

**SOCIO-ECONOMIC IMPACT OF SMALLHOLDER  
IRRIGATION PROJECTS ON HOUSEHOLD FOOD SECURITY  
IN VHEMBE DISTRICT OF LIMPOPO PROVINCE,  
SOUTH AFRICA**

**BY**

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## ABSTRACT

The aim of this study was to assess the impact of smallholder irrigation projects on household food security. It has been found that access to water for livestock and for the irrigation of crops, including food crops, is one of the ways poverty and food insecurity can be reduced in rural areas.

This study used both primary and secondary data to analyse the impact of smallholder irrigation projects on household food security. The primary data was collected by using a pre-tested questionnaire administered to selected farmers in the study area. A probability sampling method (i.e. pure or simple random sampling technique) was used to select the respondents. From a total population of 3,236 small-scale irrigators in Vhembe District, 150 irrigation farmers were randomly selected while 50 dryland farmers were selected adjacent to the selected irrigators. A logistic regression model was used to analyse the impact of smallholder irrigation projects on household food security. A comparison of the variables in the model was carried out between irrigators and dryland farmers in order to assess the impact of both on household food security of farmers in the Vhembe District Municipality.

The results obtained showed that the proportion of food secured households was higher among farmers who were on the irrigation projects that is, 86.3% as compared with 53.0% for those on dryland farming. From the analysis, irrigation and per capita aggregate production were found to have a positive influence on the probability of households being food secured. This means that the likelihood

of food security increases when farmers increase agricultural output and have access to a piece of land on the irrigation project. The food security of households is also dependent on other factors such as household size and farm size. These two variables were found to have negative and significant effects on household food security meaning that the likelihood of a household being food secured decreases with an increase in household size and farm size, even though, increase in farm size was expected to affect food security positively but was not due to larger farm sizes on dryland farms. Irrigation is a major contributor to household food security as water is the most limiting factor to agricultural production in the area. Water has obvious advantages in that it increases farmer's yields, promotes diversified farming and increases household incomes.

Farmers who are on irrigation projects are more likely to be food secured than dryland farmers. Therefore, with concerted support from government, and all stakeholders, food security can be enhanced at the household levels. Also, education and extension training are essential for farmers so that they are able to adopt new technologies. The study suggests that households that need to be targeted for food aid are those with large families, and those without access to irrigation projects. Also to be included are those families with few assets, and those without access to agricultural land and implements.