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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

Practical Session at a Farm in Hasaki (Training Course on Vegetable Cultivation Technology)

At the JICA Tsukuba International Center, the curriculum for the training course on vegetable cultivation technology II is designed to achieve a number of objectives through a series of lectures and practical sessions. The practical sessions are designed to help the participants acquire knowledge of high yield/quality cultivation and seed production techniques, which enable farmers to follow environmentally friendly farming practices. Another objective is for the participants to gain good understanding on the activities of agricultural cooperatives and research centers as well as agricultural extension organizations. The curriculum includes visits to farmers, however, it is difficult for the participants to understand cultivation techniques which farmers have acquired through their individual experiences and learn the critical points of various practical techniques. Therefore, we decided to include a practical session at working farms, which provide an opportunity to experience farming activities and farming livelihood at the same time. This practical session enables the participants to further their understanding on how what they learned during the course is applied in reality, through their first hand experiences of technique applications that are the backbone of sustainable farming.

In selecting farmers for the practical session, we focused on green house cultivation farmers so that the practical activities would not be influenced by the weather. We also considered areas with easy communication. With these criteria in mind, we contacted the Hasaki Branch Office of JA Shiosai, which is officially designated as production center for green peppers and host farmers were selected. We explained to the staff at the center about our plan regarding the objectives of the practical session, and after detailed consultation with the officers at the Hasaki division, we decided to hold two-days practical session. JA Shiosai Hasaki district had experience in receiving agricultural trainees from China, however, it was the first time to receive JICA trainees. Therefore, in order to reduce the burden on the part of the host farmers, accommodation and meals were arranged by us. However, we asked the farmers to let the participants take meals at their house. In addition, an AAI staff member accompanied each of the three groups as interpreter to assist with the language barrier, which was considered the biggest problem.

The farmers who accepted the participants were active farmers who were also playing an official role at the Hasaki division. Many have participated in study trips to visit farms overseas. Some have prior experience in accepting trainees such as extension officers or students, and had agricultural trainees from China as employees. The JICA participants joined the farmers from 8:00 in the morning until 8:00 in the evening, and participated in various forms of work ranging from harvesting, selecting and boxing green peppers, to pruning and training. The host farmers actively worked on the participants, showing them various work methods and techniques. In addition, between operations, the farmers told the participants about their philosophies and the realities associated with various farming techniques. During lunch and dinner, the farmers also told the participants about their farming lives over generations. Participants were also asking questions related to farmers' families, as well as telling the host farmers about lives in their own countries.

According to the questionnaire survey with host farmers after the training session, all the three host farmers highly appreciated the practical session and provided the following constructive opinions;

- As this was the first session, we were little worried in the beginning. However, we gained valuable experience in understanding the issues people are facing in the participants' countries.
- Through discussion with the participants, we realized the importance of our farming activities and of sharing our works and experiences.
- The 1.5-day session was rather short and it can be possible to extend it to 2-3 days. In order to enhance exchange with participants, it would be meaningful to create opportunities for the participants to interact with children.
- In this practical session, we could have quite a lot of time for discussing as there were limited field works due to cultivation schedule. However, it is doubtful that we could make effective use of our time without an interpreter, and therefore we are very grateful for our interpreter's presence and assistance.

All the participants were very satisfied with the practical session, however, many commented that it could have been longer than two days. It is considered that practical sessions with farmers serve as an effective method for maximizing training impact. In addition, we should not overlook the positive benefit to the hosts of the practical sessions.

Green Pepper Harvest

Transporting the Harvest

Practical Session at Sorting Facility

Coordination between Technical Cooperation and Training Activities

Part 3 – Coordination with technical cooperation project

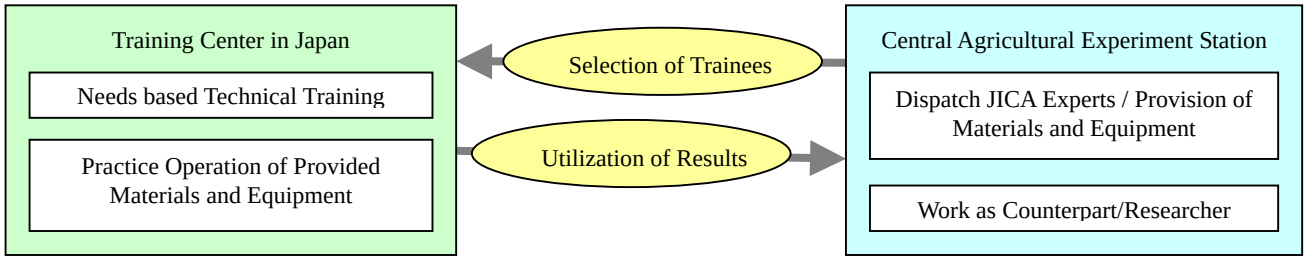
Central Agricultural Experiment Station

In this article, we would like to examine a case in Afghanistan, as a tentative suggestion for ensuring coordination between technical cooperation and training activities in Japan. Afghanistan used to be an agricultural nation with approximately 80% of the country's labor engaged in the agricultural sector. However, due to drought and the destruction of irrigation facilities during the civil war, agricultural production declined sharply, and the country is currently dependent on foreign food aid. The Japan International Cooperation Agency (JICA) began its assistance in Afghanistan with urgent support for the emergency recovery of agriculture in Kandahar. JICA then implemented programs focusing on the reconstruction of irrigation systems, farming and livestock husbandry, as well as on environmental improvement in farming areas. As part of the JICA supported program to strengthen agricultural research in Afghanistan, work is on-going to consolidate the basic programs of the Central Agricultural Experiment Station in Kabul. As there were no technicians for many years due to the closure of research organizations and the termination of their activities, there is a total lack of technicians in the country. Therefore, it is essential to improve capacity of researchers and technical instructors who will lead the experiment center in future.

With this background, we examined the possibility of linking this technical cooperation project and the JICA training programs in Japan. At present, JICA is dispatching specialists as part of the technical cooperation program and providing equipment to the center. In addition, if this assistance can be combined with capacity development of specialist technicians as part of the training program in Japan (e.g. country-focused special training), the objective of the rehabilitation of the Experiment Station will be achieved more quickly and effectively.

Staff of the Central Agricultural Experiment Station in Kabul have already participated in training courses in Japan. By linking technical cooperation projects abroad and training programs, it makes JICA's cooperation activities more consistent. This coordination also has the following concrete benefits, and it will definitely lead to a speedy increase in, and stabilization of, agricultural production in Afghanistan.

- Under the technical cooperation project for the Central Agricultural Experiment Station in Kabul, it is possible for Japanese experts and the counterpart team to formulate a basic program to strengthen comprehensive agricultural experiment and research, as well as to strengthen extension programs.
- Based on the formulated programs, it is possible to examine the details of necessary training contents, and to select appropriate training subjects and target trainees for the needs.
- In the country-focused special training sessions in Japan, it is possible to provide focused training on different experiment methods for cultivation and water saving irrigation, as well as extension methods, which the participants are expected to use after returning to their country.
- It is possible to provide training in Japan on the operation of equipment that is procured under the technical cooperation project, promoting responsible and professional utilization, and maintenance of provided extension materials and equipment.
- When the participants go back to work under technical cooperation projects, they can fully utilize what they acquired during the training. In other words, follow up activities of training programs are automatically implemented under technical cooperation programs.



As mentioned in AAI News Vol. 48 in which we summed up our training series, we consider that it is extremely important, in JICA's training programs, to select the right participants and to determine the needs-based training contents. This coordination with technical cooperation projects also assists training program organizers in securing appropriate participants and in slim-lining training contents. In addition, the coordination benefits technical cooperation projects, as it is possible to suggest appropriate training subjects that are needed for counterparts in projects. This in turn leads to the enhancement of necessary techniques and skills by counterparts, and many other ripple effects are expected through participants returning to their countries after gaining an understanding and affection for Japan through their stay there. The technical cooperation project in Afghanistan introduced here is only one of many projects. The coordination between technical cooperation projects and training activities would increase the effectiveness of many other projects and training programs. I hope that this example in Afghanistan will make a good case for the complementary functions of technical cooperation projects and training programs in Japan.

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

Part 3 – Research and Extension (Why Research tends to be far from the actual needs)

As a part of the support activities for agriculture and farmers, agricultural research activities and utilization, and the extension of their results, have played a significant role in Japan and many other countries. With agricultural extension programs, production and productivity have been increased and the agricultural economics and livelihoods of farmers have been improved. Needless to say, it is highly essential and important to ensure coordination between research and extension activities. We need to share results and achievements of research with farmers as end-users. We also need to communicate problems farmers face with research organizations in order to solve these problems and to generate new research themes.

Recent years in Japan have witnessed a trend towards formally integrating extension programs with research activities. This trend is represented by the creation of synthesized centers that integrate the functions of extension projects and research with farmer training and education. One of the reasons for this trend is that Japan has been down-sizing extension programs. Another important factor, however, is that despite a wide-spread recognition of the needs for closer coordination between research activities and extension programs, it has not necessarily been practiced in reality. Historically, extension programs in Japan focused on relatively simple extension activities that aimed to increase crop yields and promote high-quality varieties. However, in recent years, both the expectations of farmers and expectations for farming have diversified, and this necessitates extension activities to become more sophisticated and diverse. As agronomy developed, research themes also became more sophisticated and ramified. This does not necessarily equip technicians and researchers to respond to the diversified needs of farmers. With a limited research budget, it is very difficult to respond to all the requests from farmers and farming entities. In order to secure a budget, researchers sometimes need to propose themes that are attractive to people who approve budgets rather than themes that are based on farmers' needs.

In Syria, the separation between research and farmers' needs is also becoming a serious problem. For example, in the case of grape cultivation in Syria, the common irrigation method is to trail lateral tubes along shelves and to connect them with tubes called "spaghetti" which is extended to the roots. However, at irrigation experiment stations, drip lines are installed on the ground to test irrigation amount. As the irrigation methods differ, it would be difficult to expect the test results to be applied at farms as they are. It is necessary that experiment stations also use the same irrigation method as farmers and compare results from different methods. Moreover, although some experiment stations are located in areas with substantial vegetable cultivation, they do very few tests related to vegetables. Furthermore, in case fruit farms switch from basin irrigation system to water-saving irrigation systems such as the drip system, it is possible that they may see reduced productivity just after the switch due to the different soil wetting patterns of the two systems. Measures to minimize such negative effects are highly important for farmers, but there is no such testing and research in irrigation experiment stations.

The main reason for research not responding to farmers' needs is that researchers do not know the problems farmers face as they have hardly any opportunity to visit production sites. Linking research with practicing farmers is one of the most important roles of extension activities. Syria is exploring the possibility of establishing a new professional category, the Subject Matter Specialist (SMS). An SMS is expected to serve as a bridge between researchers and extension officers. As explained in the previous issue, this seems to be the sort of reform that goes completely against the trends in Japan. This may be because in Syria, the basic capacity of extension officers is considered to be low and the capacity building of the officers is regarded as a medium to long-term national objective. In addition, in the short run, the SMSs are expected to have a base in regions, and to play a role as the closest counselors for extension officers and as advisors to augment technical gaps. Furthermore, ideally, SMSs need to play an important role in communicating various problems farmers face to researchers through extension officers. Researchers at research facilities can obtain information pertaining to problems on the ground through the SMSs and they should be able to use the information for their research activities.

Grape Cultivation in Syria

An example of poor irrigation management by an ordinary farmer

The very orderly plots in an Irrigation Experiment Station

Mini Series: Sand Fixation and Tree Planting in Mauritania

Part 1: Issues surrounding Sand Fixation and Tree Planting in Mauritania

In Mauritania, an arid nation located in West Africa, a large amount of sand is blown in by prevailing winds from the Sahara Desert. Much of the country, except for areas along the Senegal River, is desert. In the oasis settlements that occur sporadically in the deserts, it is essential to protect farmyards and houses from the shifting dunes and advancing sands, therefore a lot of tree planting activities are seen in these areas. In this mini-series, focusing on information from the Tagant and Adrar regions, we would like to first introduce issues surrounding sand fixation and tree planting in Mauritania, then follow up in Part 2 by introducing tree planting techniques.

In Mauritania, people started becoming aware of the needs for sand fixation after major droughts between 1968 and 1973. Shifting sands and their accumulation brought a lot of problems to peoples' livelihoods, and seriously impacted on people's daily lives and farming activities. Therefore, various measures are taken by government supported initiatives and by residents themselves, such as tree planting to prevent, mitigate and reduce wind and sand damage. The main damages from shifting and accumulating sands are: 1) Farmlands submerged by sand; 2) Crop growth impediment; 3) Houses buried under sands; 4) Road breakage; and 5) Deteriorating livelihoods.

Protection Targets	Damages
Residential areas	Houses buried under sands Increase in illness due to sand getting into respiratory organs and eyes Impure substances such as feces getting into food items
Farms	Reduction in crop production and deteriorating quality Un-arable land due to farmlands buried under sands Degraded soil fertility
Roads	Transport hazards and shut down Causes of traffic accidents Road breakage
Entire area	Compound damage of the above three types of damage Threats to the existence of residential areas and villages as a whole Threats to local industries such as agriculture and tourism activities

Initial tree planting projects aimed at fostering peoples' support for tree planting activities and at demonstrating the effectiveness of wind and sand prevention as a means to improve livelihoods. Major settlements in regions with good transport facilities were chosen as project sites, with a view to creating obvious demonstration effects. However, later on, people's awareness on tree planting activities became high and participatory tree planting projects were implemented. In these participatory projects, tree planting areas were selected with the full consideration of the pro-active opinions of the concerned residents. In addition, recent projects include not only tree planting elements, but also incorporate rangelands and farmlands management elements with an aim to increase benefits to local people.

Since the 1970s until 1997, tree planting activities conducted by the Government of Mauritania with cooperation from bilateral donor countries and agencies were implemented at 765 sites covering a total of 6,144 ha. However, many of the activities were targeting the southern parts of the country, and only around 9%[1] took place in Tagant (222 ha) and Adrar (464 ha). Continuation of sand fixation and tree planting activities are necessary in these areas. At present, tree planting and sand fixation projects are implemented with residents' participation through the oasis cooperatives based in each oasis. However, in areas without oasis cooperatives, tree planting projects continue to be implemented by the Ministry of Regional Development and Environment. In Mauritania, the cutting of natural trees is basically prohibited. Therefore, trees planted around an oasis to prevent winds and also the sand are utilized as resources for local industries and livelihoods; building materials, fuel, livestock fodder and resting areas for tourists.

Date Palms buried in Sand Dunes

Trees Planted to Protect Houses from Sand

Trees Planted to Protect Roads

[1] The tree planting areas in the two regions were calculated with data gathered up to the year 2,000.