

Slope Farming and Land Use in the Densely Populated Mountain Region of Southwestern Uganda

Year: 2014

Place of fieldwork: Republic of Uganda

Name: Kohjun HORI

Key Words: land use, slope farming, indigenous farming system, population increase

Research background

In southwestern Uganda, rapid population increase has led to crop field expansion and deforestation. People face severe shortages of land and food in the densely populated area.

The research area under consideration is the Kabale District of southwestern Uganda, which lies at an altitude is of 1,220 m to 2,350 m. In the slope areas of this District, the shapes of the crop fields are irregular depending on the landform. This feature exacerbates soil loss and agricultural production.

Research purpose and aim

This research aims to clarify the land use and cultivation of local farmers in Kabale District. The ethnic group in this region is Kiga, which comprises Bantu speaking people. Local farmers mainly cultivate sorghum, common beans (*Phaseolus vulgaris L.*), Irish potato (*Solanum tuberosum L.*) and sweet potato (*Ipomoea batatas*) on the mountain slopes for their livelihoods. Kabale District is one of the highest population density regions in the country, with 275 people per km². Local farmers have limited arable land and agricultural intensification is an important factor to improve the agricultural productivities.

Continuous cultivation and rainwater cause soil erosion and landslides on the steep slopes. I investigated crop farming and land use under the severe environments.

Research achievements by fieldwork

The research period was for 90 days, from June 11 to September 1 in 2015 at R village of Kabale District. In this area, there are three rainy seasons: 1st rainy season is three months from December to February, 2nd rainy season is three months from March to May and 3rd rainy season is also three months from September to November. The rest period from June to August is dry season. This research period was the dry season.

Farmers planted sorghum in the 1st rainy season and beans in the 2nd rainy season. Both crops were harvested at the end of dry season. Many fields on areas with slopes of over 30° are found in this village. Farmers are eager to maintain terraces along contour line in order to prevent water run-offs and soil erosion.

The farmland was customarily divided into 15 lots. The farmers recognize the ridge line of mountains as a lot boundary. These lots are each given local name. In research village, the planted area of beans and sorghum is almost equal, 61.9 ha and 58.4 ha. In each lots, the cultivated area was partial (Figure 1). The farmlands of sorghum and beans gathered in the lots (Photo 1 and Photo 2).

According to the interviews from the villagers, they aimed to plant sorghum in the lot in order to prevent crop

damage caused by birds. Sorghum and beans are vulnerable to the bird damages.

The villagers have small patches of farmland in plural lots. They plants specific crops in each lot and make crop rotation. In research village, it is difficult to divide the small portion of farmland available to plant several crops. They make crop rotation in their plural farmlands to prevent crop damages.

Implications and impacts on future research

During the research period, I collected data on the cropping system and land use from the 1st rain season to dry season. In the following year, I plan to collect the same data in the 3rd rain season in order to complete cropping system of all the year round. The farmers cannot work efficiently by using agricultural machines and the both productivities of land and labor tend to be low. I conducted further research on daily practices and the indigenous knowledge of slope farming and coping strategies with soil erosion and land shortages.

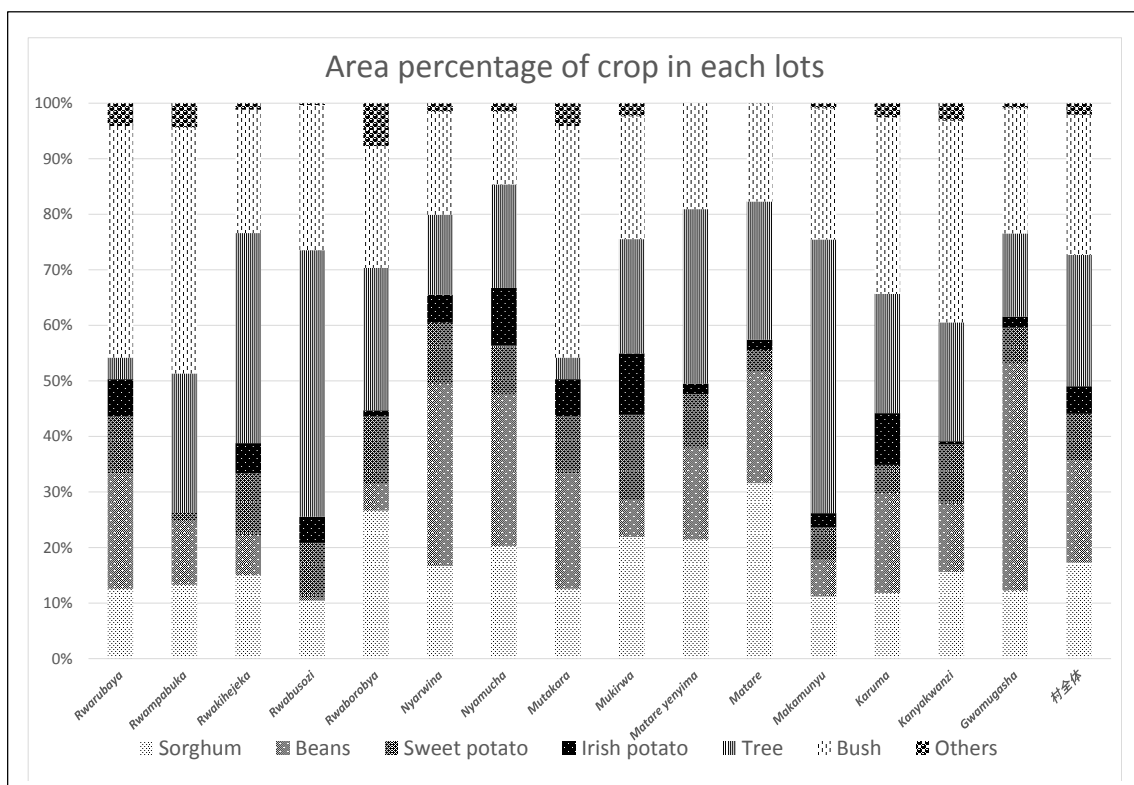


Figure 1 Area percentage of the crop in each lots



Photo 1 Farmland of sorghum



Photo 2 Farmland of beans