

My fateful relationship with AAI and training at Tsukuba

I first encountered AAI in 1996 when I returned to Japan after three years' service as a JOCV. Even though I had a sense of achievement in the activities of JOCV to which I was devoted, I had concerns about the methods I had employed and the results I had achieved. Then, I happened to browse AAI's website, and saw the three phrases that resonated in my mind, providing clear direction for technical cooperation. These were "appropriate technology", "proper scale", and "participatory approach". The next week, I visited AAI at the Machida office. Since then, I continued to keep in touch with AAI and report on recent activities, and finally, I became a member of AAI this autumn.

So far, I have been involved in technical cooperation projects and development studies as a JICA expert and/or a member of consultant teams. In Ethiopia, many researchers tended to interpret "technology development" as meaning "new variety development", and also "participatory approach" as meaning "demonstration at research stations." On the other hand, extension workers in Iraq had difficulties in communication with farmers who are the basis of "participatory approach".



Observing a study tour (2018)

Through these experiences, I became keenly aware of the importance of human resource development for elaborating appropriate technologies and implementing technology dissemination comprehensively. In order to develop and disseminate "appropriate technology" through "participatory approach" within "proper scale", it is necessary to accumulate and analyze knowledge and know-how in terms of cultivation/ farming technology and

dissemination/education methodology. In addition, communication skills of extension workers are a key issue to extract topics for appropriate technology development based on various farmer's problems.

My relationship with the Tsukuba training course goes back to 1998, when I was involved as an assistant in group training courses of "vegetable cultivation technology" and "vegetable seed production technology". I was able to recognize the advantages of "technical training in Japan" in international cooperation through daily work. The training courses were effective in teaching useful Japanese technologies, fostering a pro-Japanese sentiment among participants, and in deepening public understanding through providing a chance of public disclosure of technical cooperation. I also feel a new possibility for the future role of "technical training in Japan" in overseas technical cooperation based on the know-how backed up by AAI's 18 years of experience in the Tsukuba training courses.



With a pre-dispatch trainee of JOCV (1998)

I myself experienced the "joy of self-improvement" with a sense of agreeable tension overseas, such as when I was on-the-job training in US agriculture and studying abroad in graduate schools. It will be enormously significant if participants can utilize acquired skills in their home countries, and they also would be a base and/or bridge for mutual understanding between Japan and their respective nations. I am happy that this fateful relationship has developed and enabled me to get involved in such a great opportunity.

(Terutaka NIIDE, August 2018)

How to compose study tour for training <Part 6>

Final episode: Value of study tours

We have introduced our concept and specific approach of study tours throughout this series. We made trials and errors and sometimes failed to make better study tours. However, our ultimate target in composing a study tour is exemplified in the phrase - "how can we satisfy the participants?" A study tour or training in Japan itself may be sometimes considered as a reward trip or a sightseeing tour. If so, will the participants be satisfied with such training?

It can definitely be said that participants who come to Japan look forward to learning something in our country. However, only a few of them can express what that "something" is with any clarity. Therefore, it is important to imagine when composing a training program; what the participants want to learn, what would be useful for them after returning to their home country, and where and how they can get such knowledge/techniques.

Japan is a dream country for many participants and coming to Japan is a valuable experience for them. In addition, just visiting famous crop production areas, the latest facilities/ equipment, organizations with unique activities, may give them something new and/or useful. However, what they can get depends on the participants themselves, and they may not always get suitable knowledge which would be useful in their home country. In the worst case, they cannot fill the gap between their country and Japan, and they might even consider what they learn as "useless".

What is important is to develop a study tour with a strategic perspective which is consistent with the training objectives and project activities in order to maximize the acquisition of useful knowledge and experience in a limited time.

The participants will be satisfied when they can learn



Interviewing a Japanese extension officer in a tatami-floored room



Experiencing actual farming through working on a farmer's field



Learning traditional vegetable marketing at Nishiki Market in Kyoto

some things that they specifically wanted to learn.

Participants learn both tangibles and intangibles through training in Japan, and actually the intangibles may be more lasting in impact. For example, many participants are impressed by the efficient operation of buses and trains, and the sincerity and kindness of Japanese people, which they happened to encounter by chance. Especially during a study tour, they can touch farmers and rural landscapes/cultures which they cannot meet at the training center. Such experience is useful to understand each other's way of thinking and behavior. In this way, they deepen their understanding of Japan and Japanese people, which effectively makes it easier to work together after their returning home to their own countries.

The study tour is one of the most memorable times for the participants throughout the training period. Therefore, the participants after a good tour look refreshed and satisfied. In addition, there is a good reaction from the host organization of the tour where the participants can get a sense of high satisfaction. In such cases, we are often told "Please come again", despite us occupying our hosts' precious time. In such cases particularly, the contents of the study tour are improved year by year. Through these experiences, we realize that a study tour is composed by planners, attendants, participants, and hosts all together.

It is important to follow up in the subsequent training activities in order not only to have just "good experience" through the tour, but also to ensure that obtained information is firmly incorporated in the recipient's own knowledge base. This is a task that can only be achieved by those who have seen the same thing and have the same experience with the participants during the tour.

Toward sustainable forest conservation <Part 6>

Final episode: Summary of the series

This series introduced various efforts of forest conservation which AAI has been involved in so far. Particularly, we examined essential requirements for initiating, activating and sustaining forest conservation efforts, through considering the following three questions.

- 1) How to motivate community's participation?
- 2) How to strengthen capacity of forest conservation?
- 3) How to ensure sustainability of the activities?

Activities and challenges related to the questions are summarized for each initiative in the table below. Livelihood improvement through utilizing local resources is commonly needed for active participation and motivating the community. And, "value addition" such as processing of forest products and certification of coffee would be a key element in this. In addition, it is expected to associate with awareness-raising activities and capacity building for a wide range of people by conducting tree planting and training which involves children and women.

"Capacity building of community around forest areas" is essential for sustainable forest conservation, as well as improving knowledge and skills of forest officials related to forest management. It will take considerable time to develop and strengthen the capacity through conducting training and applying appropriate technologies. The contents may include a wide range of subjects such as "organizational development" and "information exchange

and networking" which enable communities to work together to deal with various issues such as forest conservation and rural development.

"Ensuring sustainability of activities" in the table would describe the ideas and frameworks to continue various activities even after the completion of each project, which are mentioned in "participation and interest of residents" and "capacity building". "REDD+" program aims to provide funds or finance to continue those efforts, as was mentioned at the beginning of this series. It would be difficult to continue activities in the long term, such as for 30 years in the case of Mali, without having strong relationships with mutual trust and continuous ideas and information sharing. On the other hand, no matter how sufficient funding or how much finance is available, effectiveness of the activities will be limited without an appropriate system, capacity, or structure that can utilize those financial resources sufficiently. We will continue pursuing our own efforts exploring better "collaboration" in which concerned people work together to improve livelihoods and preserve forests through mutual-trust and continuous involvement at the grass-roots level.



Relaxing at waterfall in the forest that have been treasured as God @ Sahan Village, Kalimantan

Country	Scheme	Contents of activities / Challenges		
		Participation/interest of residents	Capacity building	Ensuring sustainability of activities
Malawi/ Burkina Faso	Preliminary survey	<ul style="list-style-type: none"> ● Livelihood improvement ● Benefits from utilization of forest resources ● Involving school children and women 	<ul style="list-style-type: none"> ● Organizing community ● Training of forest officers ● Collaboration with NGOs and community organizations 	<ul style="list-style-type: none"> ● Benefits for residents through income generating activities ● Development of environment encouraging participation and access to activities
Ethiopia	Technical cooperation	<ul style="list-style-type: none"> ● Producing value-added coffee by acquiring certification ● Learning farming skills and acquiring self-confidence with mutual trust through FFS 	<ul style="list-style-type: none"> ● Strengthen capacity of group organization through forest conservation and livelihood improvement activities ● Capacity development of administrative officer 	<ul style="list-style-type: none"> ● Ability and awareness of individuals ● Strengthen capacity of sub-village level organizations ● Accumulating experience through collaboration
Oman	Development study/Technical cooperation	<ul style="list-style-type: none"> ● Understanding multi-purpose usage of mangrove forests by communities ● Conservation of mangrove forests with the participation of local residents 	<ul style="list-style-type: none"> ● Establishment of structure necessary for awareness program and environmental education ● Capacity development of local staff 	<ul style="list-style-type: none"> ● Establishment of a core center for human resources development ● Providing opportunities for raising awareness
Mali	NGO	<ul style="list-style-type: none"> ● Use and sell seedlings grown by villagers themselves ● Providing useful fruit trees and seedlings ● Processing of fruits 	<ul style="list-style-type: none"> ● Training to motivated villagers ● Learning through repeated failures ● Demonstration with appropriate technology which villagers can use 	<ul style="list-style-type: none"> ● Continued <i>Satoyama</i> regeneration activities over 30 years ● Develop farming system linked to income (vegetable process and mixed cultivation)

Let's think about seed quality < Part 4 >

Health of seeds and seed disinfection technology in Sri Lanka

Risk of seed-borne diseases and seed disinfection

Germination rate and genetic purity are the first things to mention as a seed quality factor, but health of seeds is also important. Healthy seedlings cannot be obtained from disease infected seeds, and using infected seeds could even bring pathogens into healthy fields. In addition, it is not easy to regain seed health once a seed-borne disease is established, in the case of local varieties which repeat in-house seed production. Local varieties of chily is popular in northern Uganda, where mosaic symptoms are often found caused by a virus.



Local chilies showing mosaic symptom (Northern Uganda)

In order to produce healthy seeds, it is necessary to control diseases appropriately in the seed production field. On the other hand, the risk of disease infection cannot be reduced to zero as long as it is cultivated in open fields. Therefore, if seeds are affected by disease or at risk of disease, seed disinfection is necessary to ensure seed health. Seed disinfection includes agrochemicals, hot water, or dry heat treatment, and seed companies treat seeds with the necessary measures. Fungicide dressing and soaking are relatively simple treatments, but basically all of them require delicate temperature control and special equipment, so individual farmers rarely implement these treatments. In the case of the above-mentioned mosaic disease, it is necessary to apply dry heat treatment, if it is caused by a virus. Otherwise a non-infected strain should be carefully selected in order to collect healthy seeds from the strain.

Proposing seed disinfection technology in Sri Lanka

The author was dispatched as a short-term expert of "vegetable seed postharvest technology" to "The Project for Enhancement of production system of certified vegetable seed in Sri Lanka" which had been implementing by JICA from 2012 until 2017. In general, "postharvest" includes harvesting, postharvest ripening, pre-cooling, selection, grading and packaging, but in a

broad sense it may include transportation, processing, and marketing. Under this project, I divided the series of processes from harvesting to packaging of vegetable seeds into four fields, namely, "Pre-/Post-harvest technology", "Pre-storage processing technology", "Storage technology", and "Seed treatment technology for shipping". My assignment covered a rather wide range of activities, including technical guidance to farmers, review of inspection standards and management methods after harvest, adjustment of seed selection machines, advice on storage environment and packing, although the title was simply "postharvest".

The most problematic subject among them was seed disease infection. When I visited a seed production field, major seed-borne diseases such as tomato bacterial canker and virus diseases were observed, but no appropriate management was done. In addition, disease pathogens were detected from domestic and imported seeds. Therefore, seed disinfection seemed to be an indispensable technology for the seed business in Sri Lanka, whose mission is to produce and supply good quality seeds.

Training on seed disinfection technology was conducted for 20 staff in charge of departments responsible for seed production and quality control. Due to time constraints, only training was able to be implemented, but necessary technologies were transferred as much as possible by combining lectures and practical training. It was regrettable for me that I could not be involved in the subsequent process, because it takes time with trials and errors to apply and establish the technology. However, later I was told that they were continuing seed disinfection seeking better solutions. We hope that introduced post-harvesting technologies including seed disinfection will be useful to improve the quality of vegetable seeds in Sri Lanka.



Training on seed disinfection technology