

An Analysis of the Effects of Socio-economic Pistachio Planting in Central District of Sabzevar

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Extended Abstract

1. Introduction

In dry areas, crop yield is generally low and there are limitations in fulfilling goals such as increasing the area under cultivation and reducing the cost of production. In such circumstances, the agricultural activity is limited to crops that can tolerate the harsh climatic conditions, secure farmers' income, and tolerate saline and limited water resources in these areas. Therefore, it has been quite inevitable to change the farmers' attitude towards the cropping pattern. One of the important policies aimed at developing this agricultural sector is to put more emphasis on the cultivation of strategic crops tailored to the capacity of the various regions. Pistachio as a strategic crop is one of the most precious agricultural and herbal plants in the world which is highly resistant to draught and salinity, and has played a significant role in improving the social and economic situation of villages in the arid and semi-arid regions which face many limitations in cultivation of agricultural crops. Sabzevar with a hot and dry climate is one of the major centers for cultivation of this crop in Khorasan Razavi Province (with 2737 hectares of pistachio and the annual crop yield of about 2000 tons). Considering the climatic limitations and little precipitation over the past few decades, Sabzevari farmers have decided to change cropping patterns from grains and cotton to pistachio in order to increase their compatibility with the environment. In general, lower water consumption, convenience, higher value-added, and less work force needed for planting pistachio as compared with cotton have encouraged the farmers to grow pistachio, which is more resistant to harsh climatic conditions. Accordingly, within the framework of sustainable development of agriculture, this study seeks to investigate the social and economic effects of planting pistachio on pistachio-growing households in rural areas of Sabzevar. It is clear that if the economic and social effects of growing

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strategic crops are not investigated, they may threaten the sustainability of the ecosystems. Therefore, the main research question is: what effects do pistachio planting have on social and economic situation of the pistachio-growers?

2. Theoretical Framework

To achieve sustainable development in the agricultural sector, especially in Third World countries, requires adopting appropriate policies which facilitate reaching the real growth rate of per capita income and preventing the destruction of national and natural reserves. This would be possible in light of *sustainable development of agriculture*, which guarantees economic efficiency, social acceptance, technical compatibility, and protection of the environment. The present study thus examines the effects of the Pistachio planting on the economic and social status of pistachio-growers within the framework of sustainable development of agriculture. As various models of sustainable agriculture have been adopted in different countries and there is no single version, the framework of the model is clear and consistent with social, economic, and ecological sustainability, which is also verified in several studies.

3. Methodology

This study was conducted using a descriptive-analytical method with a comparative approach. The data were collected through library research and field work. In this study, the farmers were interviewed about the effects in both economic dimension (17 items) and social dimension (12 items), within two time scales before they were growing pistachio (when they grew cereals, & cotton) and now that they grow pistachio. The data were weighted using Likert scale. The study area was the central district (Bakhsh) of Sabzevar. The central district includes four rural districts (Dehestans), three of which are mainly active in pistachio growing. Of 62 inhabited villages in the central district of Sabzevar, only six villages have pistachio-growers, all of which are included in the study. Based on an initial exploratory survey in the villages of the study area, there are 131 pistachio-growers all of whom were questioned. Then, we analyzed the data extracted from the questionnaires of the study through SPSS.

4. Results and Discussion

Reviewing and comparing the changes in the economic indices before and after planting pistachio show that the average economic situation of the pistachio-growers before planting Pistachio was 1.86 while it was 3.03 after planting pistachio. In fact, there has been +1.17 change, which shows that the planting of pistachio has had positive impacts on the economic development of the pistachio growing households. The results also showed that average social status of the pistachio growing households before and after pistachio growing were 2.05 and 3.25, respectively, which confirms +1.2 rise in Likert scale. This indicates that

planting pistachio has had positive effects on improving the social status of the pistachio-growing households.

5. Conclusion and Suggestions

Over the last two decades, given the suitable climatic conditions for pistachio cultivation, the acres of lands in Khorasan Razavi Province dedicated to cultivation of pistachio have significantly increased, which has had favorable social and economic effects on rural areas. The cultivation of pistachio has had positive effects on causing economic boom of the rural areas, increasing the revenues, boosting liquidity, creating job opportunities in the horticulture sector and its related industries, reducing migration, and finally moving forward in the path of rural development. But it should be noted that the economic profitability of pistachio has been increasingly encouraging the farmers to plant this crop. If this trend continues in an uncontrolled manner, in near future there would be ecological issues such as low groundwater level, hyper-salinity of the groundwater, soil salinity, soil erosion, lack of soil fertility, desertification, drying of deep wells, etc. Therefore, it is essential to take into account the ecological considerations so that villagers may enjoy sustainable agriculture, which paves the way for achieving a more sustainable livelihood in rural areas.

Key words: Pistachio, Socio-economic impacts, Agriculture, Sabzevar City, Change in cropping patterns

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