

**A case study on effective utilization of abandoned farmlands**

According to recent reports, in Japan abandoned farmland is increasing due to the aging of farmers, a lack of successors and falling prices of agricultural products. In the past, abandoned farmlands tended to be in small plots in mountainous areas or in areas with bad drainage. However, in one prefecture I investigated, I witnessed an increasing area of abandoned farmlands in the flat plain areas too. According to the data from the Ministry of Agriculture, Forestry and Fisheries, there were 13,500 hectares of abandoned farmlands in 1985. By 2005, the area size grew three fold to 38,500 hectares, or 9.7% of the total farming area in Japan. In particular, in agricultural areas in mountainous regions, abandoned farmlands account for 14.7% of all the farming land. Yamaguchi Prefecture has been attracting much positive attention for promoting raising cattle, effectively utilizing the abandoned farmland. I had a chance to join a survey in Yamaguchi this time, and would like to report on our findings.

To begin with, what was very impressive in this survey was the proactive and swift implementation of the project by the Yamaguchi Prefectural Agricultural and Forestry Center as well as their cooperation with farmers. At one farm, the prefectural staff were engaging with farmers very swiftly, providing advice on the effective use of abandoned mandarin orchards and farms on steep slopes. Prefectural staff would quickly arrange trial cattle and provide necessary information on how to manage cattle and pastures as well as on the use of insecticides. Prefectural staff would also provide routine advice on all aspects of raising cattle. These proactive actions and cooperation have gained the trust of the project implementers, namely the farmers.

Let me now explain how the project is actually run. In the beginning, farmers can “rent” cattle from the prefecture. They fence the livestock farming area with electric fences which can be rented or purchased. Then introduction animals for breeding purposes are “prepared” to suit the ranching environment. This entails making animals touch the electric fence to experience the electric shock so that they learn not to go near the fence and try to go out. The preparation also includes application of medicine to their bodies to treat against skin ailments caused by ticks and other factors. As long as electric fencing is adequately maintained, animal health is regularly checked and drinking water is provided. The animals can be left alone day and night. This makes it possible for farmers to reduce the amount of fodder that has to be purchased and reduce the maintenance work necessary for the upkeep of livestock sheds. In addition, cattle are happier grazing freely in a stress free environment. Moreover, promotion of grazing is considered to improve the scenery of the particular areas.



**Grazing on an inactive farmland**

The increase in abandoned farmlands has become a serious problem in recent years. In the past, most of the abandoned farmlands were in areas with unfavorable conditions. They tended to be in areas with poor soil and other poor farming conditions, such as isolated small farms, and farms in the deep end area of mountain valleys where there is little water. However, in recent years, the number of abandoned farmlands with relatively favorable conditions in flat areas is also on the increase. The aforementioned data on abandoned farmlands are a national average, however, the percentage of abandoned farmlands in rural prefectures and areas is much higher. In short, it is possible that the more dependent a prefecture is on agriculture, the more advanced the desolation of lands is. In Japan, 40% of the commercial farming areas is in mountain areas. If one adds subsistence farms, the percentage is expected to be even higher. These farming areas were considered to be reservoir for water resources thus playing an important environmental role, yet, it seems in reality due to “economic” reasons, they are cut off from production. Use of abandoned farmlands for grazing in Yamaguchi Prefecture is a progressive example. While I share the wisdom of increasing the potential of abandoned farmlands, I feel the need for dividing technical and economic support into two different functions for farmlands, namely food production and environmental protection/conservation. It takes 2-3 years to rehabilitate abandoned farmlands and return them to their original levels of productivity. In Japan, the food self sufficiency rate based on calories was 73% in 1965. This had decreased to 39% by 2006. This survey of abandoned farmland area conversion for grazing land made me think about various issues including agriculture promotion, national environmental protection and conservation, and an increase in the food self sufficiency rate.

(By Zaitsu, July 2007)

## Coordination between Technical Cooperation and Training Activities

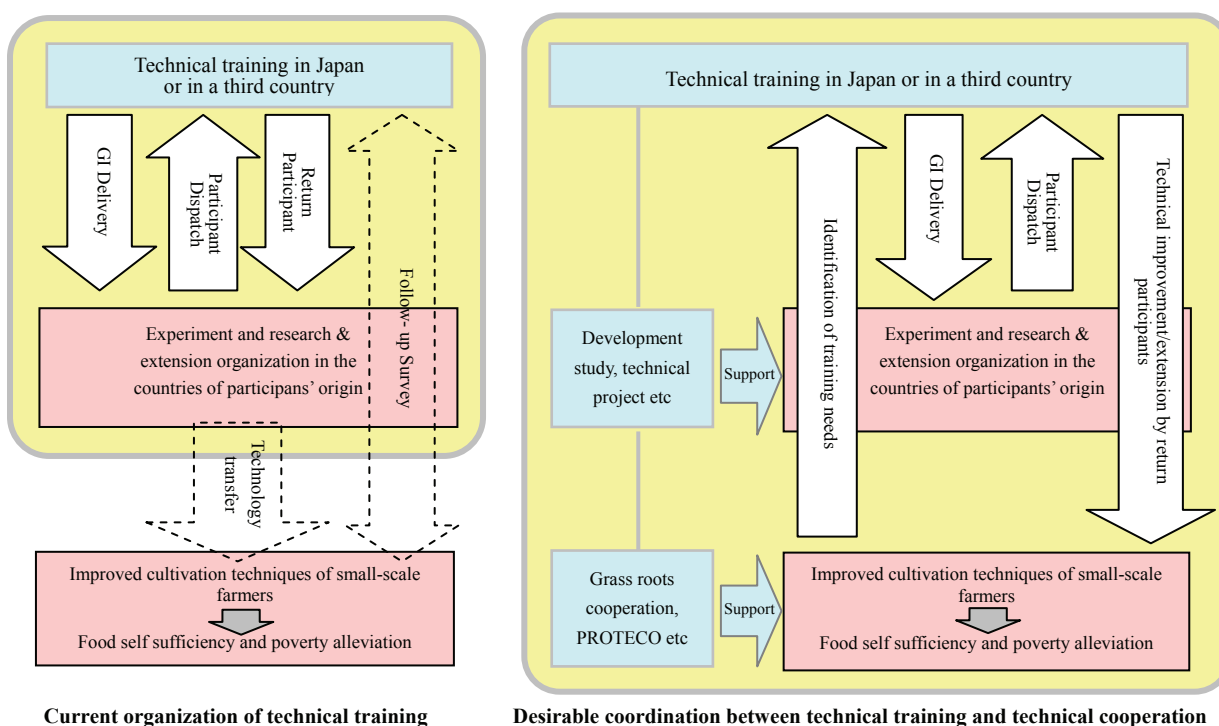
### Part 6 – Future Development (Last in the Series)

In this series, we have introduced various cooperation types, which can be summarized as follows. In actual training and technical cooperation activities, coordination is promoted making use of different types of features and exploring the potential for combining these different types. However, the most important point here is to keep in mind our perspective of farmers' lives and the places of production in developing countries. In other words, it is not enough to only provide training activities in order to enhance participants' technical capacity. Cooperation activities have to include an element which looks beyond the training activities to create a conducive environment for the participants to utilize the techniques they acquire through a training program. We would like to have a closer look at this point, using the example of the Training Course on Vegetable and Upland Crops Cultivation Technique for Southern African Countries that AAI organized in the past.

Coordination Type	Features
Follow-up Type	Increases the effectiveness of training and capacity building program, and contributes to formulation of a project that addresses the needs of the beneficiaries.
Coordination with Technical Cooperation Project	With the complementary functions of the technical cooperation project and training activities, it is possible to implement activities that are beneficial to both.
Third Country Training	As training is conducted in an environment similar to that of participants' home countries, it is easier for them to apply the knowledge and techniques acquired in a training program in their own countries.
Compound Program Type	By promoting various schemes in a comprehensive manner from the project formulation stage onwards, effectiveness of support can be enhanced.

The ultimate objectives of the Training Course mentioned above were the improvement in food self-sufficiency and poverty alleviation. These were to be achieved by supporting small-scale farmers in running a commercially viable farming business through improvement in their vegetable and upland crop cultivation techniques. In order for the participants to be able to adapt the techniques which they learnt in the training program, it was essential to improve techniques and ensure sustainable extension of the improved techniques. At this stage, implementation of improvement and extension activities were the responsibility of individual participants. Although their action plans showed their eagerness to put what they learnt into action, further support for the participants' activities in their countries was not part of the whole program. Even if a follow-up survey might emphasize the importance of technical extension on the ground by the participants, any support targeting farmers has to be developed as a new and different project.

On the other hand, if it is designed from the beginning in a way that a technical cooperation project or a grass-roots cooperation project forms part of the training program, it must make it easier to identify real training needs on the ground, and to implement technical improvement and extension activities responding directly to local situations, by participants in their home countries after a training program. In summary, considering the effectiveness of conducting training and technical cooperation in a comprehensive manner, it is clear that, ideally, training activities and technical cooperation activities on the ground should be implemented with an organic coordination between them as described in the following diagram.



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

### **Part 6 - Reconsideration of support activities for agriculture and farmers (Last in the Series)**

This series attempted to examine current situations and problems in Japan's support systems for agriculture and farmers, comparing Japan's issues with Syria's, and to utilize lessons learned for future support for developing countries. This series was triggered by the fact that we hosted counterpart participants from Syria and participated with them in field visits to learn about Japan's agriculture and extension activities. In farmer support projects we are involved in, support tends to be provided through the government and NGOs which support agriculture and farmers, rather than offering support to farmers directly. In this type of support, it is difficult to see the project impact on the ground. At the same time, if the support activities are conducted systematically, there is a high potential for the support to have ripple out effects to a large number of farmers. It is essential to consider the possible weaknesses and strengths and their relationship when providing support.

To summarize this series, based on knowledge and lessons gained from the Syrian counterpart training program, I outline different angles related to training contents and examine how to evaluate the applicability of the contents in the home countries of the participants.

	Support for Experiment, Research and Extension Activities	Support for Organization of Farmers	Support for Non Governmental Sector
<b>Training Subjects</b>	<ul style="list-style-type: none"> <li>- Visit to agricultural experiment centers</li> <li>- Visit to extension centers</li> <li>- Lecture on extension system</li> <li>- Visit to farmers</li> </ul>	<ul style="list-style-type: none"> <li>- Introducing agricultural cooperative activities</li> <li>- Introducing water users' association activities</li> <li>- Introducing examples of different support</li> </ul>	<ul style="list-style-type: none"> <li>- Visit to the Ground Work Project</li> <li>- Visit to activities of NPOs</li> <li>- Farms targeting tourists</li> <li>- Seed and nursery company</li> </ul>
<b>Participants' Tasks in Syria</b>	<ul style="list-style-type: none"> <li>- Identification and confirmation of roles of agricultural experiment center and extension organization, and their utilization</li> <li>- Understanding of historical background</li> <li>- Significance of improving product quality</li> <li>- Legitimacy of value addition</li> </ul>	<ul style="list-style-type: none"> <li>- Understanding of historical background</li> <li>- Judging the needs for a farmers' organization</li> <li>- Confirmation of applicable areas</li> </ul>	<ul style="list-style-type: none"> <li>- Understanding support capacity and present circumstances</li> <li>- Understanding historical background</li> <li>- Examination of applicable areas</li> </ul>
<b>Roles of Japanese Specialist</b>	<ul style="list-style-type: none"> <li>- Support for strengthening extension activities</li> <li>- Advice on farmer support methods</li> <li>- Assisting technology transfer with TOT</li> </ul>	<ul style="list-style-type: none"> <li>- Introducing case studies</li> <li>- Support for organization</li> </ul>	<ul style="list-style-type: none"> <li>- Provision of data and materials</li> <li>- Advice on application</li> </ul>

**Setting future targets:** There is a significant difference between Japan and developing countries, be it with agricultural systems, technical levels and surrounding economic and social circumstances. It is often difficult to apply the Japanese systems as they are, in developing nations, therefore, in aiding understanding of what is taught, it is necessary to adjust training substance in a way that better suits the situations in developing countries. However, it is possible to introduce Japan's case as a future target for the participants' country. For instance Japan's water users' associations are promoted as an integral part of efforts for equitable water distribution and land improvement. It is not possible to apply this system directly to Syria which has a totally different historical background.

**Learning from history:** Japan's extension system and agricultural cooperatives evolved over many years. Therefore, there is a lot one can learn from the past and processes, rather than trying to apply, or learn from, the present day system alone. For instance, rather than looking at Japan's current situation of extension projects being consolidated and diminished, there is more to learn from the close and trusting relationship between extension workers and farmers and how the friendly atmosphere was created during the time of active extension activities represented by the "green bicycle" approach which extension workers used to visit farmers.

**Negative example:** It is difficult to say "learn from Japan" nowadays. Japan's agriculture has a lot of problems which are not common in developing countries, including aging of farmers, a lack of successors, and increasing abandoned farmlands. Therefore our legislative system, organizational set-up and activities are designed to respond to the existing problems. These aspects might be useful as "negative examples" for learning.

The significance of training programs in Japan, in a surrounding with political, historical and environmental differences, is that they enable participants to discover techniques adaptable to their own countries, with a firm understanding and full acceptance of the differences that exist between Japan and their home countries. In order to enhance the actual effects of the training programs, it is necessary to extract useful lessons and techniques from both the strengths and weaknesses of Japanese way in supporting agriculture and farmers. It is also important for the training hosts to confirm necessary issues and challenges from the reactions of participants, in order to improve the quality of our future support.

This training program in Japan was designed to include the technical cooperation project staff from the Japan side. It was very meaningful for both the counterparts and the project staff to discuss the adaptability of different techniques, as we made field visits and listened to lectures together. Ideas coming from joint experiences and mutual understanding need to be passed on in the efforts to support agriculture and farmers in Syria.



## On the occasion of the publication of the *AAINews* No. 60

*AAINews* was first published on October 1, 1995. We, the AAI staff, are very happy to publish the 60<sup>th</sup> issue of the *AAINews* this month 12 years and one month after the first publication. Simultaneously, we are extremely grateful for your understanding and support for our work over all these years.

As we wrote in our launching remarks for the first *AAINews*, if one combines the abbreviation “AAI” from our company’s English name “Appropriate Agriculture International” with “N” for “Newsletter”, it becomes “AAIN”. AAIN means “spring” or “eye” in Arabic and it is a word that conjures up the image of an oasis which holds water, the most important resource in arid areas and a place which offers peace and comfort. Literally, the AAIN issues have been offering an oasis for our company for the last 12 years, providing a platform for exchanging information and opinions for the AAI staff members who are frequently away from Japan on various assignments. Moreover, we believe that the AAIN has been functioning as a “spring” for our thinking and it has served as an “eye” to see your reactions. We would like to continue to send out people’s voices from our fields of work and voices from we who keep on exploring how international cooperation can have the best impact on peoples’ lives. We extend our sincere regards to you for your continued support of the AAI and our work.

Commemorating the publication of the *AAINews* 60<sup>th</sup> volume, we would like to introduce you to what each AAI staff has recently been working on.



**Hiroyasu Onuma:** Since 2000, I have been participating in irrigation related projects such as the Tanzania’s National Irrigation Master Plan and Syria’s Water Saving Irrigation Agriculture Extension Plan. In the project in Syria, I have been trying to make use of the experiences I gained when I was in Syria’s extension department as a JICA expert, as well as my experiences gained through training activities in JICA Tsukuba. On the ground, I have been working on extension activities of modern irrigation technologies involving extension staff working in villages, while aiming to establish a system for offering training courses to the extension staff.



**Hiroshi Ono:** Since 2001, I have been involved in the Irrigation and Expansion Plan of Sri Lanka. More specifically, I worked on a study on the socio-economic situation of the newly settled areas and a situation study of sugar cane farmers. I also was involved in the creation of model vegetable cultivation plots in the new settlement area. At JICA Tsukuba, I was in charge of the Training Course on Vegetable and Upland Crops Cultivation Technique for Southern African Countries and for South Africa. Currently, I am in charge of the Vegetable Cultivation Technique II Course. Through our Muscat Fund, we worked with a local NGO in Zimbabwe to increase farmers’ incomes, and conducted a follow up investigation into the activities of Botswana participants after they returned to their country. I would like to work on a program that involves ex-participants in their native countries.



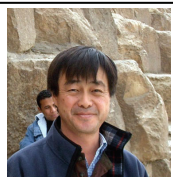
**Naoki Koga:** Since joining the AAI in 2003, I had chances to get involved in the Regional Agricultural and Livestock Husbandry System Improvement Plan of Mongolia, the Syrian Water Saving Irrigation Extension Plan, and the River Basin Management Plan of East Timor. Although target resources are different in the above projects – ranging from forests, grassland, water to soil - the undercurrent of all the projects was “resource management”. An important angle here is how to draw out cooperation from local residents, which is easier said than done. Although it is challenging, this has made me motivated, too. In future, I would like to regularly visit certain places over a long period and find long-term counterparts. Perhaps in Africa?



**Nobuki Kojima:** Since joining the AAI last year in 2006, I have been involved in various projects dealing with the NERICA rice, such as working as an instructor for the JICA Tsukuba’s training course on rice variety selection techniques and working in Uganda as a short-term NERICA adaptation planning specialist. It seems my technical field has shifted from wet rice cultivation of pre-AAI time to upland rice cultivation. However, there are challenges that are in common between the two distinct rice varieties, and I can apply my past experiences to my current and future work. Some of these challenges are the improvement in seed production and variety selection techniques, and extension and training. In order to promote NERICA in Africa, I would like to make an effective use of ex-participants of the upland variety selection technique course, who have returned to their countries.



**Akira Koto:** In recent years, I have been working in Syria as a JICA expert and as part of JICA technical cooperation projects, in particular the Water Saving Irrigation Agriculture Extension Plan. During these assignments, I have also been involved in capacity building of extension workers through training activities. I would like to make use of these experiences in other future projects and training course assignments at JICA Tsukuba. I am also increasingly interested in issues surrounding Japan’s agriculture and farming villages, such as the increasing number of abandoned farmlands and the drop in Japan’s food self sufficiency rate.



**Yoshihisa Zaitzu:** Until this year, I participated in the oasis development survey in Mauritania. Presently, I am working on a support program for Iraq in the field of irrigation agriculture. My specialty originally was soil science. Soil science took me to land use issues, which in turn led me to cultivation related work and from there to agricultural development work. I have also dipped into satellite image analysis and GIS. It takes quite a lot of time and effort to publish *AAINews* regularly. However I am using *AAINews* for enhancing my own learning and as a forum for AAI staff in different countries to exchange information and views.



**Shigeya Hasegawa:** I started teaching vegetable cultivation techniques training courses at the Tsukuba International Center in 2000, and I have taught nearly 90 participants. At the beginning of a training course, participants who are new to Japan and instructors from Japan need to explore and understand each other. However, by the end of a training course, when participants present their final training report, there is always a sense of unity among the participants and instructors, which is very satisfying for me. Likewise, I think it is our challenge to establish training methods to increase participants’ sense of achievements. Moreover, it is my next assignment to collate my experiences in a cultivation technique instructor’s manual. I am also thinking it is about time to provide follow-up support to the ex-participants who have returned to their countries.