Sustained Presence and Utilization of the Arborloo in Rural Ethiopia

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Results

Compelling evidence for high rates of arborloo adoption
• 67.0% of households had an arborloo in the last 10 years
• No clear relationship between household wealth and arborloo adoption

Strong evidence that arborloo usage was sustained in intervention communities
• Among households that had an arborloo in the last 10 years, 76.2% had sustained arborloo use
• Factors such as pit usage, slab availability, religion, cost, and arborloo planning impacted arborloo sustainability
• No clear relationship between household socioeconomic status and their ability to sustain arborloo facilities

Background

Public Health Problem
In rural Ethiopia, less than 20% of the population has access to improved sanitation. This lack of sanitation has no doubt contributed to high levels of diarrhea, trachoma and helminth infection.

The Arborloo

The arborloo is a low-cost ($5USD), composting toilet. It is intended for use in rural areas with poor sanitation coverage and is considered an improved ecological sanitation option that is designed to utilize composted material for tree planting. By eliminating the barriers of cost and time, the arborloo has the potential to increase the rate of rural sanitation adoption in Ethiopia, which could in turn decrease the burden of sanitation-related infectious disease.

Catholic Relief Services Project
• Began promoting the arborloo in 2004
• Sanitation was promoted because Ethiopia has low coverage
• Arborloo was chosen because it is an affordable and easy to construct option for rural households
• CRS has helped households construct more than 80,000 arborloos since 2004

Target Location and Population
• All households in gotts (communities) where CRS implemented the arborloo program in Oromia Region, Ethiopia

Methodology

Data Collection
• Conducted cross-sectional survey of 690 adults in 20 villages
• Random selection of villages and households
• Interviewed 24 key informants
• Conducted 33 in-depth interviews

Survey
• Formulated quantitative and qualitative research tools
• Collected data on program reach (% of households in target communities that start using the arborloo) including:
  • Types of households reached
  • Factors associated with households beginning arborloo use
• Collected data on sustainability of arborloo use including:
  • Factors associated with households continuing arborloo use

Data Analysis
• Performed an in-depth analysis of the data using SAS 9.3
• SES was assessed using principal component analysis
• Bivariate analysis and multivariate logistic regression model
• Qualitative data themed and triangulated with quantitative results

Conclusions

As a low-cost sanitation option, there is a clear role for the arborloo in rural Ethiopia to increase the rate of sanitation adoption and as an entry point on the sanitation ladder.

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