

Rice Cultivation in Africa <Part 6>

Summary of the series and future challenges

In the past five issues of AAINews we have reported on rice cultivation in Africa. These included the formulation of the Development Study on National Irrigation Master Plan in Tanzania, upland rice cultivation in Uganda, current state of rice cultivation in Guinea, and Area-focused Training Course on Upland Rice Variety Selection Techniques for Africa.

There are a number of ways for classifying the rice cultivation systems in Africa. Although some classification systems are unique to individual countries, the four classification types introduced in the 4th part of the series can be applied for different parts of Africa. These are namely slope of hilly area, inland area, floodplain and coastal lowland area. In this last part of the series, we will summarize case studies that were introduced in each part in the series using these four classifications.

In the first part, we introduced the efforts of the Coalition for African Rice Development (CARD) to increase rice production in Africa. CARD classifies rice cultivation system in three categories namely irrigated paddy field, rain-fed lowland wetland, and rain-fed up land field. The organization works on selection of high-yield and locally adapted varieties, improvement in cultivation techniques and promotion of necessary inputs (water, fertilizer etc) to increase yield. Three geographical conditions, namely inland area, floodplain and coastal lowland area are applicable in Guinea. Depending on the availability of irrigation systems, coastal lowland can be divided into two categories - irrigated paddy field or rain-fed lowland paddy field. Slope of hilly area would be rain-fed up land field.

In Tanzania introduced in part two, the annual precipitation is between 500-1,000 mm. Whether they grow rice in paddy in inland area or in floodplain, irrigation is basically essential. Therefore the nation-wide irrigation master plan was formulated. Given that there are insufficient financial resources, and insufficient technical and organizational capacity necessary for irrigation facility development and management, a manual was produced focusing on small scale irrigation facility development. Official guidelines were also developed for establishing a system for development and promotion of small scale irrigation led by prefectural government with full participation from local farmers.

Part three focused on upland rice cultivation in Uganda, introducing local farmers' efforts to stabilize upland rice cultivation in inland area which is considered to contain a high level of

water and nutrients in the soil compared to slope of hilly area.

In the example of Guinea in Part four, we reported on basic and simple paddy rice cultivation in inland area and floodplain along rivers. The country's development plans promote development of low-input irrigation facilities and rice cultivation that is appropriate for local environmental conditions. Unlike Tanzania, Guinea has an extremely large amount of rainfall and experiences frequent flooding. These aspects need to be considered in irrigation facility planning and consolidation, as well as in development of new cultivation techniques.

As understood in these examples, even with shared geographical elements, the environment for rice cultivation differs depending on rainfall and its distribution. It is important to identify appropriate technologies for the particular environments. It is also important to understand differing appropriate cultivation environments both for paddy rice and upland rice.

Rice, whether it is paddy or upland, requires a large quantity of water compared with other crops. In order to increase the productivity and its stability, it is essential to deploy wisdom to effectively utilize limited water resources. Effective utilization which AAI has been working on is considered to be becoming critical. The status of rice in Africa is different from that in Asia. Rice cultivation needs to be an integral part of the multiple cultivation system involving various crops that are appropriate for the local environmental conditions. In order to achieve this, it is necessary to develop techniques, ensuring effective utilization of a variety of geographic conditions, and diversification of crops and cropping periods. Furthermore, in continuing to be involved in rice cultivation in Africa, AAI will try to foster relationships with the 50 ex-participants from 16 countries who participated in Area-focused Training Course on Upland Rice Variety Selection Techniques for Africa introduced in Part five.

