







# Transitioning Amid Risk: What Influences Farmers' Willingness to Engage in Contractual Carbon Farming Programs?



## **MOTIVATION**

Contracts with payments per tonne of soil C sequestered are presented as cost-efficient instruments for GHGs mitigation in agriculture (Antle et al., 2003). But, the impact of most environmental projects are not known with certainty (Glenk & Colombo, 2013; Canales et al., 2023). Therefore, participation to result based programs such as voluntary carbon-based payments can be affected by the contributors' heterogeneity in beliefs about the uncertain impact of their contributions.

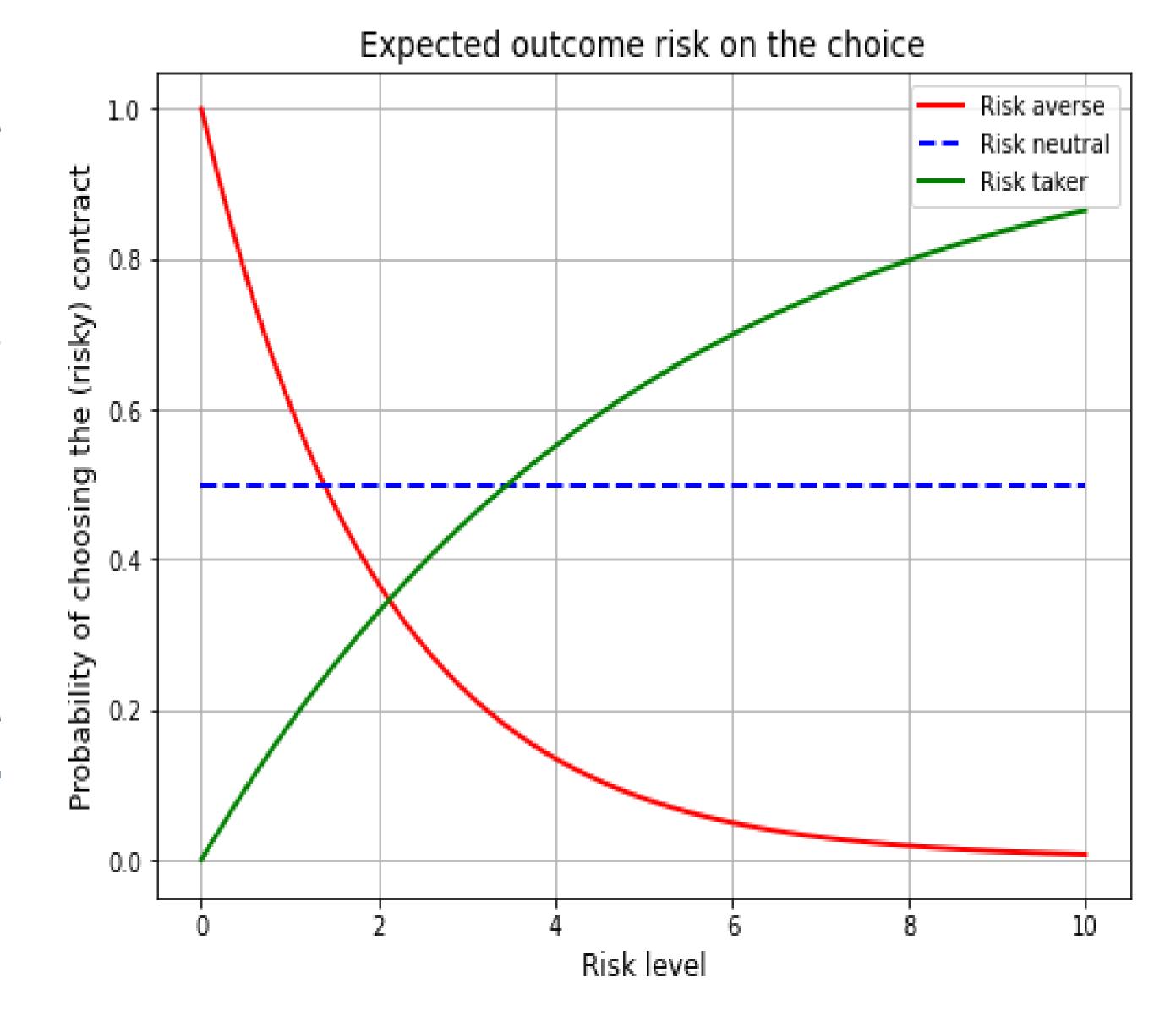
## RESEARCH QUESTION

What is the effect of outcome related risk on farmers' preference for contractual carbon farming programs?

## **METHODOLOGY**

We use a split sample discrete choice experiment to study the contractual arrangements needed to induce voluntary CF adoption:

- Integration of variable risk contexts associated to the impact of climatic and natural events on carbon farming outcomes: (1) base design no indication on risk; two experimentally varied designs with (2) low risk (30%) and (3) high risk (60%).
- contracts characteristics are: contract duration; valuation of environmental cobenefits; prepayment option; additional administrative burden; and incentive payment.



### CONTRIBUTIONS

- Estimating the willingness to accept, the risk premium and the maximum acceptable risk.
- Deriving farmers' responses to risky situations and risk preferences.
- Estimating the elasticity contract adoption to each contract attributes and risk preferences.

#### REFERENCES

- Antle et al. (2003). Spatial heterogeneity, contract design, and the efficiency of carbon sequestration policies for agriculture. Journal of Environmental Economics and Management.
- Canales et al. (2023). Conservation intensification under risk: An assessment of adoption, additionality, and farmer preferences. American Journal of Agricultural Economics,.
- Glenk & Colombo (2013). Modelling outcome-related risk in choice experiments. Australian Journal of Agricultural and Resource Economics.

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