

## The Role of Producing Rose and Rosewater on Kashan Human Settlement Development

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### EXTENDED ABSTRACT

#### Introduction

The purpose of this paper is the investigating the relationship between specific, endogenous, compatible, suitable and adaptive activity to the natural environment, namely, the production of damask rose (and other medicinal plants) and extracting rosewater (and other essential oils) via traditional techniques on the one hand, and the economic, social, physical and ecological development of settlements of Kashan (Iran) on the other. The cultivation of damask rose and the traditional distillation of other medicinal herbs for the provision of various herbal medicines and veterinary medicines, seasonings and spices, and cosmetics & perfumes in the local, indigenous and small conversion and complementary industries is important in some aspects including the treatment and prevention of diseases, marketing and economic development, job creation and utilization of comparative advantages, revitalization and development of indigenous knowledge, assistance to sustainable development, development of ecotourism and farm tourism, diversification of employment, attention to indigenous knowledge and industries in settlements of Kashan.

#### Methodology

In this applied research, an analytical descriptive method was used, in field study, two questionnaires were used; one for flower growers and one for owners of traditional distiller workshops. 231 people from 28 settlements in Kashan County with more than 50% of the acreage of the agricultural sector and practitioners in the field were selected as sample. For determining settlement development, Vikor technique were used. Cronbach's alpha test showed that the measurement tool (questionnaire) had the required reliability. The Shapiro-Wilk test indicated that the distribution of data is not normal. Correlation test, Crosstab tables and Chi-square test were used to test the hypotheses.

#### Results and Discussion

In terms of development, Ghamsar ranked the highest among the settlements. Niasar, Barzok, Joshaghan and Camoo ranked second, third and fourth respectively. Dorreh is ranked in the middle, and Dolatabad has ranked 28th in the last development ranking. Pearson correlation coefficient indicated that there was a significant correlation ( $\text{sig}=0.000$ ) between the developmental rank, with the number of flower growers, the amount of damask rose production, the number of distiller workshops, the number of pots, and the amount of rose consumption in the pot. According to the observations, it can be stated that the main reason for the higher

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correlation coefficient between the developmental rank and the number of workshops, the number of pots and the amount of rose consumption, is the impact of attracting tourists and increasing producers' incomes. The crosstab table test indicates that there is a significant correlation (sig=0.05) between the percentage of total flower growers and rosewater producers with flower and rose water functions and there is a significant correlation (sig=0.01) between the development of a settlement with flowers and rose water functions and attracting tourists. Also, there is a significant correlation (sig=0.05) between the developmental rank and the increase in land prices due to the production of damask rose and rosewater, the increase in the area under cultivation, the increase of the role of settlements at the district level, health, education, introduction of settlements, and tourism prosperity. On the other hand, there is a significant correlation (sig=0.05) between the developmental rank and the functions of the production of damask rose and rosewater, such as reducing feelings of relaxation, increasing insecurity, increasing social anomalies, population congestion, traffic problems, increasing environmental pollution, and There is a significant correlation (sig=0.01) between the developmental rank and the increase in the number of addicts. One of the concerns about increasing the cultivated area under damask rose is the decline in the production of the main food, the results showed that this is not important in the settlements of Kashan. Other functions of the production of damask rose and rosewater is the establishment of health and sanitation facilities and ease of access to them, extending the physical location of the residence, changing the face of the house, expanding the street network and so on.

### Conclusion

The results showed that there is a significant correlation between the developmental rank of the studied settlements and the type of dominant economic activity (production of damask rose and rosewater). There is a meaningful correlation between the functions of production and the role of settlement in the area which shows the impact of this activity on the development of settlements. The continuation of this activity leads to the formation of other activities including the tourism boom and as a result, the continuation of activities in the field of production and marketing, increasing the income and purchasing power of people. Increasing the purchasing power of people and the presence of tourists from near and far ways in the studied settlements is one of the factors driving up land prices. As a result of attracting tourists, expanding second homes and the presence of the owners of the villa, the return of retired people to their native land, the continuation of economic activities in villages, the presence of young people in villages and their need for housing and so on, land prices are rising. One of the indicators that comes from the functions of damask rose production is the introduction of the settlements and tourism boom. There is a significant correlation between the introduction of the settlements and tourism boom. Qamsar and Niasar are two of the top tourist destinations, the main reason of the attracting tourists in these settlements is the suitable advertisement and holding rose and rosewater festivals in the last few decades. The production of damask rose and rosewater simultaneously link three sectors of the economy (cultivation of damask rose, rosewater industries and tourism services), hence, the prosperity of this crop can encourage mobility and improvement of all three sectors.

**Keywords:** damask rose, rosewater, settlement development, Kashan County.