

# Behavior in Agricultural Practices and Perceived Food Security Status in Guatemala

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## Introduction

- Being worried that food in the household would run out could reflect the actual food security situation, but it is also possible that some households are more likely to be worried than others.
- This study examines the link between perceived and actual food security status of farmers with varied behavior in agricultural practices.

## Data

- The analysis used the data from a survey in June 2016 of more than 2,000 farm households in rural Guatemala.
- In addition to farm and household characteristics, household heads were asked about behavior in agricultural practices, such as risk preference, sharing seed and input, and sharing agricultural information with their neighbors and friends.
- The enumerators also asked the spouses of household heads sixteen food security questions, adapted from the method developed by US Department of Agriculture.
- These questions included whether they were ever worried in the past three months that food in the household would run out and whether food actually ran out.
- Based on the answers to the two questions above, households were grouped into three categories.

## Methods



## Results

Group 1: Not worried (but food ran out)



Group 2: Accurate (reflected the actual status)



Group 3: Worried (but food did not run out)



### ANOVA

Sharing seed and input with others  
Sharing information with others  
Risk preference

Less frequently than group 2

More frequently than the other groups

Less frequently than group 2

### Multinomial Logit<sup>§</sup>

Sharing seed and input with others  
Sharing information with others  
Risk preference

Less frequently than the base group

Base group

More frequently than the base group

Base group

Less frequently than the base group


Base group

### Generalized Ordered Logit<sup>§</sup>

Sharing seed and input with others  
Sharing information with others  
Risk preference

More frequently as moving across the groups from group 1 to 2, then to group 3

Less frequently as moving across the groups from group 1 to 2, then to group 3

<sup>§</sup> Regressions include control variables such as wealth index, livestock ownership, land size, bean harvest in past two seasons, age, gender, education, household size, and location fixed effects.  The coefficient is not statistically significant at the 10% level.



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