

AAINews

**APPROPRIATE AGRICULTURE INTERNATIONAL
CO., LTD**

TEL/FAX:+81-42-725-6250

1-2-3-403 Haramachida, Machida, Tokyo, 194-0013 JAPAN

E-mail: aai@koushu.co.jp Home Page: <http://www.koushu.co.jp>

Reflections on Japan's Food Culture (Regional Resource Circulation Survey in Miyakonojo, Miyazaki)

In late 2003, I took part in a survey to assess the current situation of local resource utilization in the Miyakonojo area, concentrating mainly on stock raising farms. We visited fattening and breeding farms of cattle to survey the current situation of fodder production, utilization of cattle excreta as manure, types and amount of imported fodder, and so forth. The purpose of this survey was to understand the impact of utilization of locally available resources and the introduction of outside resources from the viewpoint of energy and resource circulation. The targeted Miyakonojo area is a valley located in the southwest part of Miyazaki Prefecture next to Kagoshima Prefecture to the south and the Kirishima mountain range to the west, and the area has a thriving livestock industry.

The farms surveyed this time are mostly producing rice for self-consumption and fodder for their cattle, and most animal excreta is being used in the farms for fodder production. In general, cattle breeding farms are smaller family businesses compared with cattle fattening farms. In cattle breeding farms most of the fodder is obtained locally, while cattle fattening farms are larger in scale and many of them depend on imported fodder. Mixed feed is purchased from the local agricultural co-operatives or private companies, and most of this seems to be processed imported feed. In fact, the raw materials of mixed feed, such as corn, wheat and wheat bran are not produced in a great quantity within the country. Therefore, mostly it must be imported. Under these circumstances, farmers in the Miyakonojo area are trying to promote the local livestock industry by more active utilization of locally available organic materials and a focus on environmental conservation, and they are making good efforts to produce safe and high-quality meat.

This survey was to consider the energy and resource circulation from the holistic viewpoint of local agricultural activities with the livestock industry of the Miyakonojo area as one case study. Through this survey I was made to think about Japan's system of food production and consumption.

The statistics for FY 2002 show that Japan's food self-sufficiency was 40% on a calorie basis, and the self-sufficiency rate when it comes to cereals including fodder is merely 28%. According to calculations by the Ministry of Agriculture, Forestry and Fisheries, the cultivated area in Japan is only 4,760,000ha, while the land area outside Japan, which is cultivated for food production for this country amounts to 12,000,000ha, and a huge amount of transport costs (energy) also arise. Another calculation indicates that the amount of water resources used overseas for cereal production for Japan is approximately 48 billion tons, the amount which almost approaches the agricultural water use within Japan (56 billion tons). We can say that we are indirectly importing this amount of water from overseas as well. While a large amount of food is imported, at the expense of huge amount of overseas water resources and energy, it is said that 25% of the food is wasted during the process of marketing and individual consumption inside the country. When we think of today's food issues, we should think not only about securing the quantity and safety of food, but at the same time we should consider the relationship of our food security with the issue of global environmental conservation.



Cowshed of a cattle fattening farm



Italian rye production farm in winter



Storing fodder (rolled bale and silage)

(By Zaitso, after the farm survey in Miyakonojo, 2004)

"Human Resource Development"- Our Challenges in Training Activities

Part 4: Counterpart Training for Development Study and Expert Dispatch Program

Technical training courses organized by JICA in Japan can be divided into two categories; group training and individual training. Thus far we have reported on the former type of training mainly held at the JICA Tsukuba International Center. One type of individual training is so-called ‘counterpart training’, given to the staff of JICA’s counterparts in development study or expert dispatch. A technical training program is drawn up and carried out according to the specific field related to an on-going development study or expert dispatch, but it is also expected as an important outcome to give the trainees a good understanding about Japan through this training. After the trainees return home, they are expected to collaborate with the JICA team and experts to implement the project.

Since 1992 AAI has carried out the counterpart trainings that are shown in the following table. In the past we normally took charge of certain parts of an entire training (e.g., agricultural extension work and GIS), but in the recent development study in Oman we were involved in the formulation of the training program itself.

Development Study/Expert Dispatch	Training Period /No. of Trainees	Purpose of The Training	Training Contents
Restoration, Conservation and Management of Mangrove in The Sultanate of Oman (Development Study)	Twice, starting from March 2003 / Total 4 persons	Conservation of wetland, resource management, GIS, forest conservation	Introduction to civil activities for wetland conservation and restoration; aquatic resources management; fish farming; information gathering regarding artificial fish reef; introduction to GIS techniques
Small scale agricultural and rural development program along the Mekong River in Laos (Development Study)	February 2000 / 1 person	Agricultural extension	Introduction to agricultural extension at the Agricultural Improvement and Extension Center of Yokosuka, Miura Area; introduction to various activities of farmers and agricultural co-operatives
Agricultural Development Program in Nejd Region, Oman (Expert Dispatch)	August 1998 / 1 person	Water and soil management	Introduction to GIS techniques and demonstration of their application; visit to farms and institutes of Shizuoka University, visit to the Tottori University Arid Area Research Center and TRT
Afforestation technique development in acid sulfate soils in the Mekong Delta, Vietnam (Expert Dispatch)	August 1998 / 1 person	Forestry research training, forest soil, afforestation	Introduction to GIS techniques; introduction and demonstration of plantation techniques; visit to local greening projects; practical training in seedling and plant cultivation
Agricultural extension improvement program in Syria (Expert Dispatch)	Twice since May 1994 / Total 2 persons	Agricultural extension	Introduction to extension activities at Agricultural Improvement and Extension Center; introduction to village revitalization activities; introduction to the activities of surrounding farms and agricultural co-operatives
Irrigation development program in the Rokan River in Indonesia (Development Study)	August 1992 / 1 person	Irrigation facilities	Visit to water intake and conveyance facilities and irrigation facilities in the Ooigawa River basin in Shizuoka Prefecture; visit to various activities by MAFF Local Agricultural Bureaus

From the viewpoint of the development study member or expert, it is very important that the counterparts get motivation to work on their project through this sort of training. Also, we feel it is very meaningful that the training can complement the task of technical transfer which may end up being incomplete if done only during the project implementation in the host country. In most cases those who participate in a counterpart training in Japan go home with a good impression of this country. Then, those trainees would play a significant role in ‘activating’ the development study work or expert dispatch activities back in their own countries. On the other hand, in the process of planning and arranging the training programs, the organizers can establish new networking relationships with various institutes that the trainees would visit for their study, and such networking often proves to be useful later for other training courses or for expanding the opportunities for further technical exchange. We also feel that with the counterparts who went through the training in Japan we can build up better teamwork than with those who did not.

Therefore, the counterpart training has positive side effects elsewhere in addition to the obvious learning benefit for the trainees themselves. In practice we have been able to carry out field activities smoothly in Syria and Tanzania as a result of teaming up with the local counterparts who had completed training courses at Tsukuba International Center. Therefore, AAI considers the counterpart training as a crucial pillar for exchanging various techniques, gathering information and expanding communication/interaction, and we have been making efforts to understand local training needs and plan appropriate training programs. What is most important in this process is communication between the local counterpart and the Japanese staff who will plan and implement the training programs. Often official papers do not convey the real training needs in detail, so we try to communicate additional requests which do not appear in such documents to the training organizer. While in Japan we not only carry out the training as our job, but also we organize recreational activities and have interaction in daily life (such as going shopping together), so that the trainees can enjoy the training and feel at ease. We shall continue these efforts to realize effective and meaningful training courses.

Lessons Learned from Mangrove Ecosystems

Part 4: Development Study in The Sultanate of Oman

AAI has been taking part in the Development Study started in 2002 devoted to the restoration, conservation and management of mangrove forests in Oman. One of our staff members has been in Oman since 2000 as JICA's long-term expert on mangrove plantation, working at the Ministry of Regional Municipalities, Environment and Water Resources. He is also assisting the implementation of this Development Study. (Please refer to the previous report.)

The purpose of this study is to assess the situation and functions of existing mangrove forests based on the local environmental and socio-economic conditions, and to establish a master plan which includes site-specific planning, capacity building programs for those who implement the project, and an education program for local communities. 21 creeks (locally termed 'khawr') on 16 different sites were selected as the survey target areas, and, in order to assess the overall value of the mangrove ecosystems, the team studied the natural environmental conditions such as topography (geographical features), soil conditions, water quality and hydrological features, as well as socio-economic conditions such as the local land use, economic activities of the coastal region (fisheries, tourism, etc.) and the historical values attached to the sites. The team then recorded such information on every site as technical specifications, and drew up a guideline of the plantation techniques which have been implemented locally. The survey target sites included the areas with and without mangrove forests, and the studied khawrs were categorized according to their environmental conditions, forest functions, participation of local communities and their historical and ethnic relationships, and involvement of the authorities. Based on this categorization, the study team formulated a mangrove restoration, conservation and management plan.

At present the entire area of mangrove forests in Oman is some 1,100ha, which is not very large. The forests have been used directly as resources to provide fuel, construction materials and fodder, and indirectly as nurseries for aquatic (marine) resources, bee-keeping grounds, etc. In recent years the forests' uses as tourism resources and recreational sites have also been recognized.

The current survey looked at only 16 sites, 21 khawrs, but Oman has more khawrs scattered along the coastline. For development and utilization of these khawrs, the coastal utilization plans based on the classification of khawrs, which was proposed as a result of this survey, will be drawn up one after another. The survey results on mangrove ecosystems and the surrounding environment are summarized in a monitoring sheet, and it is expected that the survey will be continued by the local authorities. Recently Oman's coastal region has been suffering from many environmental problems such as red tides, blue tides, and sedimentation and erosion which are thought to be caused by the construction of ports. The mangrove forests play an important role in protecting the coastal environment and they also have to face such problems.

The government of Oman has a plan to establish an information center to study and protect not only mangroves but also coastal resources in general, and they are trying to keep up with activities for securing appropriate human resource and educating local communities regarding the important value of mangrove forests. We hope that the outcomes of this survey will be useful in realizing this information center, and eventually contributing to increased understanding on the part of local communities for the expansion of mangrove forests and their values.



**Wide view of mangrove forest
(Bandar Khayran)**



**Inside mangrove forest
(Mahawt Island)**



**Surveying plantation potential
(Khawr Quq)**

Collaboration with Universities as part of our International Cooperation Activities: Reflection from the Lecture at Ibaraki University

In the previous issue we reported on our seminar for students at Shizuoka University. This time we would like to report on a special lecture series given to graduate students at Ibaraki University. The request came from the Department of Agriculture for AAI to participate in a lecture series titled “Special Lectures on Agricultural and Environmental Engineering”. Specifically, we were requested to talk about the work of experts specializing in agricultural and environmental fields and involved in overseas agricultural development and environmental restoration projects, their entrepreneurship, things to be careful of and things to expect. We were to give lectures on these issues referring to the technologies, knowledge and research attitudes at different levels, that is, from the laboratory, pilot farm and actual field levels. Based on AAI’s experience, we decided to discuss the techniques, knowledge and relationship (communication issues) needed for agricultural and environmental experts, while talking about environmental conditions of arid and semi-arid areas, the current situation of desertification, natural and social factors behind environmental degradation, and specific cases of counter-desertification projects.

AAI delivered three lectures in total under the title “Starting Business Based on Technology and Knowledge About Agriculture and Environment; Professionals Rising to the Challenge of Desertification.” At the first lecture, just like the lecture at Shizuoka University, we explained the current situation of the environment and desertification in arid areas, resources management and the ‘softening’ of aid activities in developing countries, and discussed the role of consultants in technical co-operation. At the second lecture we reported on AAI’s activities such as development studies overseas and training courses in Japan, and also suggested a get-together (exchange session) with people currently studying at the Tsukuba International Center (TBIC). On the third day we took the students to the TBIC to learn more about the realities of the training, and it was followed by an exchange session (as suggested) with the trainees.

We discussed how we should proceed with this session, and decided on a sort of role-play practice. That is, the students became “petit” consultants and gathered information about the trainees’ home countries through interviews. The participants of the training course on vegetable cultivation techniques in southern Africa were from Botswana, Namibia, Swaziland, Lesotho and Zambia; countries with which the students were not very familiar. Therefore, the students seemed to be interested in learning about those countries in general, especially about the agriculture issues. In the morning before the exchange session the students were given some common information through presentations on each country. During the session both the trainees and students gave brief self-introductions, after which there were only one-on-one interviews so that everybody had a chance to talk. To let the students learn how to communicate, we helped them as little as possible.

After the session many students said that they regretted their poor English language skills. At the same time, there were also many who said they felt a renewed incentive for international work through this interaction with different cultures. The best part of this session was that somebody mentioned ‘hanami’ (cherry blossom viewing) at the end of the session and a “sports-cum-hanami party” took place under the cherry trees in full blossom at the TBIC. Some of the participants were even requesting to get together once again before the trainees went home. We believe that the basis of international co-operation is in this sort of individual interaction. If the students and trainees could feel the joy and beauty of such interaction, it was more than desirable for us. We hope that through these sorts of events, international interaction/exchange gets promoted and the networks of friends become wider and wider around the world. As a private company it is our great pleasure to be able to make any tiny contribution possible to developing the capacity of those who wish to be involved in international exchange and international co-operation. Last but not least, we would like to thank Prof. Hisashi Kobayashi who invited us to give the lectures at Ibaraki University, and the TBIC trainees from southern Africa for their co-operation.



Exchange Session



Group Photo



Hanami Party