

# ADDRESSING EXTENSION AND TRAINING NEEDS OF FARMERS WITH PHYSICAL DISABILITIES

A case study of  
the Islamic Republic of Iran



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**Extension, Education and Communication Service  
Research, Extension and Training Division  
Sustainable Development Department**

**FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS  
Rome 2003**

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# ACKNOWLEDGEMENTS

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## PREFACE

The number of countries afflicted by human-induced disasters has jumped up from an average of five in 1980s to 22 in the year 2000. This unpleasant development has further underlined the needed rehabilitation of men and women who have been physically disabled due to these conflicts, or for any other reasons, with the aim of ensuring them a normal life in the society. Many persons with disabilities have settled in villages and have adopted farming as the main means for living. However, in spite of their disability, they are not given any special attention by extension workers. In view of the increasing emphasis on developing client-focused agricultural extension approaches, FAO conducted a study in rural areas of the Islamic Republic of Iran in 2001 to identify extension and training needs of the farmers with physical disabilities. This publication is an edited version of that unique and elaborate study.

It is hoped that those Member Countries which are confronted with the challenge of rehabilitating persons with physical disabilities in rural areas as productive citizens, would benefit from the findings and recommendations of this study in terms of developing special agricultural extension and training strategies, suitable for this often ignored but equally important segment of farming societies.



Ester Zulberti  
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## ACRONYMS

FAO	Food and Agriculture Organization of the United Nations
ILO	International Labour Organization
NWO	National Welfare Organization
PPD	People with physical disabilities
WHO	World Health Organization

# INTRODUCTION

Agricultural extension clientele traditionally include all the members of rural farm families, among whom there may be people with physical disabilities (PPD).

In large cities and rural areas, PPD usually have the opportunity to attend special technical schools and/or professional training centres where they can acquire skills that are appropriate for various types of employment. After several years of attendance at such centres, skilled PPD may be able to engage in a servicing or producing activity that provides them with a continuous source of income, allowing them to live independently. Rural PPD, on the other hand, rarely have such opportunities, since they live in villages with no, or very little, access to technical schools and training centres.

Rural PPD who live within families that are engaged in agricultural activities are often obliged or willing to collaborate with their families in farm activities. In many cases, however, PPD have not received any appropriate training and are not skilled in any profession, so they cannot participate actively in farming activities and are forced to remain relatively useless.

The main problem facing rural PPD is that they have no, or poor, accessibility to the special training schools, professional centres and agricultural and rural extension agencies that would help them to acquire appropriate technical knowledge. This means that they are unable to assume a responsible and useful role within their families or to contribute to independent farming operations.

Such a situation gradually leads to the general unemployment of PPD in rural areas and creates the feeling that people with disabilities are unproductive and a burden to the family households that support them. Among other consequences, this state of affairs becomes unbearable to PPD who see themselves as wasting their potential and, as a result, their lives. In response to such a serious problem, the objective of this study was to identify the training and extension needs of PPD engaged in agricultural activities in the areas concerned so that special training and extension programmes may be prepared for them.

## BACKGROUND

A review of the relevant literature on national-level training programmes for PPD in the Islamic Republic of Iran shows that the National Welfare Organization (NWO) offers a wide range of services to its clients, most of whom are PPD.

Some of the services that NWO provides for PPD, according to its publication of June 1999 (NWO, 1999: 8-9), are in the following areas:

- primary surveys to identify PDPs;
- medically based rehabilitation services;
- medical tools and aids;
- social aids, counselling and psychological services;
- training in daily living and communication skills;
- special training services;
- professional rehabilitation services;
- care of unrehabilitated people;
- evaluation of activities (NWO, 1999: 10-16).

The community-based rehabilitation section of NWO is continuously examining the literature of international scientific agencies, such as the World Health Organization (WHO), from which it derives appropriate approaches. New guidelines, books and pamphlets are studied, translated and published and workshops are held in order to raise society's awareness of NWO's improved management of the rehabilitation process (NWO, 1999: 12-18).



*A young farmer who has lost a hand, spraying his tobacco farm, without taking safety measures*

As well as the social services that NWO provides for PPD – such as financial aid, care and support – the organization also trains PPD to help them acquire handicraft and weaving skills (NWO, 1999: 24). NWO has a Rural Affairs Bureau which is interested in extending its services to PPD through rural complexes (NWO, 1991: 320-329). At present, the bureau carries out the following duties with regard to rural PPD:

- social, economic and cultural development of rural women with physical disabilities;
- training of rural youth with physical disabilities on reciting the Koran, acting, singing and handwriting, for their leisure time;
- providing PPD with suitable physical education and sport competitions;
- establishing rural libraries to help PPD strengthen rural culture;
- providing employment opportunities at the village level by establishing professional courses on carpet weaving, which are usually followed by the provision of loans to trained PPD.

In addition to NWO, other agencies are concerned with PPD in the country. For example, the Imam Khomeini Relief (Emdad) Committee provides many general services to poor elderly people in villages, including training in appropriate primary skills such as handicrafts, carpet weaving, animal husbandry, apiculture and sericulture. Such training is usually followed by the award of financial aid, loans or credits, which allows the trained people to start earning and helps them to become self-sufficient.

The Mostazafan and Janbazan Foundation also undertakes a wide range of similar services for its clients, who are generally deprived people and those who were rendered physically disabled during the revolution and war.

The Technical and Professional Training Organization of the Ministry of Labour and Social Affairs is also involved in a wide range of training activities for its target groups, among whom are PPD. The training that this organization offers every year includes courses in agricultural professions such as horticulture, crop production, vegetable growing, fishery and beekeeping (Ministry of Labour and Social Affairs, 1999: 250-256). These courses are related to agricultural activities but they are not specifically for rural areas, nor are they specifically for PPD, although such people may participate if they are able to.

The Labour and Social Security Institute of the same ministry, among its many studies and publications, has translated and published a manual (ILO, 1993), which describes basic principles and training programmes for the professional training of PPD at centres in rural areas. This publication contains a wide variety of professions that would be practical for PPD in rural areas (Ministry of Labour and Social Affairs, 1993: 81-82 and 107). The Technical and Professional Training Organization already offers agricultural courses in urban areas and it is hoped that these training activities will be gradually extended to the villages. This would

give PPD in rural areas easy accessibility to a wide range of appropriate training programmes.

Mention should also be made of the Special Education Organization and the Technical and Professional Training Branch of the Ministry of Education. The former is highly active in the education and training of people with special needs, i.e. students with mental and physical disabilities, and has schools and centres all over the country. Students with physical disabilities can also take part in the technical and professional training that the Professional Training Branch provides at high schools and colleges, according to their interests, abilities and capabilities.

Although these agencies are present and active all over the country, there are very few agencies that are specifically responsible for the agricultural training of PPD who live in rural areas and are engaged in agricultural activities.

In the Islamic Republic of Iran, three agencies are partially or fully responsible for national-level agricultural training and extension activities. The Technical and Professional Branch of the Ministry of Education, in addition to the activities mentioned in previous paragraphs, runs more than 100 high schools and colleges specializing in agricultural studies and practices. Students attend these schools and colleges for periods of two to four years before graduating with an agricultural technician's certificate at level 2 or level 1. The Ministries of Agriculture and Jihad Sazandegi<sup>1</sup> are engaged in similar activities and, in addition to educating and training students in the fields of crop and animal production at technical schools and colleges, they are also responsible for the agricultural extension and training of rural people all over the country.

Each of these two ministries has its own agricultural extension system for the practical training of rural producers according to appropriate extension teaching methods. However, surveys show that neither of them yet has any specific programme to educate and train PPD engaged in agricultural activities. It is hoped that these two ministries will assume the responsibility of providing such a service as they develop in the future.

### THE STUDY AREA

The province of Mazandaran, the area under study, has a total population of 4 028 000 (Iranian Statistical Centre, 2000: 7), of whom about 44 percent live in urban areas and 56 percent in 4 044 villages. The province covers a total area of

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1 These two ministries were merged in 2001, but the organizational units of the new ministry called Ministry of Jihad-i-Agriculture, are still being formed, and their functions being fine-tuned.

4 645 400 ha (Bagheri, 1995: 121), including 622 495 ha under annual crop production and 104 636 ha under fruit tree production (Ministry of Agriculture, 1999: 153-155). The area under natural forest is about 1 294 000 ha and that under pasture and rangeland is 1 857 020 ha (Hossein-Pour, 1993: 14).

The province's total animal population is 4 370 516 head, of which 34.6 percent are in moving, 36.2 percent in semi-moving and 28.2 percent in stationery animal husbandry (Hossein-Pour, 1993: 16). Animal husbandry includes considerable cattle production and sheep raising. Poultry production, fish farming, silkworm raising and beekeeping are the other main agricultural activities in rural areas.<sup>2</sup>

The Ministries of Agriculture and Jihad Sazandegi are the two main government agencies that are legally responsible for supporting and promoting the agriculture sector in the area. The Ministry of Agriculture is responsible for crop and fruit tree production, and the Ministry of Jihad Sazandegi for animal, fishery and poultry production, as well as forest and pasture management. Each of these two ministries, and many executive, technical and scientific institutes, organizations and departments, has its own agricultural training and extension system which undertakes rural training and extension education activities on the basis of its own specific approach.

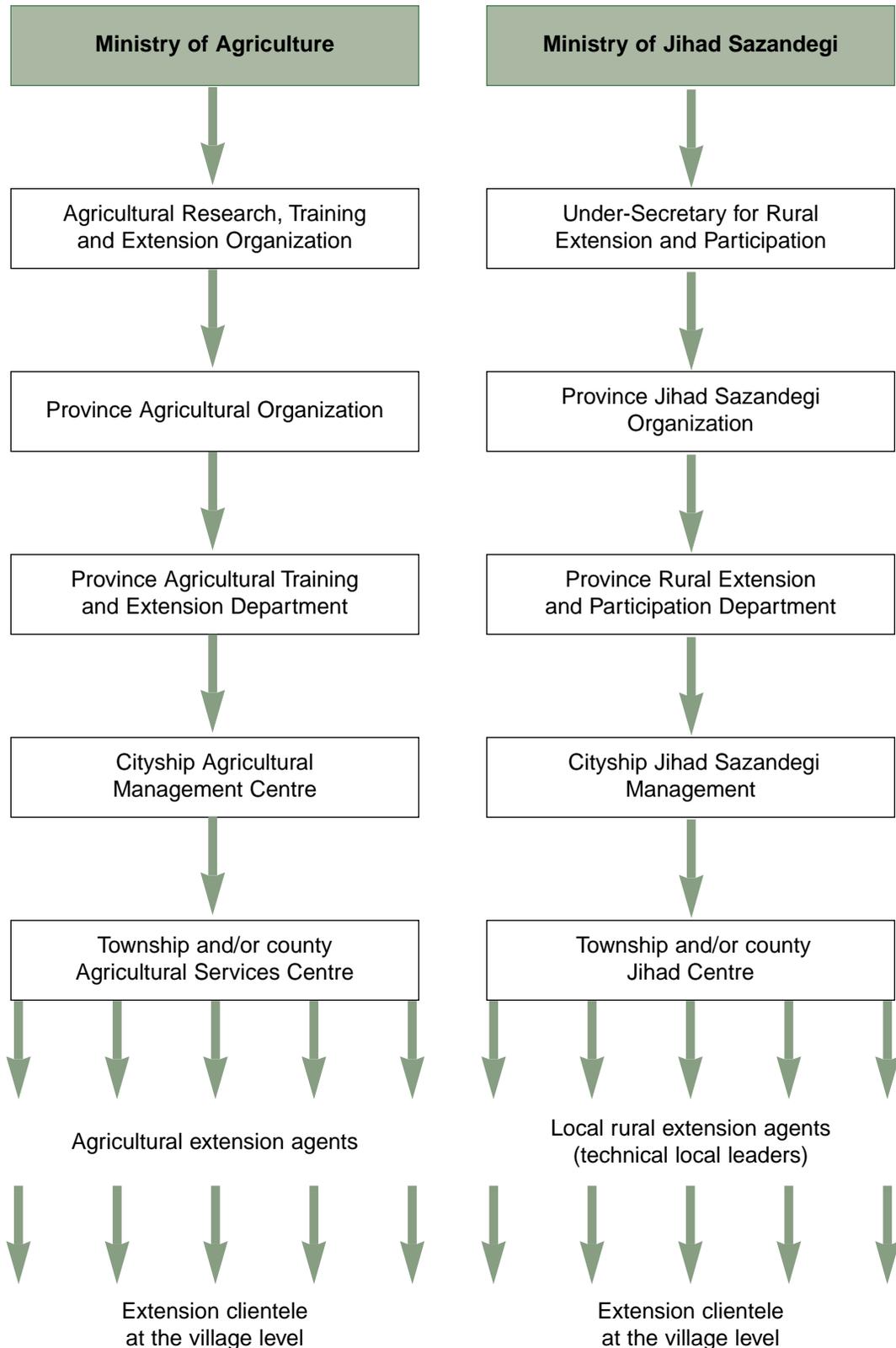
Each ministry has an administrative organization in Sary, the centre of the Province of Mazandaran: the Organization of Agriculture and the Organization of Jihad Sazandegi. Among the many provincial-level departments in each of these organizations, the Agricultural Organization has a Department for Agricultural Training and Extension, and the Organization of Jihad Sazandegi has a Department for Rural Extension and Participation. Scientific and technical staff in these departments includes subject matter specialists who are responsible for acting as a link between the research bases and the field extension branches.

The departments of each organization have main branches in every cityship within the province. These branches, in turn, have sub-branches in the counties and sub-counties of each cityship. In both organizations, expert field workers from the branches and sub-branches, backed by subject matter specialists from the province, usually undertake agricultural extension and training activities in direct contact with rural clients. Figure 1 outlines the various relationships involved.

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2 Most of the figures given here, which were taken from the Statistical Yearbook of 1377 (1999), refer to the census of the Year 1375 (1997), i.e. before the separation of Gorgan and Gonbad districts from the province of Mazandaran and the formation of the new province of Golestan.

**Figure 1**  
**Agricultural extension and rural training: organizational chains of the two ministries (year 2001)**



## HUMAN RESOURCES

In Mazandaran, in addition to the administrative staff of the Agricultural and Jihad Sazandegi Organizations, the Department of Training and Extension Education has 110 extensionists, including four M.Sc. specialists, 67 B.Sc. experts and 19 college graduate technicians; and the Rural Extension and Participation Department of Jihad Sazandegi has 101 technical and social sciences staff, including 15 M.Sc. specialists, 52 B.Sc. experts and 34 college graduate technicians. These members of staff are stationed in cityships all over the province and work as extension field workers in rural areas (Under-Secretary of Statistics and Information, 1999: 3 and 5).

Originally it was thought that the existing human resources could undertake training and extension activities for PPD in rural areas, at least in the first stages. However, extensionists are already involved in field extension and training activities for able-bodied farmers, and it was not clear whether they would be able to assume such demanding extra responsibilities. The answer to this question will be discussed later in this report, on the basis of the responses of the extensionists interviewed.



*An elderly farmer without hearing who works as an active manager in the village*

## **PEOPLE WITH PHYSICAL DISABILITIES**

The results of the national census in 1986 show that there are 453 090 PPD in the Islamic Republic of Iran,<sup>3</sup> more than 50 percent of whom live in rural areas (Iranian Statistical Centre, 1992: 1). According to the same statistics, there are 28 381 PPD in the province of Mazandaran. Of these, 18 814 (66.3 percent) live in rural areas (Iranian Statistical Centre, 1992: 2). On the basis of the Mostazafan Foundation statistics for 1989, there are 4 682 war-disabled people in the province (Mostazafan Foundation, 1991: 8).

In 1998, a total of 3 046 PPD were attending the centres run by these organizations and NWO, which has more than 28 professional training, clinical and care centres in the Province of Mazandaran (Under-Secretary of Statistics and Information, 1999: 5). Given the large proportion of PPD in the province who are not attending such centres, there is a clear need to establish many additional centres, and to extend education and training activities so that most of the province's PPD can benefit. This is particularly important because more than 55 percent of the province's population of 2 750 000 live in villages and, as already mentioned, more than 66 percent of PPD live in rural areas of Mazandaran.

It therefore seems essential that, in addition to NWO, other organizations and institutions that are already involved in rural affairs should extend their activities and assume the task of educating and training rural PPD in villages all over the province (Under-Secretary of Statistics and Information, 1999). Two of the most important of these organizations and institutions are the Department of Training and Extension Education of the Ministry of Agriculture's Agricultural Organization and the Department of Rural Extension and Participation of the Ministry of Jihad Sazandegi's Jihad Sazandegi Organization. Both of these departments already have active networks of agencies to serve rural people at the city-ship, township and county levels of the province. This makes them suitable candidates to assume the innovative task of educating and training PPD who are involved in agricultural activities.

However, if extensionists are to take on such new and specialized responsibilities in addition to their other tasks, they will need psychological preparation, as well as special training, sufficient payment and physical facilities.

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<sup>3</sup> This figure does not include the population of the new province of Golestan.

## METHODOLOGY

The main objective of the research undertaken by this study was to identify the needs of PPD with regard to agricultural extension and training programmes in rural areas. To obtain such information, it was necessary to reach the target group and find out its points of view.

The members of the target group were the men and women, both young and old, who reside in rural areas, are physically disabled and are engaged, or have the potential to be engaged, in agricultural activities. During the process of data collection, it was difficult to reach PPD within families which are scattered across villages all over the study area. It was also difficult to establish face-to-face communication and dialogue with them. However, it was essential that this group be interviewed, in spite of the difficulties and time involved.

PPD generally live with relatives, who care for them and manage their affairs. It was also necessary to interview these relatives in order to learn about their experiences, points of view and recommendations. Points of view and recommendations also had to be sought from the agricultural extension workers and rural trainers of the Ministries of Agriculture and Jihad Sazandegi, since they will be expected to satisfy the extension and training needs of PPD.



*A farmer who is semi-paralysed, gathers mulberry leaves to feed silkworm*

As a result, the following three groups were interviewed:

- PPD – men and women, old and young – as the main target group;
- nearest relatives of the PPD, as the consulting group;
- agricultural extension workers and rural trainers, as the experts from related organizations.

Using the simple random sampling method, 31 PPD, 24 of their nearest relatives and 23 agricultural and rural field workers and experts were selected for interview. Interviews were based on specially designed questionnaires (see Annex). The collected data were then analysed, tabulated and interpreted.

In the process of interviewing for data collection and analysis, some difficulties arose from:

- dispersion of the PPD in different villages across the study area;
- unwillingness of the PPD to participate in an interview about their disabilities;
- variation in relatives' expectations with regard to the primary needs of the PPD in their care;

## FINDINGS

### FARMERS WITH PHYSICAL DISABILITIES

A total of 31 PPD were interviewed from 23 villages across ten counties, four townships and three cityships in two provinces. The interviewees' ages ranged from 24 to 67 years, with an average of 40 years; one woman and 30 men were interviewed. All the interviewees were married and had from zero to ten children. Of the interviewees, 27 were literate and four illiterate. The formal education received by literate interviewees ranged from one to 12 years, with an average of seven years.

Interviewees' physical disabilities included locomotor problems caused by amputation and lameness (16 persons); general handicaps (four persons); paralysis (four persons); and others (four persons). The percentage of disability ranged from 25 to 75, with an average of approximately 40 percent. Interviewees had been disabled for ten to 52 years.

### PPD, agriculture and extension

At the outset of the study it was assumed that rural PPD had no, or only very limited, sources of income and employment. However, field surveys revealed that 20



*A woman who is blind in one eye, collecting wood for her family*

of the interviewees received a regular monthly salary or allowance from government agencies or public foundations; nine earned an income from agricultural business; and the remaining two were employees of government agencies (Table 1). Ten interviewees had been financially supported by the agricultural bank, three by other banks, while the rest had not received any such support.

**Table 1**  
**Interviewees' income and occupational conditions**

<b>Conditions</b>	<b>Findings</b>			<b>Total responses</b>
Source of income	Farming business	Monthly allowance		31
	9	20		
	Monthly salary			
Ways and means of securing income deficit	Farm activities	Welfare agencies		31
	22	3		
	No reply			
Type of employment	Private business	Government agency		31
	11	2		
	No reply			
Farm landholding	Landowner	Renter	Sharer	31
	26	4	1	
	Seasonality of occupation	Permanent	Temporary	
Need experience and skills for occupation?	Seasonal	5	1	31
	25			
	Yes	No		
Trained for occupation?	27	4		31
	Yes	No		
	8	23		

Most of the PPD had seasonal farming employment, a few had permanent employment, and one had temporary employment. About 26 of them were involved in cereal production – mainly rice and some wheat. Nine were involved in oilseed production and the cultivation of fruit trees. In addition to these activities, some of the farmers with disabilities also engaged in animal husbandry, silk-worm keeping and poultry production as side-activities; most interviewees were engaged in more than one activity.

Generally, interviewees had gained their farming skills and experience traditionally, from parents and relatives; a few of them had received extension training. Only about ten interviewees had been helped and encouraged to engage in farming; the rest had entered it as a result of their own personal interest. They had been guided in their farming activities by extensionists, local leaders, other farmers and their relatives; but five had not received any farming guidance at all.

All but four of the interviewees felt a need for additional skills and experience in farming operations; three-quarters of them had never attended any extension training classes, courses and/or meetings. In many cases, however, the production yields and farming efficiency achieved by farmers with disabilities were similar to those of able-bodied farmers who had attended extension training activities.

All rural people, especially farmers, are clients of the School of Agricultural Extension Education. This means that rural PPD, especially if they are engaged in agricultural activities, should be considered clients of the school. However, how aware are farmers with disabilities of this facility? And do extensionists recognize and accept the unusual situation of farmers with physical disabilities? In regard to these questions, it should be mentioned that, if PPD are aware of their legal rights with respect to training and extension education services, they must try to acquire access to such services. Similarly, if extensionists recognize and accept PPD as a special client group, they should try to serve that group in accordance with its special situation.



*A farmer with disability and his wife prepare for chemical spray of their field following a method which is considered unsafe and dangerous*

The results of the survey showed that farmers with disabilities were not aware of their rights and that extensionists did not recognize and accept the unusual situation of farmers with disabilities as a special client group. Although most interviewees knew the Agricultural Servicing Centre and the local agricultural extension agents, 18 of them never had contact with or met agricultural extension agents. In addition, the vast majority had received no previous training contacts or extension meetings from Jihad Rural Trainers.

Among the group who did have contacts and meetings with Ministry of Agriculture extensionists, 19 persons had met the extensionists in their homes or farms, and the rest in extension offices or training centres. It was revealed that the extension training methods at these meetings included lectures, demonstrations, farm visits, film shows and radio and television aids.

**Table 2**

**Expectations of farmers with physical disabilities regarding extension and training activities**

Conditions	Findings			Total responses*
Suitable place for training visits	Farmer's home	Workplace	Extension office	27
	9	9	10	
	Training centre	Public places	Rural farms	
Preferred training methods	None	5	7	30
	Radio and TV	Film	Publications	
	13	4	14	
	Lectures	Extension meetings	Demonstrations	
	5	3	20	
	Face-to-face training	Practical training	Farm visits	
	19	7	5	
Post-training expectations from agencies	Production credit	Supportive loans	Primary materials	30
	22	24	18	
	Storage services	Marketing services	Farmland	
	2	14	9	
	Rangeland	Improved cattle	Improved inputs	
	None	2	9	
Special tools	Tools and facilities	Social motivation		
	1	1	7	

\* Interviewees mentioned more than one item in their replies.

It should be mentioned that all contacts and meetings with extensionists were directed to rural farmers in general, with farmers with disabilities taking part if and when they could. In other words, no activities had been planned specifically for farmers with physical disabilities.

Regarding the post-training assistance and support they expected from the agencies to help them put what they had learned into action, all but one of the farmers with disabilities mentioned at least one of the following: loans to support production, farm credits, primary materials for handicrafts, marketing services, farmland, improved inputs, social motivation and other necessities.

### **Problems and solutions**

The most common problems and difficulties that interviewees faced in agriculture were lack of knowledge in selecting appropriate varieties of seed crops, lack of experience in pest and disease control and lack of production inputs and irrigation water. A few mentioned other factors including soil salinity and flooding.

Regarding suitable training to solve these problems, 17 of the interviewees suggested courses in plant pest and disease control, nine asked for courses in the proper use of inputs, and five requested courses in how to select appropriate improved seeds and in methods of irrigation and land preparation.

Most of the interviewees proposed the provision of tools and inputs and the granting of low-interest loans as being the best economic facilities to help solve



*A woman farmer carrying food on her head for her family members working on the farm*

their farming problems and difficulties. Almost all of them reported facing no social problems in the course of their agricultural activities. Most of them, especially the war veterans, felt themselves to be well respected in their societies.

The physical difficulties faced in farming included the impossibility of preparing land, the problem of transporting heavy inputs and products, and their inability to perform other heavy farming jobs. Interviewees suggested the provision of suitable tools and machinery and special training in carrying out farming tasks in easier ways as options for resolving or decreasing these difficulties.

The farming-related needs, wants and recommendations of farmers with disabilities were very similar to those of their able-bodied colleagues. In fact, the similarity in responses was so great that it is difficult to distinguish between the expectations of able-bodied and those of farmers with disabilities, although the latter group has to contend with the additional effects of their physical disabilities.

### THE RELATIVES OF FARMERS WITH PHYSICAL DISABILITIES

Of the 31 farmers with physical disabilities interviewed, only 24 had relatives who were available for interview with field surveyors. These relatives were interviewed at 20 villages in six counties, four townships and two cityships of the province of Mazandaran.



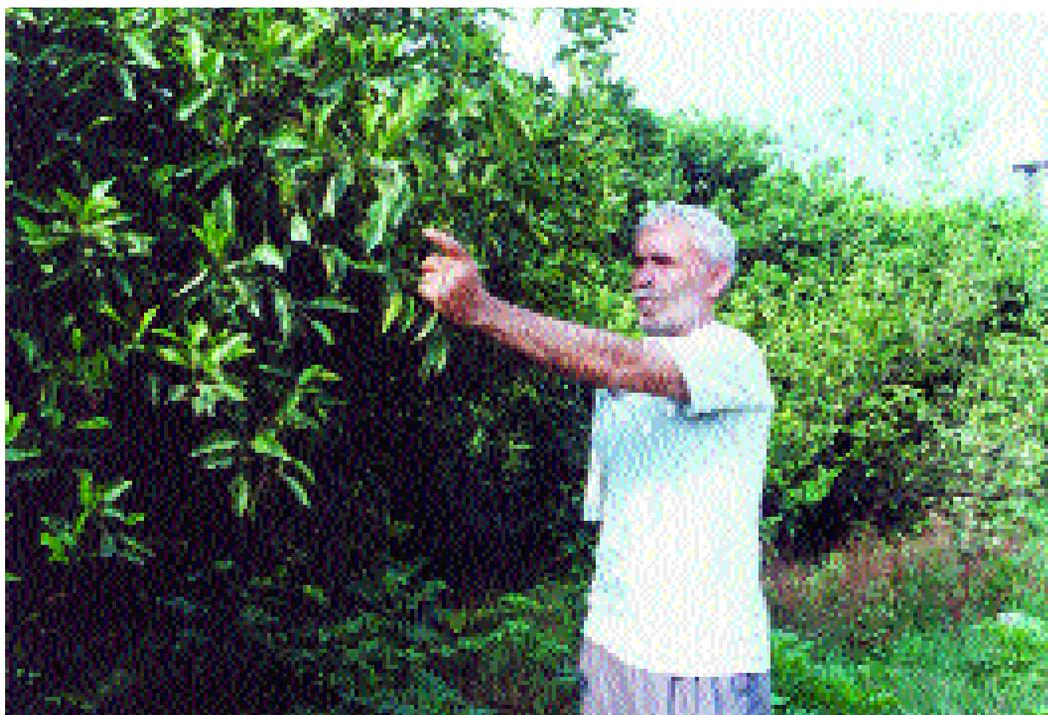
*A farmer who is semi-paralysed, as home producer of cattle*

The ages of 20 of these interviewees ranged from 15 to 66 years (four relatives did not mention their ages). Of the 24 interviewees, 18 were men and six were women; eight were illiterate, seven had received elementary education, six intermediate education, two secondary education, and one college education. Four of the interviewees were the sons, six were the wives, six the brothers and eight the fathers of the disabled person.

### **Farmers with disabilities and assistance**

According to the interviewees, all of the farmers with physical disabilities were very willing or willing to receive general assistance from their relatives; and most were interested in technical guidance in agricultural activities from their relatives. However, only one of the relatives had received special training in helping PPD.

Interviewees declared that they had been helping and training their relatives with disabilities for many years, especially in such operations as rice cultivation, the use of manure and green fertilizers and plant pest control. Relatives stated that farmers with disabilities were indeed ready to accept such assistance, because of much mutual confidence between the farmers and their relatives and the guidance and training offered by the latter had been found to be effective. When helping their relatives with disabilities, most of the interviewees had received encouragement, support and collaboration from other close relatives, local leaders and other farmers. Only two of them mentioned extensionists.



*A farmer with only one hand surveying his citrus orchard to determine proper time for pest control*

Farmers with disabilities also generally accept guidance in farm operations from other people (although not quite as readily as they do from relatives). Most relatives thought that this was because the farmers with disabilities usually respect experienced farmers and are very interested in gaining new knowledge and skills. However, about 20 percent of interviewees mentioned that their relatives with physical disabilities believed themselves to be experienced enough not to need the help of third parties.

According to most relatives, farmers with disabilities carried out farm monitoring and management, seed cleaning and disinfection, mechanical harvesting, weeding, seeding and grafting satisfactorily; while activities related to land preparation, input and product transportation, fertilization, pruning and hand-harvesting were not performed satisfactorily.

Seven interviewees helped their relatives with disabilities because of emotional relationships, eight claimed it improved the economic condition of the family, and the remaining 13 interviewees were motivated by family commitment and satisfaction. The sort of assistance that relatives were giving included physical help with agricultural operations, especially heavy jobs, providing farming tools and marketing farm products.

### **Recommendations and expectations**

On the basis of their experience, the relatives recommended that special attention should be paid to the viewpoints of the PPD themselves; abilities, competencies and efficiencies of farmers with physical disabilities should be appreciated, and their disabilities disregarded, by those who come into contact with them; and full attention should be paid to the recommendations of farmers with disabilities, while taking account of their personal needs and remembering that they depend on family support and assistance.

Regarding the cooperation, assistance and services that they expected from other people, private institutions and public organizations to help PPD to continue their agricultural activities easily and more satisfactorily, interviewees recommended more technical and financial support, more facilities for providing farming inputs and loans, special training, more social respect and follow-up on requests.

### **EXTENSIONISTS' POINTS OF VIEW AND RECOMMENDATIONS**

A total of 23 agricultural extension managers, experts and agents were interviewed in the provinces of Mazandaran (20 persons) and Kohgiluyeh and Boyer Ahmad (three persons). The extensionists came from nine cityships, two townships, seven counties and five villages across the two provinces. Six of the extensionists were agent-technicians, 15 were B.Sc. experts and two were extension specialists with M.Sc. degrees.

The extensionists' lengths of service at the Department of Agriculture ranged from three to 30 years, with an average of 14 years, as general agriculturists in the fields of crop, fruit tree and animal production, as well as other related fields. Their length of service as specific agricultural extension field workers ranged from three to 27 years, with an average of 12 years.

Since it seemed that this was the first time that the extensionists had been contacted to express their ideas about PPD engaged in agricultural activities, they were asked to identify the types of physical disability that were most common among rural people in the study area. In response, the extensionists mentioned paralysis, locomotor problems, lameness and amputations, as well as blindness, deafness and muteness, as being the most important disabilities. Almost three-quarters of the interviewees believed that digestive and other internal diseases were additional causes of physical disability among rural people in the province of Mazandaran.

Since physical disability is originally defined as a person's partial or total loss of working capacity (ILO, 1965: 3), such diseases could be considered primary sources of physical disability among rural people. However, in this study digestive and internal diseases were not considered as physical disabilities.

Most of the extensionists estimated the frequency of physical disability among the rural people in their areas as being between 0.1 and 0.6 percent (i.e. between one



*Twin sisters with physical disabilities cultivating their farm*

and six persons out of every 1 000). This is far lower than the figure of 10 percent that medical specialists estimated as accounting for all types of disability.

The extensionists listed the main agricultural activities of PPD in the study area as rice and wheat production, citrus tree growing, production of soybean, cotton, vegetables, oilseed and other cash crops, animal husbandry, sericulture and poultry production. These were the same as the activities reported by the farmers themselves.

Most extensionists stated that the production yields and efficiency of farmers with disabilities were satisfactory.

**Table 3**  
**Extensionists' views of farmers with physical disabilities**

Subjects	Findings			Total responses
The yield and efficiency of farmers with physical disabilities are satisfactory	Yes 15	No 7	No reply 1	23
Reasons for satisfaction	Yields are equal to those of able-bodied farmers: 5 Farmers with disabilities do their best in farm production: 5 Good management and follow-up, continued contact with relatives, use of others' experience: 5			15
Reasons for dissatisfaction	Do not follow extensionists' advice: 2 Cannot perform heavy jobs: 2 Use paid labourers and others: 3			7

None of the extensionists had ever received any organizational circular, directive or guideline to help them educate and train farmers with disabilities. Eight of them stated that they had no need of special directives because they met and served their clients with physical disabilities as though they were able-bodied.

Regarding interviewees' proposals for ways in which the related institutions could improve the working ability of farmers with disabilities, more than two-thirds of them suggested the provision of medical aids and tools, and the remaining one-third suggested the provision of appropriate farming tools. According to most interviewees, the support that would best help farmers with physical dis-

abilities to establish and/or extend their agricultural activities was the provision of production credits and loans for farming.

Most of the interviewees believed that the organizations and institutions concerned should establish special training programmes in accordance with the needs and possibilities of farmers with disabilities, so that they can continue their activities in agriculture. Most also believed that priority must be given to the formation of practical training courses to be held at the homes or farms of their clients with disabilities. They also emphasized the need to offer special training courses to the relatives and family members who work, help and/or live with the farmers with disabilities.

In addition to these proposals, the extensionists also suggested that extension volunteers who want to serve farmers with disabilities must be trained and employed, so that they can carry out this important new task properly. Other suggestions included simplified training courses, educational films and publications, and innovative and appropriate extension teaching methods.

Once again, regarding what concerned organizations and institutions should provide to help PPD to work in various fields of farming, most interviewees mentioned agricultural tools, inputs, credits, loans, land and improved cattle breeds under simple, specific terms. Some emphasized training, encouragement and service provision at the homes and farms of the farmers with disabilities.

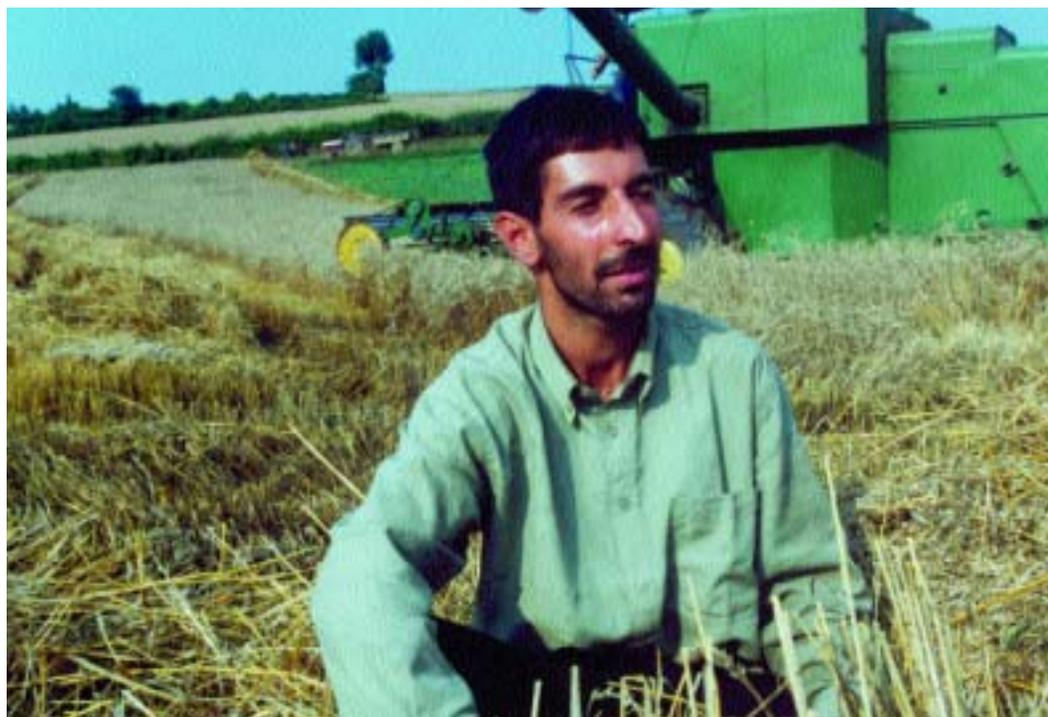


*An elderly farmer with only one hand uses a tractor to perform almost all farm activities*

The extensionists implied that support should be based on some sort of subsidy. Since farmers with disabilities are scattered over rural areas, and therefore difficult for concerned agencies to reach, it was suggested that special groups should be established. Most of the extensionists stated that concerned institutions and organizations could assist PPD to form production or professional cooperatives, societies and/or special farmers' groups at the national or regional level. Such an approach would help PPD to improve their farming activities and support each other within society, as well as strengthening their voice in private institutions and government agencies, all of which would protect economic benefits of farmers with disabilities and their right to live in peace and security.

Several interviewees did not approve of such special groups because they believed that farmers with disabilities should not be separated out from farmers in general. They stated that it was better to assist and encourage farmers with disabilities to acquire membership in general farmers' cooperatives, societies and social and professional groups.

With respect to the education and training that extension field workers should receive before working with farmers with disabilities in rural areas, 18 interviewees stated that field workers should attend special courses in social psychology and sociology, as two of the basic fields of extension education. The rest emphasized training in communication and special teaching methods, so that field workers can easily transfer their messages, technical points and recommendations to their clients with disabilities.



*A farmer who is blind in one eye, operates a mechanical harvester*

According to extensionists, the most effective extension teaching methods for training courses and extension meetings with farmers with disabilities would be film shows (but obviously not for the blind), demonstrations of methods and results, and farm visits. A few stated that, for the literate, the preparation and distribution of simplified printed materials was more efficient.

For extensionists, the training of farmers with disabilities is an arduous task, especially when it has to be carried out in addition to their existing responsibilities. There is therefore a need for strong incentives. Good working facilities must also be provided to the volunteer extensionists who assume such a special task.

Most interviewees proposed appropriate bonuses, larger monthly salaries, field allowances, payment of overtime, and annual promotion and rewards as ways of motivating extension workers who want to work with farmers with disabilities. A few added psychological support and appreciation, vehicles and special training courses. Some interviewees suggested that such an important job should be performed by specialists who had been specifically trained and employed for the task.

Interviewees suggested many different ways of linking extension education for farmers with disabilities to the administrations and agencies concerned. These included adding a new branch to the existing structure of agricultural extension departments, establishing a bureau to monitor and follow-up on solutions to such farmers' problems, and forming an information agency. Some also suggested the formation of independent support societies, training units, servicing units and/or consultation agencies.

This was the first time that the extensionists had to consider such an issue, so it is perhaps not surprising that there was no agreement among them. The responses also indicated that interviewees were not aware of any existing organizations and institutions that were fully or partially involved in the education and training of PPD in the fields of agriculture: and, in fact, no such agency exists.

## CONCLUSIONS AND RECOMMENDATIONS

The main problem investigated by this study was the poor access of farmers with physical disabilities to agricultural extension and training agencies. The study's main objective was to identify and analyse the training and extension needs of farmers with disabilities. As a first step in achieving such a goal, agencies that specialize, or that have the potential to specialize, in supporting, treating, educating and training PPD were reviewed. Primary results showed that many government and non-governmental organizations, institutions, committees and other agencies were directly and indirectly involved in the training of PPD, but that none of these agencies and institutions was exclusively specialized in and assigned to educating and training rural PPD engaged in agricultural activities.

The data collected indicated that PPD have high potential to engage actively in the area's agricultural development process. Although no specific agricultural extension and training programmes had been established for PPD as a special group, many rural PPD were already engaged in some kind of crop and/or animal production. The extension field workers rated the yields, evaluated the efficiency of farmers with disabilities and compared the results with those of able-bodied farmers in the same area, finding little difference. The collected information revealed that fewer than 10 percent of the farmers with physical disabilities had been able to attend professional training, clinical and technical centres, and none of these centres was specialized in agricultural training for farmers with disabilities.

Considering the potential of the Ministries of Agriculture and Jihad Sazandegi's existing rural extension networks to specialize, it is proposed that the extension departments of these two ministries assume responsibility for the agricultural extension and training of farmers with disabilities in rural areas as a special client group.

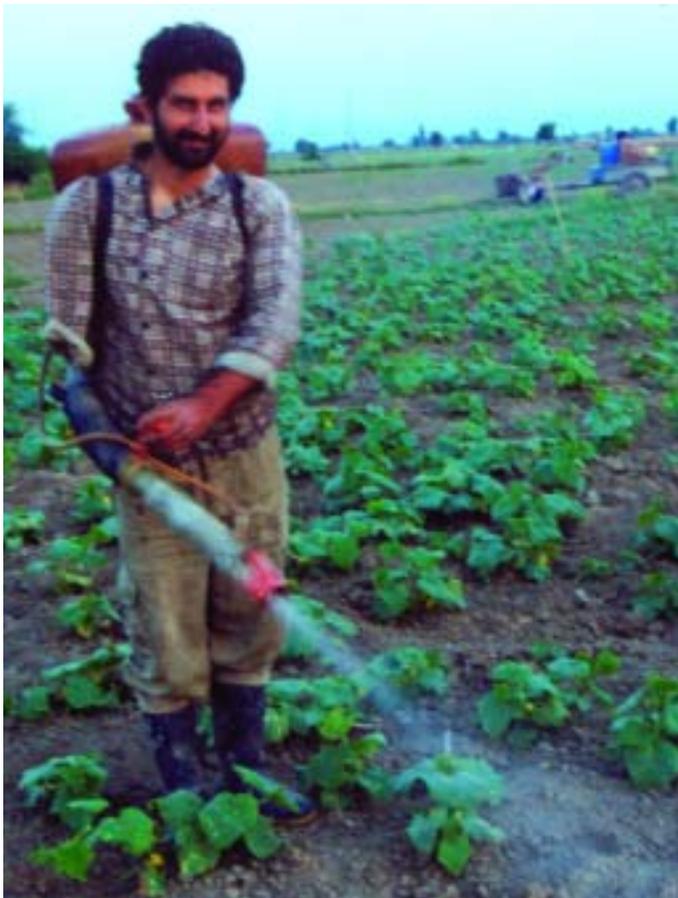
The following are some of the conclusions and implied recommendations that can be drawn from the study:

- The Ministries of Agriculture and Jihad Sazandegi both have relatively strong expert staff within their extended organizational networks for rural areas. These specialized human resources would be quite capable of planning and performing agricultural extension and training programmes for farmers with physical disabilities.
- Although the existing extension agencies have no special programmes for PPD, farmers with disabilities have acquired some improved farming practices indirectly, and have gained necessary skills and experience from relatives, friends and neighbours.

- The farming activities, types and duration of operations, sources of information and motivation of farmers with physical disabilities were similar to those of their able-bodied colleagues.
- Able-bodied farmers and farmers with physical disabilities also face similar problems in farming, and have comparable training needs. Farmers with disabilities said specifically that greater respect and attention would help them to improve their agricultural operations.
- Sources of financial support and technical guidance, as well as the nature of the farming operations themselves, were nearly the same for farmers with physical disabilities as for able-bodied farmers.
- Because of their physical disabilities, relevant farmers requested that farming inputs be provided to them at their homes or farms.
- Farmers with disabilities also requested that agricultural training be carried out at their farms or homes, either individually or in special groups.
- About two-thirds of the relatives who assisted farmers with disabilities did so because of emotional relationships, and one-third did it for the sake of improving the family's economic conditions. It could be claimed that economic incentives may also have motivated those who assisted their relatives with disabilities for emotional reasons.
- Training programmes for farmers with disabilities need to focus on ways and means of facilitating the application of improved inputs and new farm machinery and tools. In this respect, farmers with disabilities expressed a need for training, along with provision of the necessary inputs, tools, equipment and machinery. This implies that training on its own may not supply sufficient service to farmers with disabilities.
- The expectations of the relatives of farmers with disabilities were centred on the provision of credit and/or loans so that farmers can buy inputs, machinery and tools easily. On many occasions, relatives implicitly expressed the belief that if farmers with disabilities were offered sufficient financial support, it would be easier to train their relatives with disabilities. This corresponds with findings that indicated relatives as the main source of indirect training for farmers with disabilities.
- If relatives were the main target group for extension training, PPD would remain dependent on them. If farmers with disabilities are to attain independence, they must be the main target for training from extensionists.
- Farmers with physical disabilities did not expect to be considered as a special case; instead they wanted extension field workers to treat them as if they were able-bodied.
- Active farmers with disabilities were good examples of the effectiveness of indirect extension teaching methods in rural areas.
- Active farmers with disabilities have a strong tendency to emphasize their motivation, abilities and capabilities, rather than their disabilities, when talking to extensionists.
- Difficulties in moving, loading and transporting inputs and products were the most important effects of the farmers' disabilities. At the same time, farmers

with disabilities were generally engaged in field activities that involved and necessitated moving, loading and transporting. Extension field workers should carry out surveys to select the farm activities that best fit the physical capabilities of farmers with disabilities, and should then assist those farmers to engage in such appropriate farm practices.

- Fish farming, hatching, apiculture, sericulture, floriculture and poultry production are among the “light” farming activities that are extensively practised by able-bodied producers in Mazandaran, but farmers with disabilities are less frequently engaged in them. Since the natural environment of the province is suitable for these activities, it is recommended that extensionists plan effective policies to encourage, support and train farmers with disabilities to engage in them.



*A physically disabled farmer spraying his cucumber farm without following the normally recommended safety procedure*

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# ANNEX

## QUESTIONNAIRE FOR INTERVIEWING RURAL PEOPLE WITH PHYSICAL DISABILITIES ABOUT THEIR CURRENT AND POTENTIAL AGRICULTURAL ACTIVITIES

### The interview

State (Ostan) ..... City (Shahrestan) .....  
District (Bakhsh) ..... County (Dehestan) ..... Village .....

### The interviewer

Name of interviewer ..... Date .../.../2000

### The interviewee

Name of interviewee ..... Age ..... Sex ...  
Single or married? ..... Number of children ...  
Literate or illiterate ..... Education: elementary/ intermediate/  
secondary/university

### The disability

Physical disability (PD) ... Percentage of PD ..... Duration of PD .....  
Cause of PD ..... Age PD started .....  
Treatment: under treatment with hope of full recovery/under treatment to alleviate symptoms/incurable

### The agricultural business

- What kinds of tools do you usually use to facilitate your work in agriculture?
- What is your main source of income?
- How do you secure any income shortfall?
- In which fields of agricultural activities do you have ability and skills?

### Nature of employment

- Are you self-employed, waged, or a mixture of both?
- If you are self-employed, how do you hold your farmland, orchard, woods, pasture and/or workshop
- (ownership, rental, partnership, other – please specify)?

### Seasonality

- Is your agricultural work seasonal, periodic, temporary or throughout the year?
- In any of the first three cases, please specify the months.

### **Experience and skills**

- Do you need to acquire experience and skills?
- If not, how have you acquired your existing experience and skills in agriculture?

### **Training situation**

- Have you already received training?
- If so, when, for how long, by whom and in which areas have you been trained?
- How, and with the help of whom, have you been engaged in agricultural activities?
- Which system(s), organization(s) and/or person(s) support(s) you financially in the process of agricultural activities?
- Which system(s), organization(s) and/or person(s) guide(s) you technically in the process of agricultural activities?
- Which system(s), organization(s) and/or person(s) encouraged you to begin and continue with your agricultural activities?

### **Training problems and suggestions**

- What technical and professional problems and difficulties do you face in the process of agricultural activities?
- What kind of training do you suggest would help you to solve your technical problems and professional difficulties?
- What economic problems and difficulties do you face in the process of agricultural production?
- What kind of facilities and opportunities would help you to solve your agriculture-related economic problems and difficulties?
- What social problems and difficulties do you face in the process of agricultural activities?
- What kind of training and opportunities would help you to solve your social problems and difficulties?
- What difficulties does your physical disability create for you in the process of agricultural activities?
- What facilities and training would remove or reduce your physical difficulties in agricultural activities?
- What kind of training, in which areas of agriculture, would help you to improve your knowledge and skill in agricultural activities?

### **Awareness and expectations of existing services**

- Do you know the Centre for Agricultural Services?
- If so, what sort of assistance have you received from the centre?
- Do you know your county agricultural extension agent from the Ministry of Agriculture?
- If so, how many times have you met him/her, and how many times have you participated in training sessions?
- Do you know the Jihad Sazandegi County Training Centre?

- If so, what sort of assistance have you received from the centre?
- Do you know your county rural extension agent from the Ministry of Jihad Sazandegi?
- If so, how many times have you met him/her, and how many times have you participated in training sessions?
- What do you expect from the Centre for Agricultural Services?
- What do you expect from the County Training Centre of Jihad Sazandegi?

### **Training and other recommendations**

- If agricultural and rural extension agents served you with special extension and education programmes, which priority items would you suggest should be included in their training programmes?
- Where would you like to receive the extension training you have suggested: at the extension office, at the training centre, at your home, at your farm, at your workshop, or elsewhere (please specify)?
- Would you like to receive extension training through: radio, television, film, publications, classes and lectures, demonstrations, individual guidance, other (please specify)?
- Once you have received appropriate training, what do you expect institutions and government organizations to provide to help you put your newly acquired knowledge into practice: production credit, supporting loans, primary inputs, storage services, agricultural marketing services, land, pasture, animals of improved breeds, improved inputs, agricultural tools and equipment, special tools and equipment to improve your physical capacity and facilitate your movement, non-material protection, psychological support, other (please specify)?
- Please mention any general suggestions and/or recommendations with regard to the improvement and usefulness of technical extension training programmes for physically disabled people engaged in agriculture.

## QUESTIONNAIRE FOR INTERVIEWING THE NEAREST RELATIVES OF PEOPLE WITH PHYSICAL DISABILITIES ENGAGED IN AGRICULTURAL ACTIVITIES

### The interview

State (Ostan) ..... City (Shahrestan) .....  
District (Bakhsh) ..... County (Dehestan) ..... Village .....

### The interviewer

Name of interviewer ..... Date .../.../2000

### The interviewee

Name of interviewee ..... Age ..... Sex .....  
Education .....  
Name of physically disabled relative ..... Relationship .....

### The relative with physical disabilities and assistance

- Why do you help your physically disabled relative?
- In what ways and how do you help your physically disabled relative?
- How long have you been helping him/her?
- What are the main agricultural activities that your physically disabled relative is engaged in?
- What difficulties does he/she face in agricultural activities?
- How willing is your physically disabled relative to accept your help: very, considerably, somewhat, slightly, other (please specify)?
- How willing is your physically disabled relative to accept your guidance in agricultural activities: very, considerably, somewhat, slightly, other (please specify)?
- Have you received any special training in order to assist your physically disabled relative?
- If so, when, for how long, on what subjects and from whom?
- How willing is your physically disabled relative to accept other people's guidance in agricultural activities: very, considerably, somewhat, slightly, other (please specify)?
- What experience have you gained so far of guiding and helping your physically disabled relative (please be specific)?
- Who has encouraged, guided and/or helped you to assist your physically disabled relative with agricultural activities: other relatives, non-governmental organizations and government agencies?
- In what way have they helped and why?
- What do you expect people, non-governmental organizations, institutions and government agencies to provide to help physically disabled people continue their agricultural activities (please explain)?
- In your opinion, which agricultural activities can your physically disabled relative perform most satisfactorily, and which ones present her/him with the most difficulty?

## QUESTIONNAIRE FOR INTERVIEWING AGRICULTURAL AND RURAL EXTENSION AGENTS AND EXPERTS IN THE STUDY REGION

### The interview

State (Ostan) ..... City (Shahrestan) .....  
 District (Bakhsh) ..... County (Dehestan) ..... Village .....

### The interviewer

Name of interviewer ..... Date .../.../2000

### The interviewee

Name of interviewee ..... Age ..... Sex .....  
 Education .....  
 Name of Ministry ..... Job title ..... Duration of service ...  
 Duration of service in agricultural training and/or extension .....  
 Areas worked in .....  
 Employing organization at the state, city, district, county and village levels .....

### Work with rural people with physical disabilities

- In the region(s) where you serve, what kind of physical disabilities do you see most among rural farmers, male and female?
- According to your estimation, what percentage of your region's total population of farmers is disabled?
- What are the main agricultural activities of physically disabled people?
- Are you satisfied with the current performance of physically disabled farmers (please give reasons for your reply)?
- What have you done so far in order to guide and train the physically disabled persons engaged in agricultural activities in your region, as directed by your national extension service?
- Taking account of the frequency and nature of physical disabilities among the rural people in your region, what would you recommend non-governmental organizations, institutions and government agencies do to help disabled farmers to continue their agricultural activities? Please specify and explain your answers with regard to each of the following:
  - i) Provision of tools and equipment to facilitate disabled people's agricultural work.
  - ii) Provision of capital for disabled farmers' engagement and/or continuation in agricultural activities (please specify purposes for which such capital should be used).
  - iii) Provision of special extension education programmes for disabled farmers and/or their nearest relatives (please give precise proposals).
  - iv) Provision of inputs, credit, loans, land, animals, etc. to disabled farmers so that their agricultural activities can flourish.

- v) Formation of rural agricultural cooperatives, associations or groups of disabled farmers, in order to encourage physically disabled people to engage in agriculture and to support their agricultural activities technically and financially.
- What education and training programmes do you suggest would improve the knowledge and skills of agricultural extension field workers, so that they could guide physically disabled people more effectively and efficiently?
  - Which extension training methods would you recommend for training physically disabled people more effectively (please mention only the title of the methods).
  - What administrative facilities do you recommend be provided to extension field workers so that they can train their physically disabled clients in agricultural activities more efficiently?
  - What kind of organizational structure would you recommend be established and/or developed to institutionalize special extension training programmes for the physically disabled people engaged in agricultural activities?
  - As far as you know, what government institutions, non-governmental organizations and societies are engaged and active in the agricultural training of physically disabled people (please mention only the names of the agencies).

