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Assessing the Role of Project for Horticultural Promotion's (PHP) Extension and Training Materials in the Solution of Horticultural Problems in the Target Area (A Case Study of Malakand Division)

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Abstract: The study was conducted to assess the impact of Project for Horticultural Promotion's (PHP) extension and training materials on end users in the five districts of Malakand Division. For this purpose two hundred randomly selected respondents were interviewed through a pre-designed questionnaire to see the effectiveness of Project extension materials in disseminating information amongst the farming community and the role of Project in solving horticultural problems in the target area. The extension materials were found very useful for the farmers. But some of the respondents complained the poor distribution of extension materials, lack of practical demonstration of extension materials and less field days. The study shows that the Project played a vital role in the establishment of nurseries and seed production, provision of storage and marketing facilities, improved varieties of fruits and vegetables and the adoption of modern technology and management practices.

Key words: Horticultural problem, project for horticultural promotion

Introduction

Malakand Division lies in the North of NWFP. It comprises 5 districts namely Swat, Dir, Chitral, Buner and Malakand Agency. According to the 1981 census, the total population of Malakand Division was 3,240,000 persons with an area of 29,872 sq.km. Malakand Division has a wide range of agro-ecological zones from the semi-arid sub-humid tropical southern plains of Malakand Agency at an elevation of 500 meters to the dry, cold temperate valleys of Chitral District at an elevation up to 2,500 meters. The total cultivated area of Malakand Division is just 11.8% of which 56.6% is irrigated (Parsons, 1990).

The Pak/Swiss Malakand Fruit and Vegetable Development Project (now Project for Horticultural Promotion) started in July 1988, is working for the promotion of the horticulture industry in the North-West Frontier Province with an emphasis on the small farmer, the landless and women. The Project is being assisted by its partners namely, Agricultural Research System (ARS), Fruit and Vegetable Development Board (FVDB) and Federal Seed Certification Department (FSCRD). From the very beginning, the Project has tried to introduce the latest agricultural technologies amongst the farming community developed through Research, Fruit Board and FSCRD (Schoemakes, 1992).

Technology Transmission unit (TTU) OF

PHP/Agricultural Research Station, North, Mingora (ARSNM) was established in 1992 for the strengthening of Agricultural Research Station (N), Mingora and to transfer the latest agricultural technologies to farmers in an easy and digestible way. The unit has produced so far 36 extension messages, 24 advisory leaflets, 7 issues of horticultural newsletter quarterly, Baghban, 5 grading charts, 3 video films, 7 slide series and one poster. The unit manages 124 Project Publications and the project/research station library at the moment. It also prepares year planners, Project brochures, display/sign boards and agricultural research mandate etc. On the marketing side it designs and produces display boards, banners and packaging materials, fruit nursery catalogue and boards. Moreover, the unit organizes and facilitates overseas training, in-land training, in-house training, seminars, workshops and field days for the Project, FVDB and Research Station staff. The project propagates its extension and training materials through Pilot Application Centers (PAC) established one in each district. The technical staff over there make direct contacts with farmers, arrange demonstrations and train them (Morooka, 1985).

The Project area had a lot of horticultural problems regarding management, availability of standard and improved propagules, small land holding, pest/diseases, storage and marketing. Horticultural products are highly

perishable and should be provided storage facilities and instant marketing (Malik, 1994). The Project created awareness in public to adopt cooperative and progressive farming to overcome the problems of marketing and storage. It introduced many exotic improved and standard varieties in the area and also improved the existing local varieties. Technology Transmission Unit (TTU) played a vital role to educate the people regarding management practices.

Many researchers carried out research on the evaluation of Projects. Ching and Jewell (1994) conducted a study on institutional support and motivational stimuli in the relationships between plants and people, especially people coming to live in rural areas, by examining people moving to small farms in north west Missouri in the USA and who have no farming background. The sample expressed that it would most likely to receive assistance in the type of crops and plants they can grow in the area, the cost of production, investments on infrastructure, loan sources, where to obtain plant materials or seeds, disease and insect prevention and control, environmental concerns on the use of chemicals, possibility of producing organic vegetables, and possible market outlets. Bhople *et al.* (1993) studied the impact of the cooperative society on skilled workers with reference to change in their socioeconomic status. Findings showed that the weavers' cooperative has resulted in increased income and improved socioeconomic status of skilled members.

Alam and Alam (1993) conducted survey type research to assess the Adarsha Gram (Bangladesh) project. The creation of AGP for the aimed purpose has been appreciated by the participants. Johrat (1982) conducted a study to assess the impact of improved agricultural implements on crop production. He concluded that 51% of the cultivators found an increase in their crop production and saved time. However, there was no satisfactory arrangement for repairs. Santos (1984) pointed out that technological change lead to a new source of variation in yields and affects growth over time. He concluded that the innovations considered here included the production and distribution of new varieties, the use of fertilizers, chemicals and machinery. It is thought that a package of innovations, rather than an individual innovation, leads to increased yields. The adoption of new technology is modeled using the area cultivated with the new methods as the central parameters. Morooka (1985) assessed Agricultural Development Project (ADP) funded by Japan International Co-operation Agency (JICA) to establish agricultural experiment facility that can disseminate research findings directly to small farmers through

demonstration farms, extension and training activities. For this purpose, agricultural pilot center (APC) was established at Iging in Cagayan province of Philippines. It proved to be very effective and acceptable to the farmers.

The present study was designed to evaluate the Project extension materials and to find out the horticultural problems in the study area and the solution of those problems through its extension and training materials.

Materials and Methods

The study was conducted in 5 districts of Malakand Division i.e., Swat, Malakand Agency, Dir (Lower), Buner and Chitral to assess the role of Project for Horticultural Promotion's extension and training materials. A list of those 10 villages was made where the extension materials were widely circulated. Then a list of all those educated and progressive farmers in each of the 10 villages was made who regularly read the extension materials. From this list we randomly selected four farmers from each village. Thus total 40 respondents were contacted in each district. To collect the relevant information from the farmers, a simple and comprehensive questionnaire was developed to record the desired parameters regarding the Project extension and training materials and horticultural problems. The data for the present study was collected directly from the sample respondents through face to face talks, usually conducted in farmers' fields or in village centers, keeping in view the maximum convenience of the respondents. In the parameters regarding horticulture problems, the respondents were asked to tell the problems before the project and the solution after the project.

Results and Discussion

In this section the views of the farmers about the extension materials and horticultural problems and their solution are discussed. Photographs, illustrations and language:

When we asked about the photographs and illustrations, out of the 200 respondents, 74.5% respondents were happy with the photographs, while 25.5% were not satisfied with the present photographs. The same picture was obtained for illustrations. District-wise analysis also confirmed the same views (Table 1). It is clear from the data that majority of the sample respondents in Malakand Division were satisfied with the photographs and illustrations. Similarly 94.5% of the sample respondents said that the language used in the extension material is easy to understand. While 5.5% of them did not understand the technical language used in Baghban very clearly.

Table 1: Views of the sample respondents about photographs, illustrations and language used

Name of Districts	Respondents interviewed	Photographs			Illustrations			Language used	
		More	Enough	Less	More	Enough	Less	Difficult	easy
Swat	40	0	28	12	0	28	12	5	35
Buner	40	0	34	6	0	35	5	0	40
Chitral	40	0	24	16	0	25	15	1	39
Malakand	40	0	36	4	0	34	6	3	37
Dir(Lower)	40	0	27	13	0	29	11	2	38
Total	200	0	149	51	0	151	49	1	189
Percentage	100	0	74.5	25.5	0	75.5	24.5	5.5	94.5

Table 2: Reading of other extension and training materials

Name of Districts	Respondents interviewed	Yes	No
Swat	40	21	19
Buner	40	23	17
Chitral	40	19	21
Malakand	40	23	17
Dir (Lower)	40	19	21
Total	200	105	95
Percentage	100	52.5	47.5

Reading of extension and training materials: Table 2 shows that 52.5% respondents are reading materials for their agricultural information. It means that farmers are interested in educating themselves about the latest agricultural knowledge. District-wise comparison shows that the farmers of Swat, Buner and Malakand Agency were reading more materials about agriculture as compared to other districts.

The materials were about off-season vegetables, round gourd, production of onion, tomato, cucumber, mushroom and peas. Sample respondents in Buner mostly studied the extension materials about off-season vegetables. People in District Swat mostly studied the materials about growing mushrooms. The extension materials about fruits were also studied by most of the sample respondents in Malakand Division. They have read the materials on fruits like apple, persimmon, citrus and pear. The extension materials regarding apple have mostly studied by the farmers in district Swat and Chitral. The extension materials on persimmon were studied in all the five districts. The material on citrus were studied in three districts of Malakand Division, i.e., Malakand Agency, Buner and Dir. The sample respondents in District Chitral only studied the extension materials on pear. Some of the readers in Malakand Division, have also read some more extension materials on integrated pest and disease management of fruits and vegetables, pruning and grafting of apple trees and marketing of some fruits and vegetables.

It was proved that majority of the sample respondents in Malakand Division had liked and read the extension and training materials on onion and tomatoes. In fruits,

majority of the sample respondents had liked to read materials on apple, persimmon and citrus. Some respondents claimed that the extension materials has not covered every principle area of fruits and vegetables e.g., pre-harvesting, post-harvesting management, diseases and marketing etc.

Availability of standard/improved propagules, seed production and nursery establishment: Table 3 shows that district Swat was more benefited by the Project regarding improved varieties, seed production and nursery business followed by Malakand and Dir. It means these areas were closer to the Project headquarters and the Research Station has done much more work. Average data of five districts shows that the availability of improved varieties, seed production and nursery business has been increased exponentially with the introduction of Project. The Project introduced exotic varieties and already existing local varieties in the different zones of the Project area e.g., cherry, strawberry and Swat-I variety (onion) etc. It encouraged the nursery business in the community and made them standard by registration with the Project/Research Station and providing technical assistance. It also played a main role in the local seed production.

Storage and marketing facility: Table 4 shows that it was a big problem in the target area due to the perishability of horticultural produce. The Project assisted in the establishment of cold storage and industries for packaging materials at various business centers. The staff at Pilot Application Centers (PAC) played a vital role in making the farmers market oriented and induced cooperative farming and drying of fruits and vegetables during poor marketing as mentioned by Morooka (1985).

Management practices: Table 5 shows that the farmers are not relying on pesticides only but have been directed towards integrated pest management practices, e.g. using

Table 3: Availability of standard/improved propagules, seed production and nursery establishment

Name of District	Respondents interviewed	Improved/standard propagules		Seed production		Nursery business	
		Before	After	Before	After	Before	After
Swat	40	10	25	5	20	2	20
Buner	40	5	23	4	17	1	15
Dir	40	6	18	3	15	0	19
Malakand	40	7	20	5	18	2	14
Chitral	40	4	17	4	16	0	12
Total	200	32	103	21	86	5	80
Percentage	100	16	51.5	10.5	43	2.5	40

Table 4: Storage and marketing facility

Name of District	Respondents interviewed	Storage facilities		Marketing facilities	
		Before	After	Before	After
Swat	40	1	15	2	25
Buner	40	0	12	1	22
Dir	40	0	15	0	20
Malakand	40	0	13	1	19
Chitral	40	0	10	0	15
Total	200	1	65	4	102
Percentage	100	0.5	32.5	2	51

Table 5: Management practices

Name of District	Respondents interviewed	Use of chemicals		Use of IPM		Off-season and multiple cropping		Other management practices and new technology	
		Before	After	Before	After	Before	After	Before	After
Swat	40	35	25	5	10	12	17	22	30
Buner	40	30	25	2	9	3	15	15	24
Dir	40	30	20	1	9	7	10	12	24
Malakand	40	32	24	1	8	5	15	12	15
Chitral	40	25	22	0	7	2	12	8	12
Total	200	151	116	9	43	29	69	69	105
Percentage	100	75.5	58	4.5	21.5	14.5	34.5	34.5	52.5

diseased resistant varieties, efficient cultural practices, crop rotation, using biological control measures by predators and pheromone traps along with judicious use of pesticides. It also played a role in making awareness in the local community about the environmental pollution. The results are in line with the findings of Berrie and Mohyuddin's (1990).

With the introduction of off-season vegetables, the farmer's socio-economic status has been improved. Similarly, the Project extension and training material has profound effect in educating the people to adopt the advanced propagating techniques, pruning, thinning, and new and improved technology.

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