



**Technology Transfer: Marketing Obstacles and Methods Followed
A Case Study of Yarmouk Agricultural Resource Development Project - Jordan**

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1 - Introduction

Yarmouk Agricultural Resource Development Project is one of the agricultural projects undertaken by the Ministry of Agriculture in the Northern region of the Kingdom next to the borders with Syria. The Project's activities are carried out in selected areas in Yarmouk basin in the governorates of Irbid and Al-Mafraq, as well as parts of the governorates of Jerash and Ajlun in which annual rain rate exceeds 200 mm.

Implementation of the Project started in the year 2000 and went on for six years. In 2006, IFAD reviewed the different stages of the implementation of the Project and agreed on its extension for two more years (until 2008).



Intervention Area of the Project

The Project's covers 1,235 square kilometres in various areas in which annual rain rate is between 150-500 mm. The Project's area is inhabited by 700,000 people living in 99 villages and neighbourhoods. Population density in the area is as high as 526 persons in each square kilometre.

The Project's main objective is to improve food security and levels of income for farmer-beneficiaries through reversing soil deterioration and regaining its fertility in order to achieve sustainable usage of water and soil resources. The following methods help achieve this objective:

1. Providing technical and financial support for farmers in order to undertake measures for the protection of the soil and water, as well as improvement of agricultural production.
2. Making credit available for small enterprises inside and outside the farm.
3. Improving the capacities of agricultural departments in the Project's area in order to provide supportive and guiding technical assistance in the most useful manner.

The Project includes five components: Agricultural Resource Development Component, Agricultural Funding Component, Agricultural Development Component, Rural Roads Component, and Coordination and Administration Component.

2 - Problems Facing the Project's Beneficiaries

Poverty is one of the major problems that face beneficiaries although its severity differs from one place to another. Poverty is due to the following reasons:

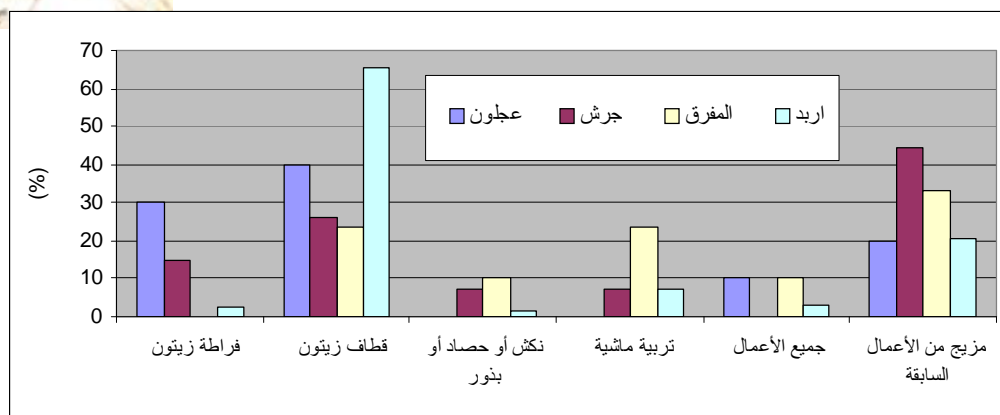
- High population density.
- Fragmentation of land tenure due to Inheritance Law.

- Big size of families especially with the high percentage of dependants due to the increasing number of children (non-productive members). Persons under 15 years of age constitute 35.6% of families' members.
- Limited usage of inputs, low level of agricultural technologies and underdevelopment of markets, which lead to low levels of agricultural income.
- Unavailability of enough job opportunities in other fields.
- Low level of family income which leads to dependency on governmental subsidies, alms, family-based support, or even excessive borrowing.



According to the primary socioeconomic survey conducted in the Project's area, wives' share in tilling operations is high. It reaches 43.9%, 47.4%, 60%, and 44.8% in the governorates of Irbid, Al-Mafraq, Jerash, and Ajlun respectively. Women's participation is confined to picking olive, hoeing, and taking care of livestock.

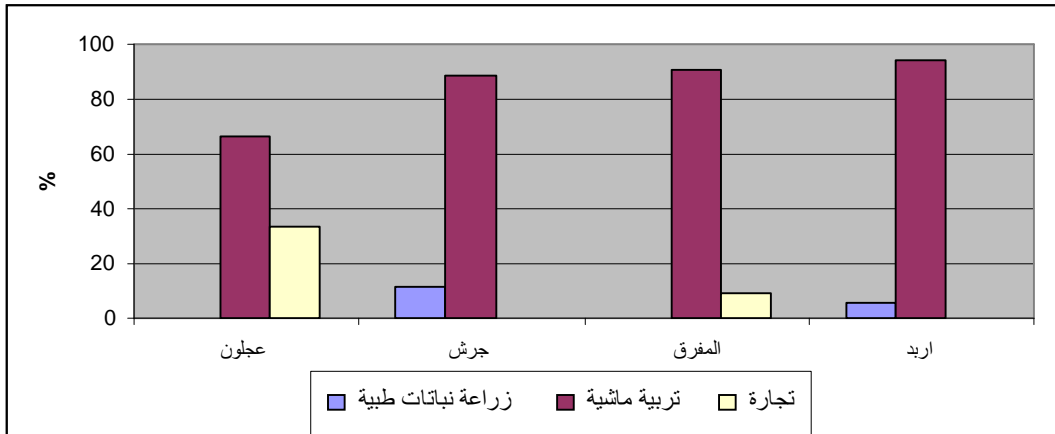
Figure 1 – Percentage of Women's Share in Agricultural Work by Governorate



Concerning participation of women in decision making in the family, this study revealed that 89.5%, 100%, 92.3% of women in Irbid, Jerash, and Ajlun participate in decision making, while their participation is only 65.3% in Al-Mafraq which is the lowest percentage in the Project's area. Decisions in which women participate are mostly confined to family-related issues.

The study also showed that there is a large number of women who want to establish agricultural projects. The percentage of these women is higher in Al-Mafraq, Jerash, and Ajlun than in Irbid. It is noticeable that many women in the first three governorates want to establish agricultural projects like growing medicinal plants or breeding livestock due to their desire to improve the income of their families and the fact that they already have the different components of a project.

Figure 2 – Projects that women wish to establish if they managed to receive a loan



Although women are highly motivated to establish agricultural projects, many of them in different governorates didn't get loans. Only 15.2% and 15.4% of women in Irbid and Ajlun respectively wanted to receive loans. The rate increases to 49.3% and 50% in Al-Mafraq and Jerash respectively. The reason is that income levels in these two governorates (Irbid and Ajlun) are lower than the other governorates.

The types of projects that women want to establish are restricted to growing medicinal plants and breeding livestock. Women chose these projects because they would quickly improve their income, and because they possess experience and other elements for these projects. It is worth mentioning that many women who don't want to receive loans claim that they don't have enough free time, and raise the issue of their inability to repay the loan.

Although women are active participants in all aspects of life, they don't benefit from their own work and don't have the same opportunities as men. This is due to women's lack of work skills or capital, or to their inability to provide the guarantees required for obtaining a loan.



3 - Project's Role in Solving the Problem

In order to achieve its objectives of increasing the level of income of targeted farmers and rural families, the Project paid considerable attention to activating women's role in agricultural production and improvement of family income. This was to be achieved through making necessary fund available for women to establish income-earning small projects that they can run from home.

To achieve this objective, the Project started in 2003 to carry out income-earning projects that target rural women, in coordination with Agricultural Finance Institution. In this framework, this Institution provides medium-term fund to rural women in order to establish small income-earning projects. Each qualified woman receives a 1,000 Dinars to establish her project. Credit ceiling was increased in the past few years to 3,000 Dinars per woman due to increasing cost of project's requirements.

In the beginning, the Project aimed at making targeted rural women familiar with this lending activity. It sought to raise the awareness of local community through seminars and advocacy meetings in the Project's areas, in cooperation with charity organizations, women's unions, and

local councils so that rural women learn about the Project and its objectives, as well as criteria for selecting women who would benefit from the program of income-earning projects.

For this aim, five female agricultural engineers were employed in field units of the Project as rural development educators to help women benefit from the program, and to follow-up implementation of their projects. Rural development educators – in coordination with agricultural credit supervisors - carry out field visits to project's locations proposed by women qualified for acquiring the loan. Then, the proposed project, the situation of the family, and its needs and capacities for implementation of the project are evaluated.

Based on this evaluation, loans are provided for women to carry out proposed projects. Women who are granted these loans participate in a training course carried out by Yarmouk Project so that she learns how to technically and administratively implement the project.

After all the qualifications for receiving a loan are satisfied, final approval is granted and the sum of money suitable for each project is determined. Loans take the form of subsidized simple loans with an interest rate of 6.5% over eight years for simplified guarantees.

The total number of women-beneficiaries reached approximately 626 women during the past five years, i.e 78% of women targeted in the Project's instrument (800 women).

Priority is given to women who want to receive loans to establish income-earning loans according to a pre-determined set of criteria put by the Project's team.

4 – Capacity-Building Activities and Technology Transfer

The role of rural women is activated through guiding her to proper utilization of resources in order to improve family income. The Project contribute in the transfer of technologies that rural women can adopt including:

1. Using agricultural waste in feeding small ruminant animals.
2. Developing unconventional sources of fodder to be used in addition to concentrated fodders. These sources come mainly from agricultural waste that is locally available.
3. Planting plain cactus.
4. Proper good care of the health of newborn animals, manufacturing of dairy products and their storing.
5. Training women on growing medicinal and aromatic plants, and manufacturing them after the harvest.



Aiming at developing the capacities of rural women in the implementation of their projects, the Project held a series of training and habilitating courses for women receiving loans in the different areas of the Project in various fields including management of small projects related to breeding of cows and sheep, manufacturing of dairy products, breeding bees, food processing, home gardens, etc. Rural development educators working in the Project supervised these activities, with the support of experts in different agricultural departments, or through cooperation with NGOs in order to provide all the information and experiences beneficial for women in their field of activity. 626 women were trained throughout the past five years on implementation of income-earning projects.

5 - Accomplishments

The success of rural women in establishing and running projects is a great achievement for them and their families because of the considerable impact it had on the family income. This success goes back to various elements including:

- The support that women receives from the family in the implementation of the Project.
- Beneficiary's commitment to her work and abidance by sound rules.
- Finally, her ability to market the production of her project.

Guidance and Rural Development Department of the Project carried out a study to follow-up the situation of rural women who received loans two years after the beginning of the rural development activity in 2005. A field survey was carried out, in addition to a detailed study of a sample of women-beneficiaries that covered 287 women from the beneficiaries. Analysing the findings of the study revealed the following:

1. Currently working projects are 174 projects (61% of projects). 113 projects stopped working (39%).
2. Concerning continuing projects, 100% of women's beneficiaries (174 projects) referred to the increase that happened in their family income to 10-50% as illustrated below:

Beneficiaries		Income increase	
Number	%	Number	%
30	20	0	100
52	30	30	70
87	50	10	30
Total (174)	100		

Increasing income due to these projects results in improving the living conditions of the members of beneficiary families, which enables them to improve the social status of women through purchasing some of the necessary requirements like refrigerators, TVs, vacuum cleaners, and school requirements. It also helped them improve their homes via building more rooms, and contributing to the university tuition fees for their children. Moreover, some beneficiary women managed to increase the capital of their projects in order to achieve further development which subsequently increased their income.

6 – Marketing Obstacles

The study performed by the Project on women-beneficiaries of income-earning projects' loan revealed that approximately 113, 39% of the sample, could not continue implementation of their projects for the following reasons:

1. 5% of them mentioned that animals (livestock and cows) died for unavailability of services that livestock needs during the processes of buying and selling of water, fodder, and agricultural and veterinary requirements.
2. 15% of women referred to inadequacy of loans to continue running the project in a proper manner, which made the Project demand increasing the value of the loan to 3,000 Dinars instead of 1,000 Dinars.
3. 25% of women beneficiaries referred to using loans in other non-income earning activities like education, building homes, and buying other necessities for their homes.
4. 55% of women beneficiaries referred to the marketing problem and their inability to market their products due to increasing costs of transportation and the long distance between the project's location and the market, as well as the decay of their products.

Following-up ongoing projects revealed that there are several marketing obstacles facing beneficiaries including:

1. The need to introduce modern technologies to improve marketing services, reduce their cost, and improve the quality of products.
2. Inadequate performance of marketing services in the fields of exporting, promotion, packaging, storing, and transportation.
3. Inadequacy of the agricultural guiding body especially in the field of marketing.
4. Lack of knowledge and expertise in the production of unconventional crops like organic products and the products for which integrated control programs are applied.
5. Lack of knowledge and expertise in the proper methods of circulation and preparation of products for marketing.
6. The recent increase in the prices of milk, which is due to rising prices of fodder, led some milk-manufacturing projects to stop working.

7 – Initiatives Proposed by the Project to Solve the marketing Problem

The above mentioned study revealed that there is a real problem in marketing the products of the beneficiaries of loans, which led a large number of projects (113 projects) to stop working. The Project insists on working on sustaining the remaining successful projects (174 projects), that is why it decided the following:

First: Making rural women participate in agricultural fairs and bazaars that are held in various parts of the Kingdom in order to exhibit their products and market them.

Second: Carrying out training courses for the beneficiaries on marketing and production management in order to increase the efficiency of their utilization of marketing and guiding services.

Third: Encouraging beneficiaries to carry out some transformative productive activities so that they add more value to their production via food manufacturing. This would help them keep their products for longer periods or benefit from higher prices.

Fourth: Sending surplus production to the central refrigerator so that it is preserved until the end of the season to help receive higher prices.

Fifth: Circulation of the names and addresses of beneficiary women through the courses carried out by the Project as a form of networking.

Sixth: Connecting productive women to local markets or charity organizations that buy their products.

Seventh: Studying the current situation of the potentials for marketing the products of rural women, the ability of the market to absorb these products, and the best mechanisms for marketing them.

Eighth: Encouraging the establishment of marketing cooperatives. The Project may establish a cooperative for marketing the products it encourages so that women's projects have wider opportunities of continuation and expansion via the profits it would achieve.

8 - Lessons Learnt

1. It is necessary to activate the role of the guiding body in the field of marketing in the Project because it turned out to be very ineffective at the beginning of the work of the Project, which brought some women's small projects to an end.
2. Follow-up during the implementation process should be intensified to avoid projects' failure by finding suitable solutions.
3. reviving some off the traditional food industries like pickles, honey, etc
4. Successes achieved by participation of some of the women beneficiaries in fairs and bazaars highlight the importance of the role of these fairs in marketing the products of small projects and enterprises to market the products of small projects, and to open new marketing channels.
5. Proper presentation and packaging – coupled with conforming to product quality standards - increases its desirability for consumers.