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AAINews

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An Introduction to the Farmer Field School (FFS) in the Community-Based Forest Management (CBFM) Programme in the Philippines

The AAI mainly targets the Middle East and African countries so the Philippines, in South East Asia, was not particularly familiar territory. However, I had an opportunity to visit the country as a short-term JICA expert and my main duty was to implement extension activities as part of the Community-Based Forest Management (CBFM) Program. This is an on-going technical cooperation project. The extension activity was designed with the aim of promoting the sustainable use of natural resources by providing support for participatory and sustainable CBFM activities. The Farmer Field School (FFS), which was a participatory technology extension method developed by the FAO, was employed in the extension activity. Agricultural extension officers and CBFM coordinators were used as the FFS facilitators.

Originally, the FFS was developed in the late 1980s as a means of implementing an Integrated Pest Management (IPM) and targeted a group of between 20 and 30 farmers. IPM-FFS involves comparative experimentations between IPM and non-IPM plots. These are called “learning fields”. They are studied from the time planting begins and throughout the growth period. Study continues until the time of harvest of rice, vegetables and other target crops. The plots are monitored and examined every week to gain new knowledge and create techniques that deal with cropping, diseases and pests, as well as to learn about agricultural ecosystems. It is also an empowerment process to nurture “thinking farmers” and “decision making farmers”.

The FFS is a highly rigorous extension method and has various rules. It has a framework to teach a set of techniques in a systematic manner. For instance, every week at the same time and at the same place, the members (participating farmers and facilitators) gather for a session that is specified by a set curriculum. Once these sessions are conducted according to the schedule and participating farmers continue to take part without dropping out, a certain amount of results can be expected. Naturally, the FFS implementation details and impacts on participating farmers depend very much on the quality of facilitators. Therefore, it is essential to train high quality facilitators for the success of the FFS.

Because of the nature of the FFS, regular and continuous commitments are required on the part of both the FFS participants and facilitators. In particular, for a project like this, which deals with the management and conservation of forest resources, farmers’ incentive to participate in the FFS tends to be weak if only the conservation aspect is emphasized. Therefore, the FFS takes the approach of supporting and improving the livelihood of farmers, combining various Income Generating Activities (IGA), while reducing pressure and dependence on forest resources. Moreover, it is essential to have government’s budgetary support for various FFS related expenses including stationery, materials, training service fees (facilitator’s fees) and transport fees. The FFS is an extension tool and what is important is the proactive and continuous involvement of farmers, as well as the role of facilitators to support the process. There is the potential to apply the FFS to other extension methods, making the most of some of the intrinsic features of the FFS approach, without necessarily dwelling entirely on its systematic form. (By Koto, August 2008)

An FFS session under a mango tree

Presentation by a farmer

Example of a “learning field”

Are Japan's cultivation techniques and the wisdom of creative Japanese farmers applicable?
– Case study of training activities at Tsukuba International Center -

Part 3: Should we plant a whole potato or cut a potato before planting?

In Japan, it is common to prepare seed potatoes three weeks prior to planting. First comes the nurturing process; sprouting in an environment that has a low temperature (10 – 20°C) and strong sun light. Then, before planting, seed potatoes are cut into two or four 50g pieces. The potatoes are normally cut through the apical bud to the apical end, however some large scale farmers use smaller 30g uncut seed potatoes that are planted using a machine after sprouting in sun light. Seed potatoes should normally be 40-60g and if a very small seed potato is planted, it may delay the growth and reduce production. However, it is not guaranteed that a large seed potato will yield more crops.

In high yield cultivation techniques, the quality and size of seed potatoes, as well as whether they are cut or uncut seed potatoes, greatly influence the growth and harvest. Therefore, the vegetable cultivation technique courses include experimentations on harvest amounts from cut seed potatoes and small uncut seed potatoes. They also include lectures on potato cultivation, a visit to the National Center for Seeds and Seedlings (NCSS) in Hokkaido to learn about seed potato production and distribution, and a visit to farms employing machine planting. Advantages of using small size uncut seed potatoes are that one can avoid section work, reduce the danger of virus transmission, and one can machine plant them. However, we tell our trainees that, as it is not necessarily easy to produce small size uncut seed potatoes, it is more common to use cut potatoes. We try to assist trainees in how to choose which kinds of seed potatoes are better suited to them, looking at cultivation size, status of machine use and the cost of production including the cost of seed potato production.

In the training course for Tajikistan, which began in 2000 and was held for four consecutive years, we had experiments for summer/autumn potato cultivation using cut seed potatoes. For the trainees from Tajikistan, it was the first time to encounter the section treatment of seed potatoes. The result of the experiment was beyond their expectation, and the trainees were discussing their plans to cultivate potatoes in their country using the newly acquired method. When Mr. Zaitsu of AAI visited Tajikistan in 2002, he received a report from a former trainee. "We used to plant uncut potatoes, but by cutting seed potatoes, we could increase seed potato numbers and increase the planting area."

Potato cultivation training (Nicaragua)

On the other hand, a Nicaraguan trainee who participated in one of the vegetable cultivation technique courses in 2006, reported the low production of potatoes in his work area. He cited three main reasons for the low productivity. These were 1) difficulty in obtaining seed potatoes; 2) the high price of seed potatoes; and 3) the small number of available disease-free seed potatoes. He also reported that uncut seed potatoes are used in his area. They are imported in 20 kg sacks, and the size of the seed potatoes in the sacks varies significantly. There has been no examination conducted to test the productivity of different sizes of the imported seed potatoes. Therefore, he stressed that it was urgent for him to find out how different sizes of seed potatoes influence harvests and an individual experiment was conducted to look into this. In this experiment, we used four different sizes (20g, 40g, 60g and 85g) of uncut seed potatoes, using a variety called 'Dejima'. We compared stem numbers in each treatment plot, the number, weight and total yield of different size categories of crops (<50 g, 50-100g, >100g). The results were that the bigger seed potatoes sprouted faster than others, had more stems, grew more vigorously and yielded more crops. Seed potatoes in the 85g group had the highest yields. Seed potatoes in the 40g group also had satisfactory yields and this proved that small, uncut seed potatoes, with adequate sunlight sprouting treatment, can be used as a viable seed potato. Based on the results of this individual experiment and as an output of the training course, an action plan was formulated to conduct a similar potato cultivation experiment under the local environmental conditions in Nicaragua after his return, and to share the results with local farmers. We expect that the trainee will be able to provide appropriate advice to local farmers based on the results.

As introduced here, trainees continue to experiment in the environmental conditions in their countries and conduct extension activities, based on what they learned and experienced in potato cultivation technique training courses in Japan. This kind of support will be even more effective if we continue to provide advice through strengthening post-training follow-up support in the trainees' home countries.

Japan's agriculture and AAI

Part 3: Report from producers – Local producers' group activities and coordination among communities in Ushimado, Okayama Prefecture

As introduced in AAIN Vol. 48, a former AAI colleague is practicing vegetable production using neither pesticides nor chemical fertilizers in Ushimado area in Setouchi City, Okayama Prefecture, as part of the local community. In order to find a point of contact between the AAI's activities and agriculture in Japan, we revisited the area and had bilateral and multilateral meetings with local farmers, new farmers including our former colleague, producers' groups and Okayama University. (Please refer to the next page for more details.) In this survey, we took stock of their activities and the challenges the local farming communities face, and investigated what the AAI could contribute.


A scene of Ushimado, Setouchi City

Setouchi City in Okayama Prefecture is bordered by the Seto Inland Sea. The climate is warm and agricultural production activities can take place throughout the year. There are large cities such as Okayama and Kurashiki in the vicinity, providing large markets for producers in Setouchi City. The young farmers in our meetings, who started farming quite recently, manage to sell their produce directly to consumers in Setouchi City and even in Okayama City, as well as ship them to the vegetable wholesale markets. However, even with this favorable production and natural environment, Setouchi has not been spared from the phenomena of rapidly increasing abandoned farmlands and aging farming population – the same problems other regions are facing. During our interview with young farmers, it was strongly felt that many of them are having a feeling of crisis for the future standing of agriculture in the area 10 or 20 years in the future. One of the issues the young farmers cited as a reason for the sense of crisis was the loss of knowledge of elderly and experienced farmers. For instance, they can understand and evaluate the situation of diseases and changes of the hydrological environment, simply by quickly surveying their farms. The young farmers called on the necessity of establishing a forum for transfer knowledge from elderly farmers who have an in-depth knowledge and understanding of the local agricultural environment, in order to improve the skills and knowledge of young and upcoming farmers.

Although we did not have an opportunity to talk to elderly farmers, knowing that a producer group rents plots from 30 local farmers, and our former colleague also receives requests to farm on local farmers' plots, there is a growing expectation in the community that young people will bring new energy to the area. A Setouchi farmers' club, which was established by a group of young farmers, formed the "Team 60%", a project team aiming for a 60% food self sufficiency rate, and has been providing support to people who are interested in becoming farmers. Prospective farmers can experience farming work with the club members and can also stay at club members' homes and listen to farming related stories. Slackening profits is another challenge. In order to add value to their produce, they partner with supermarkets and restaurants using organic vegetables so that the outlets buy directly from the farmers. Despite these efforts to increase profits, it is difficult to expand the cultivation scale with only family members working on the farms. In particular, farming without chemical fertilizers and pesticides is more labor intensive than ordinary farming, therefore it is not easy to increase profits through expanding cultivation scale.

As mentioned earlier, we have come to understand a lot of the issues by listening to farmers and producer groups in Setouchi City. Some of the issues are: (i) They desire to learn various farming skills and knowledge, however there is no forum and no opportunities for training and learning, (ii) Additional labor is necessary to expand the farming scale and increase income, however, young farmers do not have the capital to finance it, (iii) Although they are eager to receive cultivation trainees, in order to secure additional labor and to transfer skills, it is difficult to offer adequate accommodation for the trainee and (iv) They know that there are financing schemes that can be utilized and it is effective to form an organization to access such financing, however, they do not seem to have been able to utilize the existing schemes very well.

The important elements for supporting the future of Japan's agriculture are securing farmers, enabling the succession of skills and knowledge, and the conservation of farm land. Among these elements, AAI could provide our skills to young farmers, making use of our experience in providing vegetable cultivation technique courses, in order to nurture and secure future farmers. It is also conceivable to support the establishment of accommodation and places for exchange by renting abandoned houses, as a support for the effort to encourage prospective farmers by Team 60%. Furthermore, AAI could also link the farmers with trainees from abroad or personnel from JOCV's pre-departure training programs.

Mini Series: – Visiting a project of a Former Colleague

Part 2 – Safe and secure vegetable cultivation in Ushimado, the 'Aegean Sea' of Japan

As introduced in page 3, we visited a former colleague who is doing a good job in Ushimado, which is called Japan's ' Aegean Sea', in Setouchi City, Okayama Prefecture. During our visit, we shared sweaty work in the hot sun on his farm that overlooks the Seto Inland Sea. In the evenings, we could listen to many stories from various local farming community members over drinks, with freshly harvested organic vegetables serving as drinking snacks. Many of the organic farmers here are those who started farming recently, including people who have returned from the city life to their home town and people who left their home city in search of a different lifestyle. Many of them had some kinds of training in vegetable or rice cultivation techniques before starting to farm full time. It was stressed that it was important to gain a certain amount of experience before starting to farm on a commercially viable basis. As long as the business only involves individuals and family members, it is difficult to make a living solely on the sale of organic produce. Given this fact, some farmers are looking into additional income sources. Organic farming requires a much larger amount of extra time and labor for weeding and pest control compared with conventional chemical reliant farming. Even if one hires workers, it may not necessarily be advantageous for the business, as outlets need to expand, too. There are members who are exploring ways of making organic farming easier and more cost effective by forming an organization. In addition, there were intensive discussions on possible mechanisms to develop programs for urban residents to enable them to experience farming, enjoy ecotourism, or to organize organic farming training programs, in order to secure necessary labor.

We heard that there was an organization that produces, processes and sells natural food products, and we visited their office and farm. The operation is a combination of various businesses. These include farm produce production, farm produce retail, restaurants, confectionery and bread making. The collaboration between the processing industry and restaurants is a highly effective way of adding value to farm produce. Their farm produce production section is the Wacca Farm, an agricultural corporation. The company does not only produce organic vegetables but is also active in social services, accepting volunteers through registration with the Willing Workers On Organic Farms Japan (WWOOF Japan)[1] and inviting handicapped people to work on the farm. The staff at the Wacca Farm seemed to have been very motivated for their work. The Wacca office and housing complex we visited was formally used as a company dormitory, and it is perfect as an accommodation facility for trainees and WWOOF Japan volunteers. It can also be used for various exchange meetings. The 3 hectare abandoned farm, which is leased from a farmer, is cultivated. The farm is located in a valley with bad drainage, and it seemed that there was still much room for innovation to improve cultivation techniques.

Furthermore, we had a chance to meet with Professor Yoshirou Kishida at the farm attached to the Faculty of Agriculture at Okayama University. Professor Kishida had been engaged with various practical works aiming to revitalize agriculture in the region. At the University farm, we observed experimental plots for improved 'aigamo' duck farming using domestic ducks, and for testing a nitrogen fixing water plant, "azolla" for farming. In addition to activities aimed at improving cultivation techniques, he is working to develop a distribution system that directly links producers with consumers. With a strong connection with enthusiastic farmers within Okayama Prefecture and areas outside Okayama with advanced organic farming establishments, and closely exchanging with organic farmers in Ushimado, he is promoting an active "*chisan chisho* (local production for local consumption)" movement.

In Ushimado, a number of organic farmers are active and are seriously concerned about food safety and security. There are also associations and coalitions that practice various activities that promote natural food, as well as researchers who provide strong back-up for these activities. Triggered by the recent cases of toxic food items imported from China, public interest in safe food is growing. And as the input costs in conventional farming increase, organic farming is attracting renewed attention. In these circumstances, we felt a pleasant breeze in Ushimado ushering in the establishment of a new production and support system based on key themes such as "food culture", "food mileage" and "farm land conservation".


Iiyama Farm


Exchange meeting


Office of the Wacca Farm

[1] WWOOF JAPAN: Willing Workers On Organic Farms (http://www.wwoofjapan.com)