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Reza Tamartash
University of Sari, Iran

Mohammadreza Tatian
University of Sari, Iran

Maedeh Yousefian
Islamic Azad University of Tehran, Iran

Fatemeh Montazeri
University of Sari, Iran

Hamid Mostafalou
Mazandaran University, Iran

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Factors affecting rangeland utilization by ranchers in the Golestan rangelands, Iran

Reza Tamartash ^A, Mohammadreza Tatian ^A, Maedeh Yousefian ^B, Fatemeh Montazeri ^C and Hamid Mostafalou ^D

^A Faculty Members, Agricultural Sciences and Natural Resources, University of Sari, Iran

^B PhD Student in Range Science, Islamic Azad University of Tehran, Iran

^C BSc Student in Range Management, Agricultural Sciences and Natural Resources, University of Sari, Iran

^D MSc Graduate in Range Management, Mazandaran University, Iran

Contact email: reza_tamartash@yahoo.com

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Introduction

In Iran, rangelands produce most of the forage resources for livestock. There are various types of traditional grazing systems for the utilization of rangelands, including the consultative, collective and operational multiplayer systems. In the consultative type, certain people are selected by the ranchers and they determine the utilization method and manage grazing. In the collective system, all ranchers use rangeland in common. In the operational multiplayer system, rangelands are used in common but the ranchers share rangelands by rancher-rancher negotiation. This research was undertaken to investigate the human factors as rancher's effect on rangeland utilization in different systems above mentioned.

Method

The study area was located in Golestan summer rangelands, east of Mazandaran Province, northern Iran. This research investigated the effectiveness of utilization types on rangeland condition based on user's viewpoints. Information on utilization indicators was sought for each rangeland system, including livestock increasing, cooperation of ranchers in rangeland management, level of ownership felt by the ranchers and the level of government support. At the time of the first questionnaire, forms were

distributed randomly amongst ranchers in the area. All of the parameters were determined based on rancher viewpoints. The data obtained were analyzed by a Likert method (Rafipoor, 2006).

Results

The result showed that the collective utilization system was the favoured system (58%) in the study area (Table 1). Rangeland users were then interviewed to determine their influence on rangeland utilization (Table 2). The feeling of user ownership was high in the collective and operational multiplayer systems. Also, the level of government support was relatively low in the consultative and operational multiplayer systems but higher in the collective system (Table 2).

Table 1. Users surveyed in Golestan

| Utilization type (system) | Population of users | (%) | Users interviewed |
|---------------------------|---------------------|--------|-------------------|
| Consultative | 22 | (23.9) | 6 |
| Collective | 54 | (58.7) | 8 |
| Operational multiplayer | 16 | (17.4) | 7 |
| Total | 92 | (100) | 21 |

Table 2. The effect of grazing system on rangeland utilization, from the point of view of users. The less and more terms were determined based on rancher viewpoints recorded in the questionnaire

| Factors | Significant | Consultative | Collective | Operational multiplayer |
|-----------------------------|-------------|--------------|------------|-------------------------|
| Increase in livestock | Less | 30 | 42 | 60 |
| | More | 70 | 58 | 40 |
| | P | 0.03 | 0.17 | 0.26 |
| Cooperation between users | Less | 35 | 40 | 79 |
| | More | 65 | 60 | 21 |
| | P | 0.01 | 0.04 | 0.35 |
| Sense of ownership | Less | 55 | 2 | 1 |
| | More | 45 | 98 | 99 |
| | P | 0.36 | 0.001 | 0.001 |
| Level of government support | Less | 75 | 29 | 70 |
| | More | 25 | 71 | 30 |
| | P | 0.23 | 0.11 | 0.019 |

Conclusion

There are different kinds of utilization patterns in the consultative, collective and operational multiplayer forms of the traditional system of managing Iran's rangeland (Saedi *et al* 2011). Among these kinds of utilization, the consultative method was seen by the rangeland users as the preferred way to control rangeland, because not only do the users retain sufficient local control of grassland management but also experience with this approach has led to the better condition of vegetation. It seems control of grazing

pressure is low in other methods but in the consultative system each local council has control over all applications.

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