

## Tsukuba Challenge!

It has been six months since I started to learn how to provide training and guidance in delivering the Region-focused Training Course on Vegetable Cultivation Technology and Marketing Method for Small Scale Farmers at JICA Tsukuba.

During this time, I felt the need to enhance our ability to provide high quality training and guidance. Primarily instructors need a wide range of knowledge and experience to be able to teach technologies which participants can apply in their own countries. Participants need to pass on standardized knowledge and technology; variety selection methods, ways to determine planting types, cultivation management and marketing related to vegetable production technology involving a number of different crops. For them to be able to do this, it is important to build a relationship that enables everybody to exchange opinions frankly and without reservation or hesitation. Communication ability is critical to ensure the provision of accurate and appropriate guidance and directions to participants during training courses. This involves thought from everything from setting up individual experiments to management throughout the entire training courses. This will earn the trust of participants and will lead to participants acquiring technology that are applicable in their own countries. We have been feeling that by forming a trusting relationship with every participant, a training course, as a whole, becomes tighter and raises spirits and enhances enthusiasm! Getting this right is not something we can achieve in a day. We have learned that this is something which can be only achieved by cumulative experiences, and fundamentally by treating participants with respect.

Simultaneously there are benefits for everybody. What was nice is that we could share moments of deep understanding with participants both personally and professionally. There were 12 participants from 11 nations this year. Although situations in their countries vary greatly, they were relaxed, exchanging jokes at times, stimulating each other, and they were trying to make use of what they gained during the training to improve agriculture in their countries. For a long training period (in this case 9 months), teamwork between the participants proved important. I became involved in the course as a support personnel in the middle of the training period, and I learned a lot from the participants, from their diligence, sincere attitude and their sense of fun, through the daily training sessions and accompanying them on field trips. The participants went back to their home countries in early November and they immediately and directly faced farmers in their work places. The knowledge and technology which they learned during the training should be passed onto farmers directly. I feel very fortunate for having had the opportunity to directly work with participants who will shoulder extension responsibilities in their own countries. As an international cooperation professional, this type of work is highly rewarding.

Incidentally, my involvement in vegetable cultivation courses goes back to 2011. I was a student at National Farmers

Academy. My first encounter with the vegetable cultivation course was when I participated Training Program for University Students in KCCP (Knowledge Co-Creation Programs) in JICA Tsukuba. I met many participants from different countries and learned what their expectations were regarding the courses in Japan and I understood part of what they were learning. What was particularly impressive was that many participants were interested in technologies which they could pass onto farmers directly, such as pest and disease diagnosis and calculation methods for determining fertilizer inputs. The largest gain for me was that I could witness very closely and directly the actual international cooperation actions for agricultural support, and I could make use of this experience and knowledge in my work in Mozambique.

I went to Mozambique to work as a Japan Overseas Cooperation Volunteer (JOCV) in 2012 after I graduated from my National Farmers Academy. I was sent to the District Service for Economic Activities office, Jangamo district, Inhambane province on the southern coast. The farmers were largely subsistence farmers and many of them went to South Africa as migrant workers for cash income. Given the situation, it was deemed necessary to increase productivity of cash crops and improve marketing for sales. I visited farmers with local extension staff and worked towards the objective of increasing incomes for the district as a whole. However the insufficient communication skills of the 7 extension staff meant that they could not really understand local challenges which prevented them from effectively providing extension services. To improve the situation and quality of extension services to farmers, I tried to emphasize the strengths of colleagues at regular meetings. I also organized study sessions to discuss challenges and the problems they were facing, promoting sharing of individual's knowledge and experiences for mutual learning and improvement.

I firmly believe that how participants utilize the knowledge and technologies which they gain through training in Japan after returning home is a very important aspect of training programs. I hope to contribute to ensure that participants can effectively use their knowledge and technologies acquired in their training in Japan through supporting the training program, looking back to my experiences in Mozambique.

(By Ioki, November 2015)



Learning with participants

# Improvement of vegetable cultivation course: AAI's effort to link abroad experience and training in Japan <Part 1>

## Introduction

### Training in JICA Tsukuba

As we have previously introduced in AAINews, AAI has been conducting training courses on cultivation technologies including vegetable and other field crops, and upland rice, at the JICA Tsukuba (Tsukuba International Center).



Harvesting cabbage during a vegetable cultivation course

The vegetable cultivation courses are part of the core training courses of JICA Tsukuba, along with irrigation and drainage, rice cultivation, and agricultural machinery courses. The courses are about 9 months in duration, comprising lectures and practices on vegetable cultivation and visits to related organizations and farmers. In recent years, in addition to cultivation technology, emphasis is also placed on extension methods and marketing fields.

### Vegetable cultivation and extension / marketing

Typically, participants are agricultural extension staff, researchers, university lecturers and NGO staff. As their vegetable cultivation experience varies and each country has different circumstances and challenges, it is necessary to respond to each participant's needs in an individual fashion.

How participants make use of what they learn during training in their own countries and professions is important. Given this, we are placing an increasing emphasis on the theme, "technology and extension, and experimentation and research".

Furthermore, it is important to consider agriculture in terms of selling products. This requires participants to learn how to understand market needs, commodity distribution and sales systems, and effective marketing, through visits, lectures, and practices.

### Utilizing experience abroad in training in Japan

In vegetable cultivation courses, AAI staff members are

in charge of organizing and leading lectures and practices regarding extension and marketing. Our course ensures that AAI staff can use their ground experience in developing countries in training work so as to ensure that participants will be able to utilize their experience during the training sessions in their work in their home countries.

For example, we develop training materials based on our knowledge and experience in extension projects which we have implemented overseas. In this way, we can deliver lectures and practices that can directly help application of training results in their extension work in their own countries. In addition, we can apply the methods for facilitating and conducting lectures and practices which we experience through the JICA Tsukuba training in similar work which we may engage in abroad.

### Case studies

In this series, we will introduce the following case studies from various lectures and practices led by AAI staff as the lecturer within the JICA Tsukuba vegetable cultivation courses.

Subject (Focal Staff)	Summary
Local application and extension of useful technologies (Zaitu)	Share among participants the capacity that is required for extension staff through the CUDBAS workshop. Conducting lectures and practices aiming to effectively extend useful technologies that meet farmers' needs. This will include information collection methods using the five senses and body, methods for developing extension manuals, and fertilization improvement technologies using locally available resources, among others.
Crop production and irrigation (Nakayama)	Lectures and practices on irrigation technologies that are essential for increasing crop productivity. Conducted various practices on basic knowledge on soil physics and agricultural meteorology, irrigation methods and irrigation efficiency, irrigation schedules and crop water requirements (CWR), irrigation channel water flow estimations etc.
Extension of irrigation technologies and data collection and utilization methods for extension (Koto)	Introduction of impact of irrigation on crop production, challenges caused by irrigation, and introduction to necessity of water saving. Lectures on water saving irrigation technical cooperation projects in Syria, and practices, and planning and implementation modalities for effective extension activities. Lectures and practices on use of basic data for extension and farmer survey methods to collect data, development of survey questionnaires.
Marketing methods (Koga)	Using a case study on marketing training conducted as part of the Sudan and the Palestine technical cooperation projects, conducted a group classification exercise following the marketing tool 4P (Product, Price, Place, and Promotion). In addition, analysis of classification results based on participants' own experience and knowledge was conducted to be able to make suggestions to improve technical cooperation project activities, aiming to nurture participant's implementation and application capacity.

# Market-oriented agriculture in Palestine <Part 1>

## Introduction

In Palestine, two technical cooperation projects have been carried out since 2007. These are: the Project for Strengthening Support System Focusing on Sustainable Agriculture in the Jordan River Rift Valley (ASAP) to strengthen extension systems towards establishing sustainable agricultural technologies; and The Project on Improved Extension for Value-added Agriculture in the Jordan River Rift Valley (EVAP). ASAP was implemented between 2007 and 2010 with the objective of strengthening collaboration between research and extension work. EVAP was implemented between 2011 and 2015 as a follow up project to ASAP, aiming to upscale application of technologies that were introduced by ASAP, and to improve farmers' profitability through strengthening their capacity for responding to market needs and working within market systems. In this series, we would like to look back on roles of the two projects and the effectiveness of introduced technologies, considering the current situation of agriculture in Palestine.

In July 2006 when former prime minister Koizumi visited the Middle East, the concept of "Corridor for Peace and Prosperity" was suggested. This concept aimed to establish prosperous area within the Jordan Valley through concretizing collaboration within the region, with strategic and flexible deployment of Japan's ODA. The Jordan Valley covers around 1,000 km<sup>2</sup> with an approximate population of 89,000, located along the Jordan River in the West Bank of the State of Palestine territories. Agriculture is a main industry which accounts for 12% of the GDP of the area, employing 70% of the labor force, and therefore plays an important role. Farming areas of the Jordan Valley account for about 13,500 ha. In Jericho the main township of the area, 4,000 ha is farmed and almost 100% is farmed with irrigation. There are a number of issues which agriculture in the Jordan Valley faces. These include low levels of technical capacity, poor irrigation water management, increasing salinization of farm soil, insufficient availability of fertilizer and other agricultural chemicals, and high prices of both. There is also an impact on product distribution and marketing due to the restriction on movements imposed by Israel. Agricultural research and extension activities are not coordinated and there is no system for understanding and incorporating farmers' needs, resulting in insufficient measures for improving the situation.

Under these circumstances, the ASAP established five demonstration plots in experimental stations within the Jordan Valley area. In these plots, the project implemented research on cycle-oriented agriculture, water saving agriculture, soil conservation and conducted training sessions in order to develop the capacity of extension staff. In addition, the project aimed at consolidating the foundation for an effective agricultural extension system through actual extension activities to encourage farmers to independently be able to carry out cycle-oriented agriculture, water-saving agricultural practices and soil conservation. At the five demonstration plots in experimental stations, government researchers, technical staff, and extension staff from the Ministry of Agriculture examined farmers' needs and challenges, and implemented measures such as improvements in cultivation methods and introduction of new varieties following annual

work plans. As a result, the demonstration and research plots functioned as a platform for participatory research and extension in the Jordan Valley. The result was a common perception among people who were involved in the activities.

Under the EVAP, we demonstrated various potential technologies, involving extension staff and farmers within selected farmer's groups, in order to improve group extension systems. In doing this we emphasized the principle of evaluating success through crop budget with the aim of increasing profitability through introducing new technologies. Moreover, we carried out our extension activities following the EVAP extension package in order to further promote market-oriented agriculture. The EVAP extension package aims to enable participants to improve the profitability of their agricultural business by going through a series of processes such as marketing training, business forums and action plan development. Through the Project could strengthen the knowledge of extension staff who participated in the training. The EVAP extension package is being integrated within the extension strategy of the Palestine Ministry of Agriculture which plans to roll this out to the whole State.

The table below introduces technologies that were demonstrated through the two projects. Each of them is extremely important technologies for future agricultural development in Palestine. In this series, we would like to introduce effectiveness of individual technologies, as well as demonstration experience and results.

Target Technologies	Summary
Diagnosis of irrigation facility 	In Palestine, promotion and extension of water saving technologies are important challenges. Therefore we conducted diagnosis of irrigation facilities of farmers upon their request, with extension staff using a simple measurement kit. We implemented training for extension staff so that they will be able to provide appropriate suggestions to farmers on how they can improve their irrigation facilities based on the measurement results.
Production and use of grafted seedlings 	Our projects provided continuous support for commercial and cooperative nurseries, aiming for high quality and stable grafted seedling production. In some cases, we could establish how grafting strengthens the tolerance for soil-borne diseases. We could also demonstrate how grafting can support improving profitability.
Production and use of compost 	Our projects provide necessary machineries for compost production, and provided training on production as well as business planning based on appropriate production plan development. With the objective of collecting information on appropriate amounts of compost application and profitability improvement impact, we conducted tests to evaluate effects of compost application.
Production and use of silage 	Our projects provided cooperatives with the necessary machinery for silage production, establishing a system for machinery rental so that it is shared by several cooperatives and used appropriately. Through demonstration activities, we could confirm cost reduction impact and an increase in milk production and improved milk quality with silage usage. At the same time, we could demonstrate impact towards profitability improvement.

## Reports on activities of ex-participants from Nepal <Part 3>

### Effect of training in Japan for improving extension staff capacity

In this series, we have been reporting on results of this visit to Nepalese ex-participants in December 2014 as part of the “Vegetable cultivation technology and marketing method for small scale farmers” course. In this third part of the series, we introduce cases that show the contributions of training in Japan to capacity development of agricultural extension staff.

During this visit, we conducted interviews with the participants themselves and also farmers and local staff, asking if there is a notable difference between average extension staff and those who participated in the training courses in Japan. The result was that we received responses such as: ‘possessing wealth of knowledge and experience’; ‘thorough and meticulous way of teaching’; and ‘sincere attitudes when interacting’. We asked the ex-participants questions on these responses. One ex-participant said, that “in the past, I was frightened to visit farmers. But now I can deal with farmers comfortably and confidently. Maybe this led to my favorable impression.”

When we asked what were the most valuable experience during the training, 80% of the participants mentioned experiences in cultivation methods for many different crops. Many of the participants started to work as extension staff as soon as they finished university or graduate school. This meant that they had to start advising farmers on cultivation without sufficient cultivation experiences except for limited practices at university. It is no surprise that they felt afraid of questions asked by farmers on their own farming fields. Now they can at least talk about their own cultivation experience. When there is a difficult question, they deal with farmers trying to remember the actual cases they saw and learned about in Japan and what Japanese instructors taught them.

An ex-participant said, “Nowadays, even in Nepal, we can obtain knowledge and information through the internet and publications. However, cultivation experience and technology can only be acquired through actual work in fields and practices in training. It is because of cultivation experience in the training in Japan, I can now advise

farmers on cultivation.

Furthermore, a half of ex-participants responded saying that “logical thinking” which they learned in the training in Japan is contributing greatly to their work. For example, they can now analyze results of experimentation from experimental farms in a logical manner and hold meaningful discussion with researchers. Some of the ex-participants are now managers within their organizations. Logical thinking is also highly useful for them to conduct their managerial work, supervising a number of different strands of work. Additionally, they said they became capable of explaining more logically why something needs to be done, why certain management tasks are necessary, or where a problem lies, based on knowledge and experience gained in the training courses in Japan. The feedback from local staff and farmers is that many extension staff tend to provide one-way advice insisting on what one should do, but explanation of the ex-participants tend to be easy to understand and educational. One ex-participant also commented, “I used to think that there is no use explaining to farmers as they would not understand. It is totally changed now and I explain to farmers in the way they can understand.” “Compared with the past I can feel that I am much more relied on by farmers and local staff, which is a very rewarding feeling.”

As an extension staff, the most important thing is to respond to farmers requests in a sincere manner. However, inexperienced young extension staff tend to lack confidence and it is therefore understandable that they cannot deal with farmers with a feeling of authority.

In the training courses in Japan, practices on cultivation technology are always linked to lectures so that participants can acquire cultivation technology backed by logic. In addition, we create many opportunities for the participants to analyze experimentation results and present them logically. With this visit to Nepal, we could confirm that their experience in Japan is serving as a foundation for them to become extension staff who are trusted by farmers, instilling confidence in themselves as technicians.



The 2012 participant Mr. Ajaya Adhikari (left) diagnosing growth of crop from stem diameter and advising timing of top dressing



The 2010 participant Mr. Sudhir Shrestha (2nd from the left) investigating crops in farmer's farming field



The 2010 participant Mr. Arun Kafle (2nd from the left) and the 2011 participant Mr. Sandesh Dhita (2nd from the right) discussing with farmers on their farm management