

# Local honey bee spurs entrepreneurial buzz

Beekeeping As a Sustainable Local Development Strategy

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## ABSTRACT

Düzce University Beekeeping Research, Development and Application Centre (DAGEM)'s project combines traditional activity with entrepreneurial spirit by capitalising on the discovery of a unique species, the Yiğilca honey bee, which produces three times more honey than other bee races. To exploit this discovery, DAGEM conducted workshops, seminars and training courses on beekeeping and honey production, and urged the local population to participate in order to acquire the necessary skills. The university adapted 255 hectares of forest to make beekeeping possible and helped many locals, particularly women and unemployed persons, to start their own apiaries. The project, therefore managed to integrate forest development, beekeeping, honey production and start-up business development under a local development endeavour.

Beekeeping is now recognised in the local community as an important job opportunity as the initiative has contributed to decreasing unemployment and the amount of migration away from the area. The town is now self-sufficient in producing queen bees, and stands to make an annual income of €750,000 – over and above the annual government budget of €6,000.

Keywords: Rural development, entrepreneurship, Promoting Women's Entrepreneurial Spirit

## **INTRODUCTION**

Local development In many areas of the world, the reality of economic crises has provoked a search for locally driven and innovative growth alternatives (Stöhr 1990; Zaaier and Sara 1993). Recently there has been increasing attention to the importance of local gene researches for rural development (Demaziere and Wilson 1996).

The potential role of academic and research institutions in regional development should be remarkably important. In suburban societies, science–society relationships should be based on establishing and institutionalizing mutual dialogues, making public concerns not only visible but the public as equal partner (Blakely, 1989). The participatory action project reported here aims at facilitating a bottom-up, micro-region level development process in one of the most socio-economically disadvantaged rural areas of north-west Turkey. Some of the main results of this university–community partnership were its contribution to rural development, including the activation of local capabilities and networking across various local stakeholder groups through various small-scale projects and natural resource-based rural development plan for the micro-region.

Traditional activity and unique gene research may have the potential to provide opportunities for sustainable local economic development such opportunities frequently remain unexploited. This paper considers the contribution of traditional activity to sustainable local economic development. In 2010, Düzce University Beekeeping Research, Development and Application Centre (DAGEM) conducted a project which aimed to combine traditional activity with entrepreneurial spirit by capitalising on the discovery of a unique species, the Yıǵılca honey bee, which produces three times more honey than other bee races.

### **Promoting Women’s Entrepreneurial Spirit**

The participation of women in entrepreneurship has been considered important in the World. In Turkey, since the beginning of the year 1990s, public institutions, civil society organizations and international organizations has increased interest and activities on developing women's entrepreneurship. The range of women in entrepreneurship significantly lower in suburban

regions. Development of women's entrepreneurial spirit among women are seen as a tool of solution to the unemployment of women and women acquire economic independence by getting their earnings.

## **Background**

Duzce University Beekeeping Research, Development and Application Centre (DAGEM) was established with the motive to analyze the results of research on Yıǧılca Honey Bee ecotype with a view to preserving this native gene source, to develop projects to take the advantage of local beekeeping potential in pursuit of local entrepreneurial development, to carry out activities to contribute to the development of both local and nationwide beekeeping sector (Kekeçoǧlu 2010).

## **Study Area**

According to the census conducted in 2008 total population of Yıǧılca, a town of Duzce, is 18,816. 18% of this population (3,314 people) live in the city centre and 82% (15,502 people) live in the villages. The population is decreasing by 7% annually because of migration to other places since the district has infertile land and lacks economic activities and employment opportunities.

Yıǧılca is placed in the 749th order in terms of development level among the 853 towns of Turkey. Yıǧılca is located on a rough land filled with rocks which is not available for agriculture, but suitable for planting forests. Total agricultural land is 10,425 hectares whereas forests cover an area of 29,808 hectares. Hazelnut is an important source of income yet it is not profitable as it is of low quality and sold at a low price. Thus it can not create an important economic potential for the region. Beekeeping is an easy engagement that everyone of all ages and sexes can do with no need for a huge capital and productive land. 85% of honey production is carried out in the forests or nearby spaces. Thus, availability of forests together with the unique ecotype of the bees in Yıǧılca present an opportunity for the future of this district.

## **METHOD OF THE STUDY**

DAGEM conducted workshops, seminars and training courses on beekeeping and honey production, and urged the local population to participate in order to acquire the necessary skills. The university adapted 255 hectares of forest to make beekeeping possible and helped many locals, particularly women and unemployed persons, to start their own apiaries. The project, therefore managed to integrate forest development, beekeeping, honey production and start-up business development under a local development endeavour.

Our first step was to find a suitable location and buildings for our Centre. An abandoned building, which was formerly used as a health centre was acquired after completing tiresome procedures. During the renovation works of the building, we sought support from local authorities (The Prefecture and the Municipality), public institutions (the Forest Management Department) and non-governmental organisations (the Beekeepers Union of Yığılca and the local Chamber of Agriculture). The most difficult part of the project was to persuade local people to participate in the project and to convince them how beekeeping and honey production forests would help them make a living and go beyond that. Towards this end, we worked together with the local agencies mentioned above. We held meetings with the village headmen and the villagers and tried our best to inform them about the project. Despite our efforts, we were faced with reactions. Bu we never gave up and went on showing them incremental but real successes. When they understood the merit of our activities, they began to join us. They attended queen bee production courses and worked in the honey production forests. They required plants from us and, moreover, they transformed their hazelnut plants into honey production forests.

In the beginning, we conducted a survey about the nationwide beekeeping profile, the capacity and problems. During the survey, 62 beekeepers aged between 27 to 72 were interviewed. The main problem was identified to be the lack of training. We arranged two international beekeeping workshops, 4 seminars and two training courses on beekeeping and honey production. 27 people obtained certificates for queen bee breeding. We encouraged housewives, young women and disabled people to attend the courses so that these people could acquire employable skills.

The survey also revealed that beekeeping is mostly a profession of people aged over 47. It was concluded that if the new generations are not encouraged for beekeeping, it is inevitable that beekeeping sector will disappear within a few years. Therefore, a new activity was launched which consisted of visiting day care centres and primary schools in the region, showing slides about bees and bee products and familiarizing children with these concepts. We also arranged an excursion to the bee yard for the children. This will be kept as a continuing activity of our Centre. This will help to keep the ball rolling through generations. Meanwhile, through the instrument of detailed genetic research, it was proved that Yıǵılca Bee is a distinctive ecotype, and the results of the study was published. Thus, Yıǵılca Bee took its place in literature. Yıǵılca Bee ecotype was introduced at both national and international platforms by presenting the research results in 4 national and 3 international conferences. Yıǵılca Bee has the capacity of top-ranked honey production. It is different from other bee races regarding the length of their wings and legs, endurance to bad weather conditions and diseases and the capacity of honey production which is three times more than other bee races (Gösterit et al., 2012).

Following our cooperation with Yıǵılca Department of Forestry, a new activity was started under our leadership to develop 255 hectares of forests with support from other local authorities and NGOs. Our project is unique in the sense that it has integrated forest development, bee keeping, honey production and start up business development under a local development endeavour. Forest development part of the Project was supported by the local Employment Agency within their Community Service Scheme through which 20 local villagers were temporarily employed.

The purpose of developing forests is to regenerate destroyed forest areas with plants having top-rank honey production capacity. Beside this, herbaceous plants and trees with successive blossom periods were planted so that bees can collect nectar and pollen over a 7-8 month period during the year. This will prevent the beekeepers from collecting honey from a variety of regions as migrant beekeepers. They will thus only depend on their local forests. This will ensure protection of the Yıǵılca Ecotype. The ultimate aim is of course related with the economic development of the region. The forests will also offer another source of income for the region with undergrowth vegetation products such as chestnut, linden and thyme.

This integrated project can be transferred to other places with community involvement being one of the milestones. Our future actions will focus on increasing the number of people involved in beekeeping and honey production, training them about running a business and helping them expand their markets. A yearly income of 1,500,000 TL (750,000 Euro) is anticipated for the coming years (yield of 2,000 hives) in an area whose annual governmental budget is merely 12,000 TL (6,000 Euro).

## **RESULTS OF THE STUDY**

Concrete results of these project are as follows:

- ❖ Following elaborate research conducted in 2009, Yığılca Bee found its place in related literature as a unique ecotype. (Kekeçođlu, 2010).
- ❖ A 255 hectare honey production forest was developed with support from the Yığılca Forest Management Department and Local Employment Agency.
- ❖ Twenty unemployed people of Yığılca were temporarily employed by the Local Employment Agency within their Community Service Scheme.
- ❖ In an area where there are still many women who did not go out of their homes throughout their lives, 13 women were trained on bee keeping and each was given ten hives. Some of them earned up to 5,000 Euro in one year.
- ❖ The number of people involved in beekeeping has doubled in Yığılca. · Three women beekeepers were enrolled in the “Applied Entrepreneurship Training Course” arranged by East Marmara Development Agency and KOSGEB (the Small Business Development Administration of Turkey) and they became eligible for the start-up capital support of KOSGEB (13,000 Euro grant, 35,000 Euro soft loan) which will help them to establish a medium sized apiary.
- ❖ One entrepreneur has established a propolis cultivation unit.
- ❖ Twenty five of beekeepers obtained a certificate of queen bee production and started production. The town is now self-sufficient regarding the production of queen bees.
- ❖ One physically handicapped person started beekeeping and he is now a socially happy member of the society.

- ❖ Beekeeping is now being recognized by the community as an important job opportunity for the local people.
- ❖ Local people were made aware of the value of Yıǵılca Bee as a local and national wealth. They are now very sensitive for the protection of this unique bee ecotype.
- ❖ People who used to destroy forests for the sake of planting hazelnut trees and obtaining timber are now attentively caring for the forests.
- ❖ A local alliance was set up under our championship among local authorities, NGOs and the citizens.
- ❖ University-community relations were strengthened and the university played an effective role in increasing the socio-economic level of the community.

Future goal of present project that Yıǵılca is going to be a model region in terms of beekeeping with its honey production forests and beekeeping activities. The goal for the next three years is to improve *organic beekeeping* in order to make proper evaluations about the region's bee ecotype, to lead the beekeepers in terms of producing and marketing alternative bee products in Yıǵılca, and to initiate studies in the field of *APITHERAPY* (Medicine and Cosmetics)

### **Aknowledgment**

This project won European entreprize awards-2011 in category of Promoting the entrepreneurial spirit. The European Enterprise Promotion Awards identify and recognise the most successful promoters of enterprise and entrepreneurship, showcase best entrepreneurship policies and practices, raise awareness of the added value of entrepreneurship and encourage and inspire potential entrepreneurs. The category of Promoting the entrepreneurial spirit recognises initiatives at national, regional or local level that promote an entrepreneurial mindset especially among young people and women.

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