

# 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>

## On the concept of 'circulation' in Palestine

Since last year, I have been working with a JICA technical cooperation project. Its stated objective is to "The project for strengthening support system focusing on sustainable agricultural in the Jordan River Rift Valley". During this period I have had several opportunities to visit the West Bank in Palestine. Here we are exploring and examining measures to stabilize agricultural production and business (including extension and strengthening this sector). We are working in difficult conditions and have limited options due to the ongoing occupation of the territory by Israel. I am in charge of the livestock sector, and one of this initiative's priorities is to facilitate a 'break free' move from a production system that is currently largely dependent on commercially supplied fodder. Livestock production is a pivotal focus in our effort to explore the organic linkages between crop farming and livestock husbandry. A key element in the ideas we are exploring is the concept of "circulation\*".

With the recent hike of crude oil prices, an increasing number of Palestinian farmers are opting for low-cost and stably priced sources of livestock fodder, moving away from their dependence on expensive grain concentrates. There are a number of possibilities regarding self production of animal fodder by individual farmers or groups of farmers at the regional level. These include the introduction of leguminous grass species, production of fodder from mushroom culture beds, improvement in pasture land by enhancing/introducing water harvesting techniques, use of waste from crops and production of storage fodder in the form of silage, feed blocks etc.. The fundamental principle is to produce fodder from unused or under used resources.

This is based on a re-evaluation of natural resources around settlements, and for this it is necessary to develop and consolidate suitability testing methods and local technologies for establishing resource circulation systems. In Palestine, there has been a traditional integrated livestock management system that combines barley cultivation and sheep and goat rearing. We are aiming to stabilize the livestock production business based on traditional systems that use local resources effectively. For Palestinian farmers, such an integrated system is a result of rediscovering the sense of circulation, seeing resources being squandered and feeling "*Mottainai*" in Japanese.

This spirit of starting from individual and local levels to achieve circulation in Palestine is the same as the spirit people had in Japan whether it was during the good old agricultural system in the country prior to the fast economic growth or now in the modern organic agriculture movement. The term "circulation" may be one of those which touch Japanese people's hearts. In recent years, "circulation technology" has been discussed in a variety of fields and industries and, in a way, the term is over used and sometimes abused as a beautifully sounding 'key word'. For example, how can we interpret the word when used in the context of breaking out of dependency on imported cereal fodder such as maize and soy beans? Massive imports of cereal fodder from abroad and intensification of livestock farming have resulted in an accumulation of livestock waste. I have a problem when people talk thoughtlessly about circulation when discussing the issue of "waste management" of materials that are brought into the country in large quantities. The fundamental prescription should be to remove pressure on the environment by reducing cereal imports and increasing the share of domestically produced fodder. Emphasizing the need for a circular society without tackling the real problem is distorting the real issue.

Kenya's Nobel Peace Prize Winner, Ms Wangari Matthai's "*Mottainai*" spirit can be described with 3 Rs – Reduce, Reuse and Recycle. I would say that "Reduce" should be the most important element of the 3R approach followed by "Reuse". What is required for the Japanese people who are immersed in a materialistic society is firstly to reduce and start navigating towards a "low environmental impact path." (By Koga, April 2009)

*NOTE: Circulation involves the re-use of materials perceived as waste in a fashion that re-introduces them into a working and productive system.*



Producing silage from crop waste



Converting mushroom beds/logs into livestock fodder



Grazing in the Jordan Valley

## ***Are Japan's cultivation techniques and the wisdom of creative Japanese farmers applicable?***

### ***- Case study of training activities at Tsukuba International Center -***

#### **Part 6: Conclusion**

In this series, we discussed four case studies introducing Japanese cultivation techniques that exhibited a high application potential in developing countries, in vegetable cultivation training courses at JICA Tsukuba. Trainees experienced and evaluated different techniques at first hand as part of individual experiments, in order to solve problems they face in their countries in vegetable cultivation through applying Japanese cultivation techniques. The following table summarizes the contents of the experiments.

<b>Trainees Country</b>	<b>Problems</b>	<b>Possible techniques</b>	<b>Challenges for application</b>
Philippines	Soil borne diseases affecting tomato cultivation	Grafting technique	Impact of grafting on yield and quality of crops. Training on grafting and naturalization techniques. Economic consideration. Secure supply of high quality stock plants.
Nicaragua	Insufficient availability of quality seed potatoes	Systematic production of seed potatoes and distribution system	Establishment of quality management system of imported potatoes. Testing methods to evaluate appropriate size of seed potatoes. Introduction of extension techniques using model plots.
Samoa	Low yield from free growing cultivation of tomatoes	Pruning and vine training techniques	Labor and costs required for pruning and vine training. Development of training methods for determinant variety of tomatoes
Mongolia	Control of difficult and persistent pests	Application of selective pesticides and rotational use of pesticides	Organized research on integrated pest management and introduction of extension techniques using model plots.

In addition to the above, the training courses introduced other techniques to tackle a variety of problems in other trainees' countries. These included use of *neridoko* (soil mixed with compost and water) nursery beds to deal with low rooting problems in tomato seedlings when planting in drylands in Ethiopia, organic fertilizer production from fermentation of chicken droppings to counter animal waste problems in Kenya, and mulching (silver mulch) to control pest problems in organic farms in Nicaragua. Although the trainees had some knowledge of these techniques, they had had little experience in applying them in their work. In the training courses, we first ensured that the trainees mastered the basic vegetable cultivation techniques. Then they learned application of the techniques from the experiences and wisdom of creative Japanese farmers. Based on the newly acquired knowledge, trainees evaluated and examined the applicability of each technique to their countries' natural and agricultural environment. Naturally, there were a number of challenges that are expected in the process of local application.

Some techniques such as grafting, pruning and training, *neridoko* nursery beds and fermentation of chicken droppings, do not really require any special materials or equipment, therefore they are relatively easy to apply in developing countries. On the other hand, techniques such as use of selective pesticides and silver mulching require materials. Some measures even require establishment of a new system, for instance the case of setting up of production system for seed potatoes, which makes it harder to apply in other locales. A common challenge in applying Japan's cultivation techniques in developing countries is the need for re-evaluating the techniques in local environmental conditions and local circumstances surrounding the agricultural scene. One way to overcome this challenge can be found in the technique extension work which used to be seen in Japan. In this extension system, researchers from national or prefectural governments played an active role in introducing cultivation techniques to farmers. Farmers also communicated their own ideas and innovations that were generated in their daily farming activities. This led to the development of new techniques, and by collaborating with extension workers, technique development and extension work were run in a complementary manner.

The expectation of the JICA training courses is for the trainees, who learned Japan's cultivation techniques, to establish applicable techniques in their countries based on acquired knowledge, and to ensure their extension. Considering this, there should be adequate follow-up support to assist the trainees in examining the necessary plans and modifications for successful application in their countries of the techniques acquired in individual experiments. However, without sufficient follow-up, one cannot see the real results of the trainees' activities after returning to their home countries, making it difficult to gauge the impacts of the training. In order to resolve this issue, it is necessary to couple training with follow-up activities. Moreover, as mentioned in previous volumes of AAI News, another possibility is to strengthen the linkage between the training and other JICA schemes such as technical cooperation projects.

There are many cultivation techniques and wisdom accrued by creative Japanese farmers, which use the resources around us effectively, and many of them can be applicable in developing countries. Our company has experience both in implementation of technical training courses in Japan and in various activities in trainees' home countries. Making the full use of our experiences, we would like to continue to provide technical cooperation which is truly useful for the trainees. They have a lot of challenges to overcome in their countries.

## Japan's agriculture and AAI

### Final part: AAI's Involvement – Epilogue as a New Beginning

In this series we visited and heard from people AAI has been associated with, who are working on the ground in the agricultural production sector. We interviewed them on the topics of serious problems and challenges Japan's agriculture faces, for instance abandoned farm lands, decrease in national self sufficiency rate and shortage of successors to farms following retirement of older farmers, in order to explore future directions Japan should take and the future work and potential of AAI's contribution to Japan's agriculture. As this is the last part of the series, we have summarized in a table our thoughts on four cases we covered in the series, and operational principles that emerged through further actions and discussions.

Case	Operational Principle Stated in the Series	Additional Support and Cooperation that were mobilized through further actions and discussions
<b>Satomi (Ibaraki)</b>	Regular purchase of organic vegetables; turning up at monthly meetings; information exchange via group mailing lists; organization of events such as exchange events; promotion of eco-friendly (with material cycling systems) agriculture through farmers' networking	Participation and cooperation in research activities on sustainable and eco-friendly agricultural system focusing on Satomi's organic farming, in collaboration with research organizations such as universities
<b>Ushimado (Okayama)</b>	Implementation of agricultural training targeting young farmers; support for provision of accommodation and an exchange meeting facility for those who are interested in becoming a farmer; facilitation for receiving trainees from abroad and supplementary trainees	Contribution to sales promotion for Ushimado group, utilizing information exchange platform on the AAI website; organization of exchange events with other organic farmers' groups
<b>Kanra (Gunma)</b>	Contribution to promoting information sharing and exchange between Kanra, Ushimado and Satomi, aiming for future cooperation in their activities	Direct involvement in training courses for village field workers which are held in the Terakoya Nature School, utilizing AAI's own village survey methods and experiences in the field.
<b>Hamamatsu (Shizuoka)</b>	Direct contribution to the agricultural business management human resource development program, and indirect contribution to improve productivities, utilization of abandoned farmlands and conservation of agricultural lands	Contribution through organization of events to share information related to marketing which is an important element of agricultural business management and for organic farmers' groups

This series started with a discussion on abandoned farmlands. Some of the major problems Japan's agriculture is currently facing are an aging farming population, low price of agricultural products, shortage of successors and farmers in general, as well as resulting dull and inactive agricultural villages. Considering this and our interviews in villages, there emerged some important key phrases for our future work. One is "every man to his trade" based on our story from Hamamatsu in AAI Volume 65. In other words, the production part of the agriculture sector should be left to those who are already practicing farming, and AAI should not directly get involved in farming activities. One niche could be to explore what we can do to connect producers and buyers (also discussed in AAI 65). Since the end of World War II until recently, this was the role of agricultural cooperatives, however as given the reality of diversifying business and changing distribution modes, new organizational support is becoming increasingly necessary to play the role expected by agricultural cooperatives. In Hamamatsu and Ushimado, there is a movement towards establishing Non Profit Organizations (NPOs) to fill this gap. Considering how AAI could be involved in these recent trends is an important mission.

Related to this, another important key phrase is "Human resource (successor) development." The successor training program in Ushimado (AAI Vol. 63), human resource development program in Hamamatsu (AAI Vol. 65) as well as Japan Overseas Cooperation Volunteers (JOCV) supplementary technical training at the Nature School in Kanra are all efforts to nurture and support future farmers. "Technical Training" is also one of the methods for human resource (successor) development. With all these in mind, we need to explore possible ways for AAI to become involved in human resource development.

In this series, we also introduced NPOs aiming to organize farmers and develop farming business, playing the role which was previously expected to be filled by agricultural cooperatives. AAI has been collaborating with local NGOs to support agriculture and village development, through projects such as small scale dam construction and home vegetable garden projects outside Japan. In addition, for the last 10 years, we have been involved in implementation of vegetable cultivation, and rice and crop cultivation training courses at Tsukuba. Through the training activities, we have come to realize the importance of building networks with trainees and conducting follow up activities. "Linking" and "Networking" are crucial to successful agricultural and village development in Japan, too. Furthermore, from AAI's experience in training and extension work in and outside Japan, we have experienced the importance of "face-to-face" interactions. We would like to continue to work in Japan's agriculture scene, making the full use of our comprehensive and unique experiences.

## Update on activities of our interviewees

As preparatory steps for us to have concrete involvement in promoting Japan's agriculture, the most important activities are to have continuous engagement with individual organizations. Finding areas for collaboration to complement each other would lead to continued cooperation. For example, whenever possible, AAI staff attend the monthly meetings in Satomi. In Hamamatsu, we have been exploring ways to contribute to human resource development programs. We will cultivate activities in the next round of our joint work through promoting cooperation. To start with, it may be meaningful for AAI and our partners to arrange an information exchange meeting bringing together all the four organizations we are working with. The following is an update of each organization's activities since we first reported their work in AAI News.

### Satomi (Ibaraki)

- Satomi Group was requested to host trainees from the vegetable cultivation technique courses at JICA Tsukuba, and a practical session program was organized for the trainees to experience organic farming through participating in farming work in Satomi.
- AAI has been purchasing organic vegetables from Satomi through their home delivery service.

### Ushimado (Okayama)

- In November 2008, a symposium entitled "Agriculture in Ernest" and "Chisan Chisho (local production for local consumption) Forum" was organized by Ushimado Group and Okayama University, in which AAI representatives participated.
- Through the new farmer support project and practical sessions on farms which were organized last year, four people decided to become farmers. It seems that all of them will join the Setouchi Farmers' Club.

### Kanra (Gunma)

- Kanra again hosted supplementary training courses for JOCV volunteers this year. Volunteers who will be working in the field of vegetable cultivation support and village development were received.
- Possible joint implementation of Tsukuba training project was explored. Unfortunately, it did not lead to actual implementation this time, however, this provided an opportunity to explore potential for future collaboration.

### Hamamatsu (Shizuoka)

- "Shizuoka Agricultural Business Training Course" has been jointly organized by Shizuoka University and the agricultural industry in the prefecture since April 2009. Mr. S and Mr. K from Hamamatsu have been participating in the course.



Symposium: Agriculture in Ernest



Farm Product Direct Sales Market -  
Wacca Farm



Chisan chisho (local production for  
local consumption) Forum

Incidentally, there is a TV program called "Tetsuwan Dash Village", which could be literally translated as "village with strong arms making things happen". It is a program following a project by a popular rock band called TOKIO to create their own village. They refurbish an old farm house, work in the fields producing their own vegetables and sweat to cultivate rice, celebrating their harvests in autumn. Many people dream of living on the land and living in the country side, however it is difficult for them to make dream a reality. There is also a choice of "farming and X livelihood", as in farming and fishing livelihood. In this case the "X" part can be any other professions or activities. Having one's own mission in addition to farming activities may look, in the eyes of full time farmers, as not a serious commitment to 'real' farming. However, it may be a necessary effort to broaden the base of Japan's agriculture by creating a mechanism for people to play a part in agriculture in varied ways.