

Relationships Between Diversity of Gramineous Crops and Various Types of Labor in the Middle Gambia River Basin

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Place of fieldwork: The Gambia

Name: Yumiko Katayama

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- Research background

In the river basin of The Gambia, a small West African country, Mandinka men have long been growing mainly pearl millet, sorghum, maize and groundnut in fields far from the river (upland), while women engaged in rice cultivation along the river (lowland). In my research village, located in the middle Gambia River basin, the population density reaches 400 people per square kilometers because of the rapid population growth of recent years. In addition, rainfall can be irregular, for example during my research period, 2005 to 2007, precipitation varied from 700 to 1200mm. Therefore, the self-sufficiency in grains in this village is only 30 to 40%.

- Research purpose and aim

The rice fields are divided with important distinctions among the Mandinka people: *kamanyang* are individual fields where crops belong to the cultivator; *maruo* are collective fields where crops are for consumption by the cooking unit “*sinkiroo*”. In my previous study, it was suggested that these multileveled social structures contribute to ensuring their food security during the consumption phase. So the aim of this research is to inspect various factors ensuring their food security during the production phase.

- Results and achievements by fieldwork

In the research village, 2 varieties of pearl millet, 3 of sorghum and maize, and 49 of rice were found. Each man grows 1 to 3 varieties of millet with ox-drawn plough either by himself or with 1 to 3 other persons, while each woman grows 2 to 12 varieties of rice by human-power utilizing a greater number of people, sometimes over 50. There were more varieties grown in the individual fields (*kamanyang*) than in the collective fields (*maruo*). This was done to spread labor at harvesting time because they have smaller labor size in the individual fields. And in 36 cases out of a total of 60, crop seeds were brought from other villages, and 24 were from within their own village. Furthermore, 90% of varieties from within their village were obtained at the time of group working. These practices suggest that the individual and group mechanisms of the land and labor systems contribute to maintaining the diversity of crops.

- Implications and impacts on future research

In this study, I could not explain how the villagers decide which varieties to plant, from a productivity point of view, because each variety had big fluctuations in yields during my research period. And, although people explained to me about the chronic shortages of precipitation in this area, women haven't been introducing early rice or Nerica which are tolerant of dryness. This seems to be contrary to the goal of stabilizing their food supply. Further study will describe their agricultural culture multilaterally through the analysis of historical change, agricultural techniques and social aspects.



picture 1: 5 varieties of rice harvested
in woman's individual fields



picture 2: about 50 women working together
in a collective field



picture 3: they have obtained a bunch of rice after group work