Short-Term Dynamics of Rice Varieties in the Middle Gambia River Basin

Year: 2005
Place of fieldwork: The Gambia
Name: Yumiko Katayama

Key Words: Gambia River Basin, rice cultivation, variety, usufructuary of land

- Research background

In the river basin of The Gambia, Mandinka men have long been growing mainly pearl millet, sorghum, and groundnut in fields, while women have engaged in rice cultivation along the river. In this area, the crop yields can be irregular because of a large fluctuation in precipitation. In my research village, located in the middle Gambia River basin, men grew several varieties of pearl millet and sorghum, and women grew many varieties of rice (*Oryza sativa L.*) in order to minimize the impact of precipitation fluctuation. But there is no more cultivable land because of rapid population growth in recent years. Therefore, the self-sufficiency in grains of this village is only 30%.

- Research purpose and aim

In my previous research, the following two points were revealed.

① There are more varieties per plot in the individual fields where crops belong to the individual cultivator, than in the collective fields where crops are for consumption by the cooking unit.

② Women tend to introduce new rice varieties to individual fields, and familiar varieties to collective ones.

These indicated that women's strategy that unknown varieties were grown in the individual fields for testing, and safe varieties grown in the collective fields for ensuring food security for their cooking units. So the aim of this study is to reveal the dynamics of the rice varieties over a period of four years at both types of fields for supporting this suggestion.

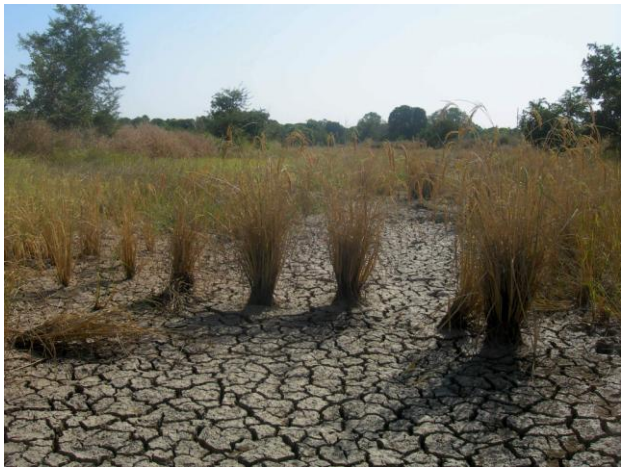
- Results and achievements of fieldwork

Rice varieties cultivated by 17 cooking units were observed from 2005 to 2008. 40% of cooking units changed their rice varieties in collective fields, while 70% of women changed in individual fields. Their motives for introducing new varieties were not positive or did not have an active reason, for example, lack of seeds because of the lack of water, and unplanned acquisition of seeds when they visited their acquaintance or worked with others in rice fields. These results support the above- mentioned women's strategy that they use the two types of fields properly, and they ensure the food security of their cooking unit which is the important consumption unit.

- Implications and impacts on future research

In my study, I could not describe the women's management strategy in its entirety, because of a lack of continuous

data about rice yields. The data about yields in both fields will be gathered continually, and interviews with old women will also be carried out for the analysis of the middle-term dynamics of rice varieties for further study.



Picture1: rice field of lower productivity caused by excessive rain

Picture2: rice cultivated in a collective field

Picture3: three rice varieties per plot