

**Do tree shelter-belts have the relative advantage to convince farmers to grow them: an empirical example from the Gezira Agricultural Scheme, Sudan.**

Siddig El Tayeb Muneer

Department of Agricultural Extension and Rural Sociology  
Faculty of Food and Agricultural Sciences  
King Saud University

**Abstract:**

One of the major environmental problems facing the arid, semi-arid and dry sub-humid areas of the world and causing substantial reduction in agricultural production and agricultural income of many farmers is desertification. In Sudan desertification is considered one of the main causes of low crop productivity in many areas, among which is North West part of the Gezira Agricultural Scheme. In 1991 the scheme administration started establishing a tree shelter-belt to protect the entire scheme from desertification, starting with the most affected areas (like Abu Gota and Bagigah blocks) in the North West part of the scheme. This study is intended to examine the effect of this tree shelter-belt in mitigating the negative impacts of desertification.

Abu Gota block of the Gezira Agricultural Scheme which is one of the most affected areas by desertification and where the tree shelter-belt is established was chosen as the study area. The data was collected through personal interviews with a stratified random sample of 300 farmers. Chi-square test is used to analyze the data.

The study results indicates that farmers whose farms are located close to the tree shelter-belt were less affected by desertification and consequently they obtained high agricultural production and income compared to those whose farms are located far from the tree shelter-belt and they tend not to resort to poverty coping strategies such as hiring their family labor to others and pulling their children out of school.