Indian Journal of Fundamental and Applied Life Sciences ISSN: 2231-6345 (Online)
An Open Access, Online International Journal Available at http://www.cibtech.org/jls.htm
2014 Vol. 4 (2) April-June, pp.612-620/Motamed and Khorshidi
Research Article

TO INVESTIGATE THE ROLE OF GRAZING LICENSES IN THE GRAZING MANAGEMENT OF PASTURES- APPROACH TO SUSTAINABLE USE OF NATURAL REFERENCES

***Mohamad Karim Motamed and Mohamad Jalil Khorshidi**
Department of Rural Development, Faculty of Agricultural Sciences,
University of Guilan, Rasht, Iran
**Author for Correspondence*

ABSTRACT

The aim of the present study was to investigate the role grazing licenses in the pastures of grazing management Range Esfahan Province with respect to an approach towards sustainable use of the environment. A statistical study of the population of all dairy farmers was done to exploit the licensing of their pastures. Using random sampling method Ardestan city grasslands were selected. Using the Cochran formula, 342 of 3353 subjects were licensed to exploit farmers using simple random sampling. Data collection in this study was a questionnaire prepared by experts. The questionnaire was tested by 30 ranchers and was refined. Reliability Using the Cronbach's alpha, was approved (0.87). In order to analyze the data, descriptive statistics, frequency distribution in inferential statistics D. Summers and Kendall's tau correlation tests were used. To examine the relationship between individual characteristics, Chi-square test was used for pasture management. Results showed that the patents-managed grazing of livestock on pasture balance, there is no statistically significant relationship between economic power and rangeland managers. Among the individual characteristics experience the pasture with pasture management have had a significant relationship. Also, was not significantly related to rangeland management, extension and educational activities, extension training contents lacks necessary to balance livestock on pasture and rangeland degradation have been prevented.

Keywords: *Rangeland Management, Balance Livestock, Grazing Licenses, Extension and Educational Activities, Sustainable Exploitation*

INTRODUCTION

The sustainable development means to fulfill the needs of the present generation without destroying the needs of the future generations. This type of development has many aspects from economic, social, cultural, and political to environmental ones. The modern theory of sustainable development with systematic and systematic thinking, all things considered, is linked to the development of environmental, because the context is planned. Hence it is necessary for the development of economic, social, cultural, political and environmental issues are examined in relation to each other (Rahimi, 2003). Pastures as a renewable natural resource, has a different role in the economic, social and environmental; The rational planning coupled with proper management of the exploitation of these resources can be used in environmental sustainability. The most important role of pastures in environmental issues such as sustainable development in the Such as reducing erosion and sedimentation, filling reservoirs to prevent, protect and sustain wildlife, ecological balance, stylized weather, health, the environment and strengthen the aquifers, Regions and countries in which sustainable development is important (Rahimi, 2003). Paul Harrison said, "One of the features that any development strategy should consider the respected environmental systems protect, preserve natural resources, renewable resources wherever they are, and just uses the principles of Squander vital resources and minimizing as far as could be formed by natural and artificial re-appoint Squander vital resources and minimizing as far as it can help re-shape the natural and artificial The immediate benefit is more than the thought, the idea that apparently needs of future generations will benefit non-renewable natural resources are most. Brandon says, "In the planning of

sustainable development, environment and natural environment and its components, including the role of forests are important, regardless of the environmental criteria and indicators of sustainable development planning it would not be practical development. Environment in relation to social and economic circles, the main loop of chain that may destroy humanity to ignore (Brondon *et al.*, 1977). Roger Prman role in the development of natural resources and environment, said: "Two forms of renewable and non-renewable natural resources, a very a crucial role in their development, the environment and development of the environment are interdependent if we direct our development process so that minimal harm to natural resources, This will be a continuous stream and a consistent flow. For example, if one element of sustainable development, biodiversity is reduced or lost, environmental sustainability will be lost and this will be equal to the instability, destruction of human life by living in an area that is destroyed Biodiversity (Perman, 1966). Ranges through various roles in economic, social and environmental areas of the country in which they can contribute to the sustainable development of the area. In Iran considering important constraints in agriculture, especially soil and water, and because they face severe environmental sensitivities and vulnerabilities faced with the Should pay more attention to the pasture, at least the aspects that will have direct benefits for the economy. Ranges can also through ancillary industries and employment in manufacturing a variety of products, exchange technology, balancing local - regional geographic areas in developing countries and are effective. If the views of meadows and Regional Planning in mind, we see that in almost all areas of the country and Range Management and related activities can be expanded. If we consider the range of the manufacturing sector, we see that this is a manufacturer of various products and activities ancillary and supplementary Fravrndh abundant pastures while the balance can different regions of the Economic and Social a guarantee this may contribute to the sustainable development (Rahimi, 2003). Population growth in Iran, especially in the last three decades has led to increasing pressure on available resources. The problem of ranges, as one of the most economical sources of livelihood security of farmers and ranchers significant population directly or indirectly depends on it, has serious injuries and challenges. Before you spend any money for the restoration of rangelands is necessary grazing management is a priority and the shortest duration possible, it is manage burden economic and social, because Without the proper utilization and management of grazing and pasture, to achieve continuous and sustainable pasture production would never be possible, In fact, it is the balance between livestock management, fodder and other inputs of land, labor and financial resources so that optimal use of all resources seems to be no damage to the vegetation and soil. The main issues in relation to grazing management, prevention of early grazing, controlling entry and exit to pasture cattle, pasture livestock in the balance, This is used to control the operation license is associated with the allowable ranges. Grazing License is a permit with regard to the capacity of the pasture grazing, season-long operation and history of and the customs of the villagers for domestic cattle in a pasture where a specified range will be issued. In the traditional (customary) Iranian Ranges in three forms, Council, Initiation, a single operation can be. So that the council pastures, grazing permits have been issued in the name of the village council members and residents on the list contained in the pasture permit pasture Privacy villages have benefited. Range Condominium, certain members of social units, boundary, co-exploit, interaction among members and between members is defined culture (Bromley, 1991). This species ranges don't have special separate units for each unit exploit. And livestock grazing are jointly. Single grassland pastures are a delimitation are usually a single license number of the beneficiary are a few variables, Karimiyan (2011) regarding exploiting of rangeland status of the Semnan province's And to express any type of exploitation of rangeland grazing management are not respected His main reason for non-compliance of the grazing management economic agent knows. Hosseni (2010) The balance between the exploitation of animals in the pastures of the Arak has believed in any of a variety of pasture utilization animals on is not balanced. The aim of the present study, Investigate the role grazing licenses in the pastures of grazing management Range Esfahan Province Approach to sustainable use of the environment. The overall objective of this study was to evaluate the effect of grazing licenses the optimal use of rangelands and pastures of grazing management in line with stable exploit.

MATERIALS AND METHODS

Underlying the present paper the method is used. Questionnaire in this study is a data collection tool; knowledgeable experts in the field to assess the validity of rangeland and pasture management was used. After it was distributed and collected the necessary reforms. The Cronbach's alpha was used to assess reliability. In the pretest or pilot study, a questionnaire with 30 participants was conducted to test the reliability and range of test corrections that need to be done and some ¬ corrected on some other items, and the total change took questionnaire adjustment and the final. After completing the questionnaire items and the reliability test were equivalent to 0/78, respectively.

Community and Statistical Sample

The study population consisted of all dairy farmers who have licenses the exploitation of pastures in esfahan. Using random sampling the city of Isfahan city grasslands were Ardestan. Using Cochran formula, 342 as the sample were 3353dairy farmers of the city were selected using simple random sampling.

Geographical Scope of the Research

Isfahan province with an area of 106,179 square kilometers, approximately 25/6% of the total area allocated to Iran. This province between 30 degrees and 42 minutes to 34 degrees 30 minutes north latitude and 49 degrees 36 minutes to 55 degrees 32 minutes east central Iran. Isfahan province has a 3/6 million acres is pasture. Almost 59 percent of the province's land is included. Than the rate of 9/1 million acres of summer pastures and 4/4 million acres of grassland is winter. The area approximately 307 thousand tons of dry matter per year are produced. Which is 2 million 800 thousand animal units. Contribution rate in this city Ardestan approximately one million hectares of which 600 hectares it's winter and summer other comprises 400 hectares. The operation of the city grasslands area located in the 3 thousand 353 farmers. Ardestan City with an area of 11,591 square kilometers and a population of over 45,150 people distance is 118 kilometers North East of Isfahan Province. This city is second section, 3 towns, 7 villages and 306 village residents has been formed. The city is the center of the city Ardestan.

RESULTS AND DISCUSSION

Results of Descriptive Statistics

Age of Participants

Table 1: Distribution of age of participants

The age range	Frequency	Percent
Less than 30 years	5	1.5
30 to 40	76	22.2
41 to 50	157	45.9
Above 50	104	30.4
Total	342	100

The findings of the research showed that subjects were significantly characterized by older people, so that the highest frequency of age for ages 41 to 50 years (45.9 percent). Aged above 50 years, the frequency of significant (30.4%). In contrast, less than 30 years of age valley lowest frequency (1.5 percent) is (table 1).

Educational Status Subjects

Table 2: Distribution of educational level of subjects

Educational level	Frequency	Percent
Illiterate	266	66.1
Preliminary	89	26
Rahnnamaii	27	7.9
Total	342	100

The results of the study, the high rate of illiteracy and low literacy in this sample shows that the highest degree of guidance with the frequency of very small allotment (7.9 percent). Highest frequency range illiterate frequency (66.1) and stage Vnhzt the frequency of the primary school (26 percent) (table 2).

Number of Members of the Household

Table 3: Distribution of the number of family members

Number of family members	Frequency	Percent
Less than 4	16	3.4
4 to 6 people	62	16.8
7 to 8	78	21.2
9 and above	124	33.7
Total	280	76.1

Results of the household rangeland managers are highly time dependent. 9 people so that families and older were the most frequent (33.7 percent) are. 7 to 8 people and families with significant frequency (21.2) are in second place. (Shrimp 342 members of 280 married and 62 were unmarried) (table 3).

History of Range Management

Table 4: Distribution of Range Management subjects

Experience animal husbandry	Frequency	Percent
10 to 20 years	195	57
21 to 30 years	141	41.2
31 and above	6	1.8
Total	342	100

The results of the data analysis Minimum of Range Management to suffer less than 10 years with a frequency of zero and a maximum of Range Management to range from 10 to 20 years with frequency (57%), then the range of 21 to 30 years with frequency (41.2 percent) (table 4).

Earn Income

Table 5: Distribution of the sample earn

Earn Money	Frequency	Percent
Sale of Meat	147	43
sales of milk and meat	195	57
Total	342	100

147 (43%) of the members sample their income through the sale of meat, 195 (57%) of the members of its revenue through the sale of milk and meat to announce the meantime, any member of their income through the sale of milk other products, it has been announced (table 5).

The Costs for Livestock

Table 6: The amount per head of cattle during the grazing season

Fee rate	Frequency	Percent
Less than five thousand Tomans	240	70.2
6 to 10 tomans	102	29.8
Total	342	100

Results per sheep during the grazing season for the majority of subjects 70.2) is less than five dollars that is of high dependence on livestock pastures (table 6).

Type of Exploitation License

Table 7: Distribution of exploitation license

Type of license	Frequency	Percent
Single	107	31.3
Common	169	49.4
Council	66	19.3
Total	342	100

Extension of Educational Activities

Table 8: Distribution of Extension educational classes

Set up classes	Frequency	Percent
Yes	102	29.8
Not	240	70.2
Total	342	100

As Table 8 shows the total population numbers 342 people, only 102 people have acknowledged that educational classes in relation to grazing management of pastures formed, and most subjects consist of the Class were aware of this number 240 are equivalent to 70.2% of the entire sample.

Table 9: Distribution of attending education

Attend classes	Frequency	Percent
Yes	87	23.6
Not	15	4.1
Total	102	27.7

As can be inferred from Table 9, the sample consists of 102 members who approved the Extension educational classes, only 87 of the classes they have participated.

Table 10: Distribution of rangeland managers view the content of educational classes

The content classes	Frequency	Percent
High	3	0.8
Average	9	2.4
Low	37	10.1
Very low	38	10.3
Total	87	23.6

As the information in Table 10 shows that among those who participated in Extension educational classes 0.8 percent of the content of the classes considered in the most intuitive and functional.

Table 11: Distribution of training courses to accountable problems of rangeland managers

	Average	Average
Average	14	3.8
Low	28	7.6
Very low	45	12.2
Total	87	23.6

In response to a question about the courses how to meet your problems with pastures have been any one of those classes had the option too much or too respond positively have; 7.6% in options low and 12.2% chose option is too low (table 11).

Table 12: Distribution of rangeland managers perspective on the impact of the recommendations on the extension improvement of pastures

	Average	Average
Average	17	4.6
Low	36	9.8
Very low	34	9.2
Total	87	23.6

In response to the question of improving the overall effectiveness of the recommended ranges, how do you evaluate the situation, none of the people who did not choose classes participated options or too much. 9.8% and 9.2 percent less options selected option too low (table 12).

Results of Inferential Statistics

The relationship of personal characteristics with livestock grazing management

Table 13: Individual characteristics and grazing management

Individual characteristics	Pearson chi-square Value	Df	Asymp. Sig
Age	51.838	39	0.082
Education	24.998	26	0.519
Marital Status	14.528	13	0.338
Experience Range Management	70.340	26	0.000
Number of livestock	24.112	39	0.970
Earn Money	20.160	13	0/091

According to Table 13, the results of data analysis showed that the characteristics of age, number of Dependants, educational status, grazing management, there is no statistically significant relationship; However, the only personal characteristic that are related with rangeland grazing management of the Range Management. There seems to be working experience in Range Management, dairy farmers are required to adhere to basic principles that are closely relationship with rangeland grazing management there is other words to improve the quality of work experience and background in Range Management and Range Management principles.

Testing Hypotheses

First Hypothesis: patents are effective in managing grazing in pastures

H0: is expected, a significant relationship between license grazing pastures with grazing management in the city there is study.

H1: is expected, a significant relationship between license grazing pastures with grazing management in the city there is study.

Table 14: Summers and Kendall's tau c test (Range Management License Type grazing management)

	Value	Asymp. Std. Errora	Approx. Tb	Approx. Sig.
Somers'd Symmertic	-0.070	0.050	-1.422	0.155
Kendall's tau-c	-0.066	0.046	-1.422	0.155
N of Valid cases	342			

The results of the tests on the relationship between two variables, Kendall's tau and D. Summers (license rangeland and grazing management), as shown in Table 14 indicate that a significant relationship between

grazing management and grazing licenses there. According to the significant amount of value that is greater than 5%, hypothesis H0 is accepted. Accept the hypothesis H0 means that any operation license grazing management on grasslands are not respected. Principles of grazing management and the sustainable use of rangelands Requires knowledge of rangeland and pasture management are adopting scientific principles. First, it is directly related to a knowledge attending the education and training of rangeland and extension will, According to Tables 2, 8 and 9 it can be seen that the sample has a high rate of illiteracy, low literacy classes promotional rarely made up of hand have been the Stockbreeders non-transactional code and incomprehensible.

Second Hypothesis: Patents are related to the increase of farmers' economic

H0: is expected, a significant relationship between license grazing rangeland managers to increase the economic power of the city is not present.

H1: is expected, a significant relationship between license grazing rangeland managers to increase the economic power of the city there is

Table 15: Summers and Kendall's tau test (type of license * rangeland managers increase revenue)

	Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Somers'd Symmertic	0.074	0/052	1.432	0.155
Kendall's tau-c	0.055	0.039	1.432	0.155
N of Valid cases	342			

According to Table 15, the significant test of Kendall's tau C and D. Summers, more than 5%. Would conclude that a significant relationship between the type of license rangeland and increase revenue rangeland managers there. Therefore assume that H0 is accepted. According to the findings of the previous hypothesis, the lack of respect and lack of respect for the balance of livestock grazing on rangeland management, leading to pressure on pastures and rangeland degradation due to nutrient capacity of pastures in the trap of reduces. This loss of livestock and animal products into the food supply problems. Economic decline rangeland and income directly affect. As with any type of livestock operation license manager because balance is not observed in the pasture. It can be said that none of the patents are not effective in increasing the economic strength rangeland managers.

Third Hypothesis: Extension Education activities associated with grazing management of pastures.

H0: is expected, correlation between extension activities of the management because there is no city grasslands.

H1: is expected, a significant relationship between extension activities with management because of the city grasslands exist.

Table 16: Test D. Summers and Kendall tau (pasture grazing management * Extension Education Activities)

	Value	Asymp. Std. Error[a]	Approx. T[b]	Approx. Sig.
Somers'd Symmertic	0.158	0/091	2/055	0.066
Kendall's tau-c	0/154	0/075	2/055	0.066
N of Valid cases	78			

According to Table 17, and much larger than the significance level of 5%. We conclude there is no correlation between the variables Between educational and promotional activities in the city grasslands grazing management of a statistically significant no relationship exists. Therefore assume that H0 is accepted. As part of the working classes and the extension was only 102 people have acknowledged that classes are held in conjunction with pasture and grazing management. Most of the subjects were unaware

of the class, that the number 240 is equal to 70% of the entire sample The sample consists of 102 members who approved the extension classes, only 87 of the classes they have attended. Well as the number of classes in terms of content to help solve the problems rengelands and to help improve the pastures are considered highly undesirable. Ignoring continuing education relating Range Management Ignoring educational needs of rangeland and non-applicability of inappropriate content are factors that reduce participation training in these classes.

This hypothesis results confirm hypotheses 1, 2 and 3. In other words the main factor lower scientific information and technical skills about the non-compliance and imbalance grazing livestock grazing management is Other words is the main factors lower scientific knowledge and technical skills on the management of non-compliance and non-equilibrium grazing livestock in the pasture. This is their impact on lower economic performance shows the ranges.

So one of the main factors that caused the principles of grazing management and livestock grazing is balance. Knowledge and scientific visibility on rangeland managers to abide by these principles.

Conclusions

Indices indicate that the population studied hallmarks such as older people, high levels of illiteracy (66.1 percent) and less literacy (26 percent), have large families, and time Dependants high. This feature is primarily outlining the society terms of the social development indicators at a very low level. This important can be considered as one of the most important challenges to manage because pastures. This important can be considered as one of the most important challenges to manage because pastures. On the other hand given to the characteristics of the study population should organize programs and pastures of grazing management in the community had a lot of expectations. Meanwhile the dependents of the above features and the cost per head of cattle during the grazing season can be found that the direct dependence of the pastures are severe. The severe dependence of the economy is a major factor in not respecting the principles of rangeland grazing management.

The results showed no relationship between the license exploit other important indicators of rangeland management, livestock grazing and imbalance grazing. This result is true about exploitation each type of license. Basically it indicates that patents cannot be involved in the management of pastures because. And just as simple to license the property ranges and limits are specified range, is considered. The result of the work of Hosseini-Nasab (2010), which examines the relationship between state ownership and exploitation of its pays Arak pastures; and imbalances in livestock management systems are reported in this study are consistent. Also, the results Karimiyan (2011), which examines the impact of exploitation on Semnan province pays pastures are consistent. The results indicated that patents are not associated with increased economic power and rangeland managers In other words, patents pasture science lacks a mechanism for economic exploitation are the pastureland. So the range is not used as an economic unit. Rangeland managers who are overcrowded households (according to the results of Table 3) and strong economic dependency to their pastures. To obtain more profit in the short term through high density livestock pastures are bringing a lot of pressure; Pastures due to capacity constraints to livestock manure nutrient credits are not sufficient. This reduces the weight of livestock and livestock products is reduced, And the long-term reduction in income and ultimately reduce the economic power and rangeland managers to This result is a consequence Karimiyan (2011)Economic reasons caused the excessive exploitation of pastures and lack attention to pasture management sees fits. Moreover, the results Khalighi and Ghassemi (2001), this result confirms.

The results obtained in the extension education activities of the city grasslands managed by the city because it is unrelated. In other words, educational and promotional activities in relation to grazing management of pastures are very limited and non-functional. The results (Timah *et al.*, 2008) that examine ranges of south Cameroon grasslands conservation education and awareness is the main reason people believe is consistent.

It should be noted that sustainable exploitation requires the Range is a view of economic science. Convince that rangeland managers to look at the pasture as an economic unit, the need to exploit the long-

term. Therefore, using the economic unit of regulated need to know. This is implemented with a stable and continuous training.

Suggestions

1- Because of low literacy and illiteracy is one of the prominent characteristics of the studied rangeland managers. Comprehensive plan must be based on universal education.

2- Training classes extension continuous and persistent by the institutions related to rangeland managers to raise awareness of the principles of grazing management, livestock grazing, and economic stability of pastures to be. Rangeland and, in this training needs of the classes are indigenous knowledge Nota bene

3- To monitor rangeland grazing management, organizational defined with the use of an expert in the field of grazing management on rangeland and pasture management surveillance.

4- About creating businesses that reduce dependence on rangeland is rangeland managers to take serious action.

5- Is better pastures, rangeland managers as economic units be provided. Giving loans to farmers to support them.

REFERENCE

Bromley DW (1991). *Environment and Economy Property Right and Public Policy* (Oxford UK, Oxford University Press).

Brondon PS, 1ombardi PL and Bentivegna V (1997). *Evaluation of the Built Environment for Sustainability* (London and New York, Routledge).

Hosseini-Nasab M, Rain H and Religion Tylky AH (2010). examined the relationship between property values and operational status, with emphasis on summer pastures Arak. *Journal of Deserts And Grasslands* 17 166-179.

Karimiyan A (2011). The impact of different modes of exploitation on rangelands. *Journal of Rural Studies* **2**(2) 95-110.

Khalighi N and Ghasemi MH (2001). Evaluation of ranchers' participation in Range Management Plans, *Second National Seminar on Pasture and Range Management in Iran* 90-102.

Perman R (1996). *Natural Resources and Environmental Economics* (London, Briming University).

Rahimi H (2003). Investigate the role of pastures in environmental sustainability. *Peyke Noor* **1**(3) 49-57.

Timah E, Ajaga N, Tita D, Ntonga L and Bongsiysi I (2008). Survey Demographic Pressure and Natural Resource Conservation. *Ecological Economic* **64** 475-483.