

## **“Hope Project (HP)” as a Strategy for Knowledge Management in the Agricultural Parcels of Fars Province, Iran**

Arman Bakhshi-Jahromi<sup>a</sup>, Hamid-Reza Ebrahimi<sup>b</sup>, Afsaneh Dirin-SamimiFard<sup>c</sup>

<sup>a</sup> Assistant Professor, Socio-economic and Agricultural Extension Research Department, Fars Agricultural and Natural Resources Research and Education Center, AREEO, Shiraz, Iran. (Email: armanbakhshi@yahoo.com, Alternative: [a.bakhshi@areo.ir](mailto:a.bakhshi@areo.ir), Postal code: 7155863511).

<sup>b</sup> M.Sc. in Agricultural Extension and Education, Director of Agricultural Extension Management, Fars Jihad-e-Agricultural Organization, Iran. (E-mail: [ebrahimi19@yahoo.com](mailto:ebrahimi19@yahoo.com))

<sup>c</sup> Statistic Expert, Teacher in Education Organization, Fars Province, Iran. (Email: [afsanah.dirin@yahoo.com](mailto:afsanah.dirin@yahoo.com))

**Abstract:** The Agricultural Extension system needs a change in organizational performance to increase productivity, knowledge transfer and management services to agricultural producers through the agricultural sector in small areas or zones known as Parcel. “Hope Project (HP)” which has restructured the conventional agricultural extension system, makes organizational cohesion between different parts of “Agricultural Knowledge and Information System” to identify needs, organize research findings, providing and organizing facilities, resources and inputs and updating the knowledge of experts. HP provides a local learning center which is named Comprehensive Pattern Field Sites (CPFS). Each CPFS must fulfill several technical criteria. The main purpose of this paper is to introduce and assess the restructured system of agricultural extension known as “Hope project”, which is a developmental project in Fars province, Iran. The results show that improving knowledge of the stockholders as the main target of this project is acceptable. All stockholders were engaged in a systematic and continuous process. Researchers had a strong and noticeable role in transfer of scientific knowledge. Its consequences were the development of social capital, the optimized use of inputs (esp. water and pesticides) and of course, yield increase.

### **Practical and theoretical background**

Iranian agricultural extension system mainly is a state system and suffers from a structural inconsonance and the slowdown in productivity. In this condition, “knowledge transfer” which is the main mission of an advisory service, encountered a problem and cannot meet the stakeholders’ needs. “Hope Project (HP)” was developed and implemented in 2015 to cope with the problems and increase productivity.

“Hope Project”, which has restructured the conventional agricultural extension system, makes organizational cohesion between different parts of “Agricultural Knowledge and Information System” (research centers, extension, administrative departments, farmers, etc.) to identify needs, organize research findings, providing and organizing facilities, resources and inputs and updating the knowledge of experts. At the same time, it provides a local learning center which is named “Comprehensive Pattern Field Sites (CPFS)”. These sites are developed in farms of influential farmers who are socially and technically accepted. So each site belongs to one of social farmers whose technical knowledge and communication skills made him as a local facilitator. Each CPFS is supervised directly and full-time by a trained Special Matter Specialist (SMS). In the CPFSs, all technical advices, research findings and development programs of Agriculture Organization will be run. In this process, combination of scientific knowledge with the experiences of farmers considering the technical and environmental aspects will be applied.

Each CPFS must fulfill several technical criteria. The first and the most important characteristic is homogeneity with the other local farms in size, cropping pattern and yield. Each CPFS also must be easily accessible to other farmers because each CPFS will be visited several times by neighbor or functional farmers.

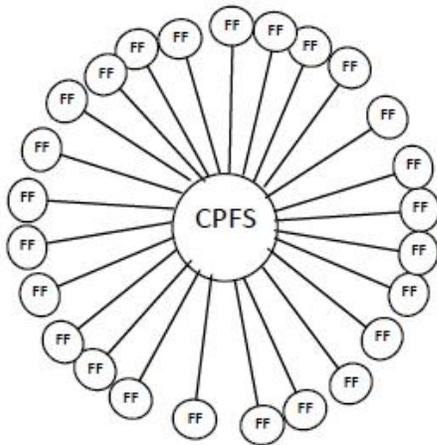
Some additional cultural and social criteria are considered for farmers who are enforcers of CPFS including:

- He/she must be socially accepted by local farmers.
- He/she must be interested in educational and participatory activities.
- He/she must be able to transfer his/her successful experiences to others.
- He/she must obey the technical advisory experts and do the farm production operations according to technical recommendations based on the principles of sustainable agricultural development.

Besides the technical and educational programs, HP is supported by some local and incentive policies and administrative strategies such as:

- Priority in the allocation of production inputs to Core Farmers (farmers who are enforcers of CPFS)
- Priority in the implementation of modern irrigation for Core Farmers
- Priority in paying bank loan for Core Farmers.

Each CPFS includes 25 Functional Farmers (FF) who are trained structurally and systematically. The functional farmers have the same products as CPFS farmers. The key point is that extensive knowledge exchange and transfer of innovative technologies and indigenous knowledge of agricultural issues, which is delivered to specific target groups of beneficiaries who are able to execute and transfer the knowledge to the others.



A strong think tank with two advisory committees support the HP. Also there are an executive committee in each county to guarantee the procedure. An evaluation group observe, survey and evaluate scientifically the program continually.

### **Objectives of HP**

Hope project covers several objectives as follow:

- Covering comprehensively all needs of CPFSSs with the transfer of technical knowledge, research findings, new technologies and promoting information and findings through field demonstration.
- Developing and using Participatory approaches
- Paying attention to farmers continues education
- Promoting the agricultural Macro-policy to field
- Increasing the local productivity and field management
- Diffusing the research finding to local point
- Developing the covering area for agricultural extension programs
- Increase in the quantity and quality
- Focus on sustainable agricultural products
- Interdisciplinary technical cooperation among administrative departments (such as Horticulture, crop production, plant protection etc.)

### Purpose

The main purpose of this paper is to introduce and assess the restructured system of agricultural extension known as “Hope project”, which is a developmental project in Fars province, Iran.

### Case description

Fars province is the second largest province of Iran and also one of the most important zone for Iranian agriculture sector. It contains 30 counties with a wide range of agricultural product. All areas of Fars province using agricultural land cadastral maps have been divided into small areas or zones are known as “Parcels”. There are 642 parcels all around the province. Each parcel is managed by one agricultural expert for agricultural affairs. The “Hope project” was implemented in all of 30 counties of Fars province, Iran, and covered 52 agricultural products in the 430 CPFSSs (more than 1000 ha) including crops (270 sites) and orchards (160 sites) with variety of 52 agricultural products. The area engaged in each CPFSS was equipped with the Signpost (tableau). All CPFSSs have an individual “history and information booklet” which include the technical and geographical characteristics of farm and farmer. Any expert and technical advices and also all farm activities are noted in this booklet as documentation for further follow-up.



In order to be kept up to date, all responsible experts (SMSs) of CPFSSs attended several technical training courses as well as Briefing meeting.

## Results

According to results of field evaluation, documents review (history and information booklet) and qualitative analysis, sustainability in agriculture, reducing the water use and chemical pesticides and also increasing in yield per unit of area were the main results of “Hope Project”.

In order to achieve this purpose and the exchange of knowledge between stockholders, “network knowledge” has been designed and applied during the implementation of this project. The results show that improving knowledge of the stockholders as the main target of this project is acceptable.

According to findings, HP has strengths and shortcomings as follows:

### Strengths:

- Focus on training and updating the knowledge of all stockholders.
- Direct connection and educational communication among farmers, experts and researchers, and possibility of the exchange of ideas and knowledge.
- Implementation of new research findings in farm.
- Increase of structural cooperation between agricultural extension office and agricultural research institute.
- Increase the level of technical knowledge of farmers and experts.
- Increase the level of perceives of researchers about rural areas and farmers.
- Increase on the quantity and quality of agricultural production and efficient use of agricultural inputs.
- Employing new experts as field managers to transfer scientific knowledge to farmers. On the other hand, it was an excellent opportunity for experts to gain experience and practical skills.
- Planning based on the priorities of agricultural products and macro policies.
- Farmers' satisfaction from HP.
- Continuous supervision.
- Expert continuous effort for facilitating supply of inputs and bank loan.

### Shortcomings:

- Insufficient budget.
- Lack of necessary infrastructure in some counties, such as planting equipment, pruning equipment, agricultural inputs, especially certified seed.
- Lack of sufficient incentives to motivate the responsible experts (SMSs) of CPFSSs.
- Failure to develop an action plan with clear targets.
- Inadequacy field visit of experts and researchers.
- Difficulties in providing adequate vehicle for continuous monitoring.
- Lack of skill of some experts on how to create and manage CPFSS.
- Time-consuming for writing the field data in “history and information booklet”.

The most used technical advices which were applied by core farmers in CPFSSs and FF's during “Hope Project” include:

- Use of micro irrigation system in crop fields
- Planting in appropriate date
- Planting the high yield and confirmed seeds

- Improving planting style
- Use of appropriate planting machineries
- Betterment of cropping pattern
- Use of appropriate manures and fertilizers
- Training the fruit trees scientifically

## **Conclusion**

Comprehensive management of agricultural knowledge system was required to drive the old and tired system of agricultural extension. This project linked different chains of agricultural complex elements. All stockholders were engaged in a systematic and continuous process. Researchers had a strong and noticeable role in the transfer of scientific knowledge. During the dozens of farm visits, which were done by research centers, farmers had direct access to researchers and reflected their field and educational needs. The structured team attempts led farmers to increase professional knowledge and led researches to tailor research to suit the farmers' need. Its consequences were developing social capital, the optimal use of inputs (esp. water and pesticides) and of course, yield increase.