

## **Perceived Learning Needs and Program Delivery Preferences of Ranchers in Noorabad Township of Luristan Province, Iran**

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### **Abstract**

The purpose of this study was to determine the perceptions of ranchers in Noorabad Township of Luristan Province of Iran of their learning needs and preferred program delivery methods. A sample of 102 ranchers was selected using a systematic sampling technique with a random entry point. Data were collected through personal interviews with each rancher. Major conclusions were that ranchers need to learn a variety of rangeland conservation and management concepts. Overgrazing, appropriate method of salting rangelands, water time, pitting, ripping and furrowing techniques for saving water, preventing soil erosion and general deterioration of rangeland were considered/discussed. The choice of education methods, season and location of educational programs, and recruitment methods for educational programs were also investigated in this study. The low level of literacy, migratory patterns, and significant learning needs of ranchers in the study pose a special challenge for the office of Extension and Training of the Forest and Range Organization of Iran.

### **Introduction**

Famines have most often resulted from climatic causes, but whole civilizations have declined from grandeur to penury and woe because of failure to protect once fertile and productive soils (Heath, Metcalfe, & Barnes, 1973). According to the National Research Council (1990), rangelands are one of the most important land use types in the world. Roughly 47% of the earth's land surface is rangeland, about 80% of which is at least moderately degraded. Hodgson and Illius (1996) stated that pastoral agriculture occupies around 20% of the land surface of the globe, and is directly or indirectly responsible for meeting the economic and material needs of a substantial proportion of the human population. It is also the predominant form of land use in many of the more fragile areas of the world. Despite its importance, rangeland has received the least research attention of all land use types. The loss of desirable vegetative cover is a threat to world food supplies, to the quality of human life, and to the environment, because most of the red meat consumed by human beings are produced in rangelands, and some 135 million people, about 20 percent of the world's population, base their economies and societies on range land resources (National Research Council, 1990). Even after several decades of assistance, developing countries remain in poor condition and

continue to further deteriorate. Many projects have failed outright and Projects perceived as being successful seldom survive after withdrawal of donor support and guidance (Child, Heady, Hickley, Peterson, & Pieper, 1984). These authors also contend that the reason for failure is the tendency to aim for technological and physical development rather than working with people and involving them at the outset in project planning. They state further that the strategy should be to advance technology and human development at the same time. An unfortunate consequence of past efforts in international development is that a great deal of attention was directed toward the transformation of what are belatedly recognized to be critically important social adaptations, without corresponding efforts to understand the context or consequences of the changes promoted (National Research Council, 1990).

Rangelands, with an area of almost 90 million hectares, occupy 55% of Iran (Report of the Islamic Republic of Iran on Forestry Development and Key Events, 1996). However, in many regions of Iran, rangelands are being degraded through overgrazing, fuel wood collection, uncontrolled burning, the unregulated exploitation of forest products, the growth of transportation networks, and agricultural expansion into marginal areas.

The Forest and Range Organization (FRO) of Iran is responsible for the management of range lands in the country. An Office of Extension and Training was established in the FRO in 1990 to educate and work with different target audiences, including ranchers. Vallentine (1989) maintains that education-information constraints have compounded the slowdown in range improvements, and argues for higher priority to teaching range improvement principles and skills, and providing more on-the-ground experience through university curricula, in-service training, and extension education.

Determining the learning needs of ranchers who are currently responsible for the productivity and management of rangelands in the country, and developing and delivering sound educational programs toward their needs will help natural resource program planners to implement relevant programs. As a result capital, time, and executive energy will be effectively utilized by the FRO. Also ranchers will support and participate in such programs.

Luristan Province in western Iran is a mountainous area where the temperature, rainfall, and rangelands are attractive for both nomadic and farming populations. Its economy is based on dry-farming or irrigation agriculture. Sheep and goats are predominant domestic animals in the province. Noorabad Township has a total area of 277,250 hectares with 88,500 hectares of forest, 65,000 hectares of rangeland and 15,000 hectares of folded mountain ridges (rim). One of the most serious problems in Luristan Province is illiteracy. According to a 1987 national survey, nearly 50% of the population is illiterate (Luristan Province Department, 4th ed., 1991). The survey also showed that people in villages could not pursue their education because of a lack of schools.

### **Purpose and Objectives**

The purpose of this study was to determine the perceptions of ranchers in Noorabad Township, Luristan Province, Iran of their learning needs and preferred program delivery methods. The specific objectives of the study were to identify: 1) the rancher=s perceived learning needs for rangeland management, 2) the rancher=s perceived learning needs for rangeland conservation, 3) the rancher=s preferred educational methods to deliver information,

4) the rancher=s preferred season and place for educational programs and, 5) the rancher=s preferred methods to recruit ranchers.

## **Methods and Procedures**

### **Population**

The population of this study included all 836 individuals in Noorabad Township who were issued permits by the Natural Resources Administration Department of Luristan Province to graze their livestock on a part- or full-time basis. The list of ranchers in Noorabad Township, and their locations, were developed by researchers from information provided by the Natural Resources Administration Department, Luristan Province, and the Cooperatives of Nomads and Sheep Raisers of Noorabad Township. A sample of 102 ranchers was selected using a systematic sampling technique with a random entry point.

### **Research Design and Data Analysis**

The research design used for this study was a descriptive survey. The survey instrument had five sections. The first section included demographic data on the target population. The remaining four sections contained questions related to the study=s objectives. Respondents were asked to indicate their level of agreement-disagreement with statements on perceived need for learning rangeland management and conservation concepts, and preference for various aspects of educational program delivery. A six point anchored scale from strong agreement (6) to strong disagreement (1) was used to prevent respondents from taking a neutral position (Clason & Dormody, 1994). Content and face validity were established by a panel of faculty and graduate students in the Department of Agricultural Extension and Education at Tarbiat Modarres University, Tehran, and extension specialists in the Forestry and Range Organization. The instrument was piloted with 10 ranchers in Sealsalah District three weeks prior to the study, and needed modifications were made. A Cronbach=s internal consistency reliability of .90 was obtained. Data were collected through personal interviews with 102 ranchers. Data collected were analyzed using the Statistical Package for the Social Sciences, Personal Computer Version (SPSS, Inc., 1991).

## **Findings**

### **Demographic Characteristics**

The majority (89.2%) of the respondents were illiterate. Fifty percent of respondents were 51 years or older. Eleven percent of respondents indicated agriculture as their major occupation. Slightly more than 31% of respondents reported that they had 25 years of experience as ranchers. Only three percent indicated that they possessed 300 hectares or more of grass land. On the other hand, 36% of respondents indicated that they had between 151 to 200 sheep and goats. Seventy percent of the ranchers said that they were semi-migrants, and only nineteen percent indicated that they were stable. All respondents were male and married.

### Objective 1

The rank importance of 14 rangeland management concepts as perceived by ranchers are shown in Table 1. A majority of ranchers indicated that they needed training on concepts regarding various grazing systems (75%), land holdings and livestock numbers (71%), determining intensity of grazing (71%), and comparison without and with a project (65%). Economic analysis of pastoral management and practices (37%), participative approaches and rangeland farming systems (35%), and livestock management (33%) were the least important learning needs.

Table 1

#### Perceived Learning Needs of Ranchers for Rangeland Management Concepts (n=102)

Rank	Concept	Number <sup>1</sup>	Percent <sup>1</sup>
1	Various grazing systems	76	75
2	Land holdings and livestock numbers	72	71
2	Determining intensity of grazing	72	71
3	Comparison without and with a project	66	65
4	Appropriate method of salting rangelands	64	63
5	Grazing season and time	59	58
6	Water points	56	55
7	Reading and writing	48	47
8	Grazing management systems	42	41
8	Loss of pasture from overgrazing and early grazing	42	41
9	Economic analysis of pastoral management and practices	38	37
10	Participative approaches	36	35
10	Rangeland farming systems	36	35
11	Livestock management	34	33

<sup>1</sup> Number and percent of ranchers strongly agreeing (6) or agreeing (5) that they needed to learn the concept.

## **Objective 2**

The rank of 14 rangeland conservation concepts considered by ranchers to be important to learn are presented in Table 2. Over one-half of the ranchers indicated concepts most needed to be learned were pitting (85%), factors involved in rangeland degradation (84%), and furrowing (82%). On the other hand, least needed concepts were seedbed preparation (40%), benefit of fencing (38%), various

seeding techniques (36%), and fertilization (30%).

## **Objective 3**

The educational methods perceived to be most useful in delivering information to ranchers are reported in Table 3. The most useful method was considered to be practical/hands on (40%). The other methods were considered to be much less useful.

Table 2

Perceived Learning Needs of Ranchers for Rangeland Conservation Concepts (n=102)

Rank	Concept	Number <sup>1</sup>	Percent <sup>1</sup>
1	Pitting	87	85
2	Factors involved in rangeland degradation	86	84
3	Furrowing	84	82
4	Maintenance and improvement of soil fertility	79	77
5	Ripping	76	75
6	Techniques for stopping rangeland deterioration	71	70
7	Techniques for stopping soil erosion	64	63
8	Time of planting forage plants	58	57
9	Techniques for water saving	52	51
10	Importance of animal diet balance	44	43
11	Seedbed preparation	41	40
12	Benefit of fencing	39	38
13	Various seeding techniques	37	36
14	Fertilization	31	30

<sup>1</sup> Number and percent of ranchers strongly agreeing (6) or agreeing (5) that they needed to learn the concept.

#### **Objective 4**

Thirty-two percent of the ranchers stated that spring was the most appropriate season for implementing educational programs (Table 4). Summer was appropriate for 27% of respondents, autumn for 22%, and winter for 19%. Most respondents (44%) indicated that nomadic regions were the most appropriate place to conduct educational programs (Table 4). Other locations were less favored.

#### **Objective 5**

Ranchers were asked to indicate on a six-point scale their agreement-disagreement with the appropriateness of seven methods used by the Extension Office of the Natural Resource Administration Department to recruit ranchers for various extension education activities. The recruitment method considered most appropriate was the use of local religious councils (37%). Other appropriate recruitment methods were the natural resources administration department (16%) and cooperatives of sheep raisers (15%).

Table 3

Educational Methods Considered Most Useful to Deliver Information As Perceived by Ranchers (n=102)

Rank	Educational Method	Number <sup>1</sup>	Percent <sup>1</sup>
1	Practical/hands-on	41	40
2	Films and slides	18	18
3	Short term courses	17	17
3	Question and answer/discussion group	17	17
4	Distance education	9	9

<sup>1</sup> Number and percent of ranchers strongly agreeing (6) or agreeing (5) that educational method is useful in delivering information.

Table 4

Appropriate Season and Place to Conduct Educational Programs as Perceived by Ranchers (n=102)

Season	Number <sup>1</sup>	Percent <sup>1</sup>
Spring	33	32
Summer	28	27
Autumn	22	22
Winter	19	19
Place	Number	Percent
Nomad regions	45	44
Rural regions	17	17
Rural schools	21	21
Natural Resources Administration Dept.	19	19

<sup>1</sup> Number and percent of ranchers preferred season and place for educational programs.

Table 5

Appropriate Methods To Recruit Ranchers for Educational Programs (n=102)

Recruiting Methods	Number <sup>1</sup>	Percent <sup>1</sup>
Local religious councils	38	37
Natural resources administration department	16	16
Cooperatives of sheep raisers	15	15
Personnel of nomad organizations	11	11
Veterinary personnel	11	11
Personal invitation	8	8
Extension agents	3	3

<sup>1</sup> Number and percent of ranchers strongly agreeing (6) or agreeing (5) that method was appropriate.

### Conclusions

Ranchers in Noorabad Township, Luristan Province, Iran need to learn a variety of rangeland conservation and management concepts. This conclusion is supported by the finding that a majority of the study's respondents (over 50%) strongly agreed or agreed that they needed to learn 16 of the 25 concepts. Grazing systems and practices, and rangeland rehabilitation are critical learning areas. A number of concepts in rangeland management related to overgrazing, appropriate method of salting rangeland, and water time (certain time for animals to drink water). A majority of the study respondents (over 50%) also indicated a need to learn specific rangeland conservation concepts such as pitting, ripping and furrowing, techniques for saving water, and for preventing soil erosion and general deterioration of rangeland.

The choice of education methods, season and location of educational programs, and recruitment methods for educational programs should take into consideration the preferences of ranchers as expressed in this study. The low level of literacy, migratory patterns, and significant learning needs of ranchers in the study pose a special challenge for the Office of Extension and Training of the Forest and Range Organization of Iran. If this is just an example of the educational need of ranchers in the country, the FRO should be planning a major educational effort.

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