Rice cultivation in Africa <Part 4>

Rain-fed rice cultivation in Guinea

Not many people know that the West African country Guinea has a 2000-year tradition of rice cultivation. The staple of Guinea is, of course, rice, and it is estimated that 90 kg of rice per person is consumed per year. The precipitation of Guinea is over 4,000 mm in the Capital Conakry. Inland, the rainfall is also high - between 1,500-2,000 mm - and most of the rain falls during the rainy season between May and October. There are generally four types of rice cultivation in Guinea, namely: 1) Upland rice: upland rice cultivation on the slopes of hilly areas using the shifting cultivation system, 2) Bas fond rice: lowland paddy rice cultivation in the inland area, 3) Floodplain rice: extensive rice cultivation using the vast floodplain along the Niger River, and 4) Mangrove rice: lowland paddy rice cultivation in the coastal lowland area. Let us introduce the first three types of cultivation.

Upland rice cultivation in the mountains and on slopes is operating under rain fed. On the contrary, paddy rice cultivation used to be dependent on rain fall and water naturally running along the land contours in the rainy season, but after achieving independence, the country made (and continues to make) efforts to promote rice cultivation with active water control by introducing irrigation facilities. However, most cultivation is still rainfall dependent, because of the destruction of facilities by floods occurring during the rainy season and the introduction of inappropriate facilities and inadequate management.

Paddy rice cultivation is done using both direct sowing and transplanting methods. In Bas fond rice cultivation, the transplanting method is mainly used as the water flow is fast. In floodplain cultivation, both direct sowing and transplanting methods are used depending on the location and conditions. The paddling by dismantling borders and lumps of soil from the previous cultivation was also observed. Seedling production for transplanting is conducted on banks near paddy fields or along the farm roads. Seeds are sown after hastening of germination, and are grown within 30-40 days. In the case of Bas fond rice cultivation and floodplain rice cultivation, as they are cultivated without having any control over water, planting timing is totally dependent on rainfall therefore, sometimes seedlings can grow too high. If this happens, the tips of the seedlings are cut before planting. Planting is done randomly. After planting, there is little tending activity such as water management or weeding. Ear level harvesting is done and post harvest treatments are done using traditional methods of drying and threshing in the field. Seeds are mostly self harvested. With these traditional cultivation methods, there is a significant amount of loss and the production rate is low with an average of 1.5 tons per ha in the country.

In Guinea, rice production cannot catch up with demand, and a large amount of rice is imported. To remedy this, the Guinean Government has been promoting increased rice production. In 2008, the rice cultivation area size was 830,000 ha, with 1.45 tons per ha yield. The total production was approximately 1.2 million tons. However, the statistics are a little doubtful. In any case, Guinea is a member of the first group of the Coalition for African Rice Development (CARD), and has formulated the National Rice Development Strategy (NRDS). The strategy aims to achieve self sufficiency in rice and export through the rice production increase plan, with targets of dramatically increased cultivation area of 1,600,000 ha with 2.73 million tons of production per year by 2018. In the NRDS, in order to achieve the targets, it is planned to introduce improved varieties including NERICA, increase the use of fertilizers and pesticides, improve processing techniques, consolidate and repair irrigation facilities, and create a focus on human resource development.

NERICA was introduced through pilots in 1997 as an upland rice variety, and a seed production project started in 1999. Seed production has been supported since then by the Japanese government and NGOs. Achieving self-sufficiency in rice production is an extremely important policy, leading to the reduction of imports and the outflow of foreign currency. Many farmers are hoping to benefit from the NRDS and increase rice production and improve their livelihoods.

Growing seedlings on the border

Upland rice cultivation on the slopes

Transplanting paddy rice in Bas fond

Paddy rice cultivation in floodplain