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RESEARCH PROGRAM ON
Climate Change,
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INTRODUCTION

This work is implemented in the context of the Climate Smart Villages (CSV) AR4D approach, developed by the CGIAR Research Program on Climate Change, Agriculture and Food Security (CCAFS) and supported by IDRC to build evidence and co-develop context-specific and gender sensitive Climate-Smart Agricultural (CSA) practices and technologies that improve smallholder's livelihoods and resilience to climate related shocks.



Using a case study of a CSV in Guatemala, we present an integrated methodological framework to better understand adoption of CSA practices, gender disaggregated motivations and constraints in smallholder farming communities.

METHODOLOGY AND RESEARCH QUESTION

Mixed-methods: Use of quantitative data gathered through the ICT-based CSV Monitoring Plan and complemented with qualitative data from focus group discussions with men and women farmers as well as semi-structured interviews

Step 2: Description of the three types identified through the typology analysis

	Type 1: adopting farmers	Type 2: not adopting and passive farmers	Type 3: women adopting farmers
# Producers	98	78	82
Description	<ul style="list-style-type: none"> - Ladino (mestizo); - Men; - between 40 and 54 years old; - heads of household; - Perceive to have been affected by the weather shocks last year. - Tend to adopt CSA practices. 	<ul style="list-style-type: none"> - Ladino (mestizo); - Men; - older than 50 years old; - Perceive to not have been affected by the weather; - Landless farmers; - Do not adopt CSA practices or do not participate in the decision to adopt. 	<ul style="list-style-type: none"> - Women; - Young; - Uneducated; - not head of household - Participate in the decision to adopt. - Motivations to adopt: find new market opportunities or because they learned it from CCAFS.

Step 3: Enabling and constraining factors that influenced adoption of CSA practices

Factor	Assets: (physical, natural, financial) "CATIE has given us the seeds"/ seeds availability in the area (home garden)	Lack of Assets: (physical, natural, financial) lack of land ownership (home garden), lack of economic resources to buy inputs (water harvesting system, improved bean, bioferments)	Assets: (physical, natural, financial) "We didn't buy seeds because a project gave us. We only had to put 10 quetzals each and they bought the boat and gave us a granite." (home garden with water harvesting system)
	<p>Flexibility: (livelihoods and physical mobility) "That takes only about four hours and I do it when there's no work." (compost)</p> <p>Knowledge and Learning: trainings (home garden, water harvesting)</p>	<p>Perception of climate risk: "here there is not enough water, then there is no place to connect it, here what happens is that the water is very scarce here." (drip irrigation, water harvesting system)</p> <p>Lack of flexibility: (livelihoods and physical mobility) "because of time, I don't have time when we're asked for crafts" (compost, coffee with banana shade)</p> <p>Lack of social organization (relationships and social network) "so they stole it with everything and the water tube and took it away." (drip irrigation)</p>	<p>Knowledge and Learning: trainings (ecological stoves, bio ferments, home garden with water harvesting system)</p> <p>Flexibility: (livelihoods and physical mobility) "It's easy to do, it doesn't take long" (Bioferments)</p> <p>Social organization "I have an uncle who worked here and he has the water tube that I use here, and that since two years ago I did." (home garden with water harvesting system)</p> <p>Perception of CSA option efficiency "This bean is faster and can be planted nearby no problem, the one before could not be planted nearby because it got tangled and did not growing well." (improved bean)</p>

Step 1. Which CSA options have been adopted by the farming households?

Step 2. Who: Which type of household within the community is adopting CSA options?

Households' adoption types (explained by adoption of CSA practices)

Individuals who live within adopting and non-adopting households (characterized by socioeconomic aspects and intra-household dynamic related to adoption)

Step 3. What are the motivations and enabling and constraining adoption factors for men and women within each household type?

Gender-disaggregated qualitative study: understanding of motivations and enabling and constraining adoption factors including intra-household dynamics (division of labor and resources)

RESULTS in Guatemala Climate Smart Village (CSV)

Step 1: CSA options adopted .

Type of Practice	Proportion who reported adoption:	
	Men	Women
Improved variety of black beans tolerant of drought	14.88	18.30
Home gardens with water harvesting	9.09	15.13
Home gardens without water harvesting	65.29	63.16
Drip irrigation	19.83	15.13

CONCLUSIONS

- More women than men adopted improved and drought tolerant variety of black beans and home garden with water harvesting, while more men adopted home garden without water harvesting and drip irrigation.
- Gender, as well as age, climate perception, land ownership, position in the household, education, decision making dynamics were relevant factors for the elaboration of adoption types.
- Assets were the most frequently mentioned factors that enabled (type 1 and 3 of farmers) or constrained (type 2) adoption of CSA practices.
- According to the adoption type, specific combination of factors enabled or constrained adoption:
 - For type 1, the most important factors that fostered adoption were assets, flexibility and knowledge and learning.
 - For type 3, the most important factors that fostered adoption were assets, knowledge and learning.
 - For type 2, the most important factors that constrained adoption were assets and perception of climate risks.

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