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AAINews

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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 units[1], 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)

Part 2 – Follow-up Type Coordination Activities

Since 1999 for 5 years Tsukuba International Center (TBIC) organized the Tajikistan Vegetable Cultivation Course and trained a total of 60 participants. According to the follow-up survey conducted in 2003 and 2004, the participants were working hard to extend the technologies which they acquired in the training in their respective fields, applying the technologies at farms they are in charge of and with farmers they deal with. The 2004 survey triggered the formation of an alumni association of ex-participants, which has recently become a government accredited NGO. This enables us to establish a system to support our ex-participants who are working in various parts of Tajikistan. The first cooperation activity of the alumni association is to respond to the ex-participants request to support the introduction of green houses to expand cultivation seasons and allow year-round cultivation of vegetables. As there is a serious shortage of fresh vegetables in winter, this would greatly contribute to solving a problem Tajikistan faces. This also leads to support for the alumni's activities to transfer the technologies they acquired in Japan by applying them in a way that fits situations in Tajikistan. In addition, in the long run it is expected that by assisting in the production of a stable and year-round supply of fresh vegetables, our support will also contribute to export promotion of fresh vegetables and processed agricultural products. In fact, a pilot project is planned with the ownership of the alumni association. It is envisaged that with close monitoring of results of the pilot and making the most of lessons learned, the project will evolve into the next stage aiming to improve household economies and stabilize farming village life.

In the Southern African Vegetable and Upland Crops Cultivation Technique Course, a total of 15 participants were trained. Many of the participants have been working to apply the techniques they learned in Japan in their own countries. However, there has not yet been sufficient post-training follow-up support for the participants. As the quality of training courses increases, requests have reached JICA from ex-participants for their activities in their countries. It is highly important to respond to their requests as much as possible, in order for TBIC to ensure positive results of training courses and to ensure the visibility of its support activities. Therefore, it is very important to conduct a follow-up survey with the aim of understanding and evaluating the legitimacy of support requests from ex-participants. If a budget for training follow-up can be made available, it is an idea to support the development of a concrete action plan. Then, for viable proposals, we could introduce various possible funding sources such as the Japanese Embassy's Grassroots Grant Assistance and JICA's grass roots technical cooperation projects, and assist the ex-participants in submitting a funding application. AAI has so far introduced the Japan Fund for Global Environment and AEON Environmental Foundation grants to local NGOs that have been steadily doing a good job.

As indicated in the above examples, a thorough follow-up is necessary to develop new technology cooperation activities based on support for ex-participants work in their countries. Follow-up activities are an essential component of training programs, and a necessary budget should be provided for them within the training program budget. In recent training programs, the development of an action plan is a mandatory activity designed to make effective use of knowledge and skills obtained during training courses. Many participants take such an action plan formulation very seriously. Very promising action plans are also produced in the end, after a presentation session whereby invaluable suggestions could be obtained from participants. For promising action plans, it is necessary to provide further technical support or to support implementation of action plans by advising on formulation of a viable proposal and application. These supports are also an important part of follow-up activities. It is considered that good follow-up activities do not only ensure maximum impact of training programs, but also contribute significantly to formulating projects that respond directly to peoples' needs.

Farmers at a follow-up seminar conducted on the request of ex-participants in Tajikistan

Visiting an ex-participants in Botswana as part of a follow-up survey using the Muscat Fund

Reconsideration of Support Activities for Agriculture and Farmers – Comparison between Syria and Japan

Part 2 – Trend of the Public Extension System

In this part, we would like to compare trends of the public extension system in Syria and Japan, as the system can be regarded as the core of support activities for agriculture and farmers. This part is an introductory phase and in the next issue we plan to discuss the relationship between research and extension activities in Syria, as well as challenges they face.

Japan's case

Japan's extension system was established through the post-war democratization process of the country. The system evolved around the cooperative agriculture extension projects of the national and local governments. Japan's cooperative agricultural extension projects have developed a multi-layered extension system such as teaching about farming by agricultural cooperatives, work by private companies and by farmers themselves. At the same time, compared with other industrialized nations where privatization is the trend for public extension systems, it is a characteristic of the Japanese system that the national government has been the main arm of the country's extension activities. The pillar of the public extension systems has been to nurture "thinking farmers", and agricultural improvement and extension workers are expected to teach farmers as both advisors and servants. The qualification exam for agricultural improvement and extension workers is conducted by local governments. To become a specialist technician who teaches agricultural improvement and extension workers, one has to pass a national qualification exam. The specialist technicians have been expected to bridge between researchers at experimental centers and agriculture improvement and extension workers. However, in 2004, when the Agricultural Improvement Assistance Act was amended to abolish mandatory establishment of regional agricultural improvement and extension centers by the national government, the extension organizations came entirely under the jurisdiction of local governments. This change meant that the specialist technician qualification was also abolished. The specialist technician qualification was amalgamated with the agricultural improvement and extension worker qualification creating a new national qualification of agricultural extension advisor. The agricultural extension advisors are expected to possess higher expertise and skills that can respond to increasingly varied issues and the sophisticated needs of farmers. The amendment was a reflection of many phenomena of that time, including decentralization trends of government administration, decrease of farming households, merger of municipalities, villages and agricultural cooperatives, marked reduction of agricultural extension project budgets, and promotion of government administration reform.

Syria's case

As in the case in Japan, in Syria, extension activities are also led by public institutions. The extension department of the central government and the regional department of agriculture at a prefecture level conduct extension activities in a cooperative manner. However, Syria has a centralized government, much more so than Japan. Extension projects tend to follow a top-down approach, with policies and technologies being communicated from the central to the local governments. Therefore extension workers often control farmers, and are expected to act like the police, taking action against illegal planting quotas. This is similar to pre-war extension programs in Japan. In those days, extension workers were sometimes seen more as the police with state power, rather than as advisors for farmers. In Syria, extension workers are considered as convenient communicators to spread central policies to farmers, as they are positioned at the end of the top-down administration. However, most of the extension workers are from villages and most still live in farming villages. Most of them farm along with their formal jobs. Unlike Japan's case whereby new graduates without actual experience get jobs as extension workers, it is Syria's biggest strength that extension workers themselves are farmers. The drawback is that their technical levels are generally low. Therefore, the Syrian government is exploring in its on-going reform effort to build a system to position specialist technicians with high level knowledge and skills who would support the activities of extension workers.

An extension worker (right) and counterparts (left) interviewing farnmer at an apple farm in Kafr Hour Village, Rural Damascus

Mini Series: Sequel to "Designing Roots"

Part 3: Extension Methods for Appropriate Techniques already developed

Previously, we developed long roots cultivation techniques and the use of stones in cultivation. At this next stage, it is now an important task to extend the techniques in the field. In the field, people have been repeating trials and errors to promote the techniques, and from these efforts we feel that we have been slowly learning what would be effective extension methods. We would like to introduce a taste of such methods.

Firstly, tree planting activities in Mali supported by the NGO "Sahel no Mori". We suggested a "multiple site and stage model." With this method, local residents themselves implement activities using techniques and materials appropriate to each site. They then increase the number of small sites. As a result, under extremely harsh conditions, they are avoiding or spreading risks of project failure between the different sites. The whole operation is small scale, with multiple sites, and is conducted by a small number of people. At some sites trees are one year old, and at other sites they are only 2 weeks old, which provides live information on the various growth stages of planted trees. We have learned that this is a very important motivating factor for local residents who may be interested in starting their own activity.

Secondly, when considering tree planting as an integral part of water basin conservation, the notion of resource management becomes extremely important. Generally, stones covering soil are seen as obstacles to agricultural development or tree planting. We would like to suggest ways to effectively utilize stones, considering them as important resources. In other words, under large stones or gaps between stones and soil, there is sometimes very fertile soil created by micro-organisms adapted to specific micro climatic conditions. Therefore, when one plants seedlings between stones, they do not only grow well, but are also protected from animals. Moreover, if one piles stones, they have water saving, soil erosion prevention effects, as well as wind breaking effects. As it is, in an effort to spread technologies, it is important to take into consideration micro topographical conditions and the utilization of obtainable materials as resources.

In tree planting activities in arid areas, considering the degree of soil moisture, it is normal practice to plant during the rainy season to prompt rooting of seedlings. In contrast there is also a move towards planting deliberately in dry season. The rationale is that if planting is done according to the soil moisture level during a dry season, making sure that the seedlings will survive through the season, it would be certain that the plants will grow well as the rainy season would come next. In addition, farmers are generally not as busy in dry seasons as they are in the rainy season. This provides another very good reason for planting trees in dry seasons. In fact, "Sahel no Mori" implements dry season planting in villages around Tominian in Mali. The good records of rooting and growth have been surprising villagers.

What is often done to promote technologies is to gather village representatives in a large town, explain techniques and the thinking behind them inside a conference facility, followed by a field visit. Here, we would like to suggest what one might call a field workshop method. With this method, technology promotion is done in villages, hence participants are villagers who are considering planting trees or who have planted trees. The main activities are actual work (digging holes, planting seedlings and building a protective fence etc.), rather than just sitting and listening to a lecture in a classroom. As these activities take place in an open space, children can also observe. By actually doing work in a village, one can also find enthusiastic villagers and children. In this way, it is expected that continued technical support can not only open a path to their economic stability but also promote higher skills and knowledge in villages by nurturing the next generation of leaders.

Tree planting in the dry season

Field workshop

Children surrounding and watching the workshop