

# 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.