Reconcile land system changes
with planetary health”

Credence attributes and consumer willingness to pay: A cross-country analysis of dried fruit and nut markets in central asia

EMIL BEGIMKULOV¹, DIETRICH DARR²

¹*Rhine-Waal University of Applied Sciences, Fac. of Life Sciences, Germany*

²*Weihenstephan Triesdorf University of Applied Sciences, Sustainable and resilient farming and food systems, Germany*

Abstract

Central Asia (CA) is a leading producer and exporter of dried fruits and nuts, such as apricots, walnuts, and pistachios, which are essential to rural livelihoods and forest-dependent communities. These products hold substantial potential for driving sustainable agricultural transformation. However, value chains across the region remain underdeveloped and are rarely aligned with environmental and social standards. While global demand for ethically and sustainably produced foods continues to rise, consumer preferences for such credence attributes in CA remain largely unexplored.

To address this gap, this study examines consumer preferences and willingness to pay (WTP) for key credence attributes, food safety, environmental safety, social responsibility, region of production, and price, in the dried fruit and nut markets of Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan. A Discrete Choice Experiment was conducted with 2,500 urban and rural respondents. Marginal WTP was estimated using a Multinomial Logit model, with interaction terms incorporated to capture heterogeneity by gender, age, education, and income.

Results indicate that food safety generates the highest utility and marginal WTP across all countries (ranging from €1.66 to €4.44), followed by social responsibility and environmental protection (ranging from €1.13 to €2.64), underscoring growing consumer awareness of health and sustainability concerns in the region. Nonetheless, notable cross-country and demographic differences emerge. Food safety is particularly prioritised by women and younger consumers in Kazakhstan, Kyrgyzstan, and Tajikistan. Environmental attributes are more valued by women and educated consumers in Uzbekistan and Tajikistan, reflecting emerging sustainability consciousness. Social responsibility is especially important to women in Kazakhstan, signaling rising ethical awareness in food choices. Regional origin is preferred by higher-income consumers in Uzbekistan and Tajikistan, showing that domestic products are associated with trust and superior quality. In contrast, price sensitivity is more pronounced among rural consumers in Kyrgyzstan and Uzbekistan, consistent with more constrained household budgets in these areas.

Findings suggest that differentiated certification and marketing strategies are needed to foster sustainable consumption in Central Asia. This study provides the first empirical evidence on WTP for credence attributes in the region's dried fruit and nut markets and supports efforts to develop more inclusive, ethical, and sustainable food systems.

Keywords: Central Asia, credence attributes, discrete choice experiment, dried fruits and nuts, environmental and social standards, food safety, multinomial logit model, willingness to pay