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Report on the identification of farmers' preferences for the characteristics of innovative risk management tools (Task 3.b)

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Report on the identification of farmers' preferences for the characteristics of innovative risk management tools (Task 3.b).

Authors: Elisa Giampietri, Samuele Trestini – University of Padova

Introduction

Agricultural producers in Europe are increasingly exposed to sanitary risks such as pest infestations, which traditional insurance schemes fail to adequately cover, partly due to high information asymmetries and moral hazard (Vyas et al., 2021; Meuwissen et al., 2013). As a response, the EU's Common Agricultural Policy (CAP) introduced mutual funds (MFs) as innovative, subsidised risk management tools. MFs rely on collective risk-sharing and can compensate for production losses due to uninsurable events. Despite these benefits, farmer participation remains low (Cordier & Santeramo, 2020). This report presents results from a study conducted in the Veneto region, Italy, where farmers face severe phytosanitary risks, including the *Halyomorpha halys* (brown marmorated stink bug), which has caused substantial economic damage (Moore et al., 2019; Höschle et al., 2023). The goal is to identify which features of MFs farmers value most, supporting the design of more attractive and effective instruments.

Data collection and methods

A survey was carried out in 2022 among 89 fruit growers. Participants rated different MF profiles based on combinations of four key attributes. The MF profiles varied across four attributes: deductible level, damage assessment method, risk type covered, and participation cost (tariff). These were selected based on literature, policy documents, and expert input. Each attribute had two levels. Profiles were built using an orthogonal design. Each respondent evaluated eight hypothetical MF scenarios and rated each profile on a 1-7 scale. The preferences were analyzed using a rating-based conjoint analysis (CA) (Green and Rao, 1971), allowing the estimation of the mean relative importance of each attribute and the utility estimate related to the attribute levels, also capturing utility trade-offs.

Results

The conjoint analysis revealed that among the various MF attributes, the deductible was the most influential feature driving farmers' preferences, followed by the tariff required to access coverage. Farmers in our sample clearly favored options with a lower deductible (20%) and lower tariff (0.7% of annual production value), highlighting a strong preference for more immediate and frequent

compensation and for affordability (Mußhoff et al., 2018; Doherty et al., 2021; Gassler and Rehermann, 2022). The method of damage assessment also played a role, with a marked preference for on-farm inspections over area-based averages, suggesting that farmers value accuracy and fairness in compensation procedures. In contrast, the type of risk covered by the fund, whether specific (e.g., *Halyomorpha halys*) or general, had limited influence on their preferences. Among the eight mutual fund profiles evaluated, the most preferred was one offering a low deductible and tariff, specific risk coverage, and on-farm inspection. These features align with both farmers' financial caution and their desire for transparent compensation mechanisms. These findings indicate that cost-related and operational features of MFs are far more decisive than the scope of coverage when it comes to farmers' willingness to participate.

Conclusions

This research allowed identification of which MF characteristics farmers value most, providing actionable insights for policymakers and fund designers to align such innovative tools with farmers' expectations. This study reinforces the idea that successful risk management tools must reflect farmers' priorities. For MFs, this means affordable entry, meaningful compensation for moderate losses, and transparent procedures. By emphasizing these aspects, both fund managers and policymakers can make MFs more appealing and potentially more widely adopted. Importantly, the results suggest that education and communication strategies should accompany any technical refinement. Farmers need to understand how MFs work, why they are trustworthy, and how they complement other tools in the risk management portfolio. Future research should explore behavioral adoption patterns, willingness to pay, and potential barriers to MF adoption to improve farmers participation in these innovative risk management tools and their role in sustainable agriculture.

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