

Training Course on Upland Rice Variety Selection Techniques

Our company undertook the assignment to lead the area focused training course “Upland Rice Variety Selection Techniques for Sub-Sahara Africa”, which was held at Tsukuba International Center (TBIC) from July 27th to October 13th in 2006. This training course aimed to assist with the promotion of the “NERICA” variety of rice in Africa. NERICA is a hybrid of African and Asian rice varieties and was developed at the Africa Rice Center (WARDA) with the aim of improving rain-fed upland rice cultivation in West Africa. This variety has beneficial features of both African and Asian varieties and has qualities fit for the African environment such as drought and weed resistance, as well as a high yield quality (a characteristic of the Asian variety). As a result, NERICA is attracting much attention as a variety which, once widely introduced, could have a major impact on agricultural development in Africa. In recent years, efforts have been made in African countries to promote various rice varieties. In this course, we focused on developing human resources in individual countries, which can contribute to the sound selection of high quality varieties of upland rice including the NERICA variety, placing an emphasis on techniques to select varieties which is a basic skill necessary for effective variety promotion. The course curriculum concentrated on Japanese techniques for upland rice variety selection which have been producing and promoting many excellent varieties of upland rice. We placed special consideration on techniques that are applicable in the participants’ countries.

Ibaraki Prefecture, where TBIC is located, is the Japanese production center for upland rice, producing approximately 70% of all the upland rice in Japan. The area around TBIC used to have many upland rice fields, and some of the fields still remain today. We could visit upland rice farmers to see their work at first hand, and this made the center a very appropriate venue for this course. In addition, the Ibaraki Agricultural Center is an institution with many years of experience as an officially designated government nursery. Unfortunately, the official upland rice development project ended in March 2006 due to diminishing upland rice cultivation areas, however some work such as selection testing for recommended upland rice varieties is still continuing. The laboratory and experimental farm implementing upland rice variety testing is located in Mito City, a one-hour trip by bus from TBIC. This enabled us to organize three visits to the farm during the course duration, and we could learn theory and practice of upland rice variety selection directly from the researchers who had been working in this particular field.

With assistance from national research institutes and universities, we organized 41 lecture units¹, 51 practice units and 10 visit units within less than 3 months. However, the core of the training course was undoubtedly the practical session to learn variety selection testing at the experimental field at the JICA Center. As the training period was short, we used a readily prepared plot, and the practical sessions focused on investigation after ear growth. Each of the 10 participants was in charge of a total of 9 testing fields consisting of 3 varieties with 3 replications, and was responsible for checking ear growth, shapes and yields. By repeating the exercise their techniques improved and became more accurate. Furthermore, by examining different varieties with their own eyes and actually touching them, they could master how to observe and understand different variety-specific characters in each plant. For the participants it was quite a tight schedule, however, everybody worked very diligently and produced good results. They had to start ear investigation as soon as they arrived in Japan and their yield investigation finished just one week before the result reporting session was scheduled.

We are informed that the NERICA extension project is seen as an important project in the home countries of the 10 participants. We look forward to their good work in their own countries and hope to assist them in their efforts in some way.

(By Kojima, November 2006)



Practical exercise at Biotechnology Institute in Mito City



Sampling from the variety selection experimental plots in TBIC



The participants working on the yield investigation exercise in TBIC

¹ One unit = half day (2.5 hours)