

Organic Farming and Sustainable Rural Development: Çoruh Valley

Ümmügülüm ERDOĞAN¹ Yaşar ERDOĞAN¹ Ramazan ÇAKMAKÇI² Metin TURAN³

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Summary

Organic farming has potential for reducing some of the negative impacts of conventional agriculture on the environment. Organic farming contributes to rural development and economy. These farming systems can also be the most important contributor to the rural economy of region and Çoruh Valley. Çoruh Valley contains rich biological diversity of plants, wildlife, and ecosystems. These natural and environmental resources will play an important role for rural development in this area. Some evidences suggested that an important benefit of organic farming is the creation of jobs in the rural economy and prevention of human erosion. Effective use of the source will come true with production, processing and marketing of organic products such as spices, pekmez, honey, fruit and vegetable juices, thyme juices, vegetable oils, herbal tea, chemical compounds of plant and food additives in Çoruh Valley.

Background

There are many explanations and definitions for organic agriculture. Organic agriculture is a production management system which promotes and enhances agro-ecosystem health, including biodiversity, biological cycles, and soil biological activity. It is a system that begins to consider potential environmental and social impacts by eliminating the use of synthetic inputs, such as synthetic fertilizers and pesticides, growth hormones, antibiotics, veterinary drugs, genetically modified seeds and breeds, preservatives, additives and irradiation (Çakmakçı and Erdoğan 2008).

Conventional agriculture is not sustainable system. Because the foods we eat today lack nutritional content, children and adults, no matter how they eat are starved and tend to eat more than necessary, resulting into: obesity, diabetes, cardiovascular and heart diseases, chronic and degenerative diseases including Parkinson's. In recent years, producers and consumers have begun to prefer agricultural products will not adversely affect human health and produced methods that do not harm the environment. For this purpose, organic farming has emerged as an alternative mode of production (Youngberg et. al. 1984). Organic farming is more sustainable than conventional farming systems which highlights the harmonic connection of humans and their environment (Edwards-Jones and Howells 2001, Rigby and Cáceres 2001, Mäder et.al. 2002) and appears to be an environmentally friendly production system (Hansen et.al. 2001, Lotter 2003). Organic farming harmonizes modern science with traditional knowledge, allows farmers to convert low-input and subsistence farms into more productive systems and increases their ability to take advantage of locally available resources.

Availability and Advantages of Organic Farming in Çoruh Valley

Çoruh Region, covering the districts İspir, Uzundere, Narman, Olur, Tortum and Yusufeli, has a strong potential for organic farming. The Çoruh Valley is recognized by Turkish conservation organizations as an important plant area, a key biodiversity area and has been nominated as a high priority area for protection (Özhatay et al. 2005, Eken et al 2006). Çoruh Valley is one of the 35 world hotspots of biodiversity pointed out by The World Conservation Union as the western section of the "Caucasus Ecosystem" (Anon 2007).

The Region faces the highest rate of migration towards more developed regions in the west and from rural areas to urban centers. This migration has accelerated after 1980, affecting economic and demographic indicators adversely. The Region loses especially young, skilled human resources and capital assets to more prosperous regions. The economic activities are concentrated in agriculture; however agricultural industries with high added value are significantly low, reducing the competitive advantage of the region.

Çoruh Valley heavily relies on agricultural sector and shows relatively low capacity of efficient farming practices and low level of competitive power. Due to its favorable climate and geographical position, there is a great chance for organic produce. Organic farming as well as other integrated agrienvironmental practices directly contributes to sustainability of the rural development in this area. They might lead to stabilization of ecosystems, preservation and restoration of natural resources, prevention of land abandonment. Organic farming is represented by widening the range of employment, creating new workplaces, improving the population keeping ability of the area. Valley is suitable for organic plant production, beekeeping and aquaculture. Valley has an advantage for organic farming, based on the still existing traditional extensive production methods.

Scientists discovered that products grown organically can reduce the risk of heart disease, cancer and other diseases. In the short term, organic systems may create nitrogen shortages that reduce crop yields temporarily, but these can be eliminated by raising the soil nitrogen level through the use of animal manure or legume cropping systems, or both (Çakmakçı and Erdoğan 2008). In the Valley where agricultural chemicals and genetically modified crop seeds are not

¹Atatürk University, İspir Hamza Polat Vocational School, İspir, Erzurum, gerdogan@atauni.edu.tr, yasarerdogan@hotmail.com

²Atatürk University, Faculty of Agriculture, Department of Field Crops, Erzurum, rcakmak@atauni.edu.tr

³Yeditepe University, Faculty of Engineering and Architecture, Department of Genetics and Bioengineering, Ataşehir, İstanbul, m_turan25@hotmail.com

favoured, the farm animals can easily fulfill their ecological roles by grazing the ranges: the milk of those cattle, goats and sheeps are used in making delicious cheese and butter.

Farmers of Valley do not have enough information about organic farming methods. But, in Valley are applied ecological and sustainable alternative farming techniques just as well as multi-crop systems, plant rotation, multi-culture, mixed farming, mixed order and intermediate plant breeding, friends plants, auxiliary plants, perennial polyculture systems, integrated farming systems, alternative mixed farming systems, cover crops, crop rotation and alternative plants. Many villagers feel their products are very healthy, as Çoruh Valley has always been agrarian region that traditionally produces most of its own food items and chemicals are not used (Çakmakçı, 2006).

To sell a product as organic the crop must have been raised on land that no synthetic chemical (including fertilizers, herbicides, insecticides, or fungicides) inputs were applied for three years prior to its harvest (Çakmakçı and Erdoğan 2008). In Çoruh Valley, many agricultural areas are still managed without the use of synthetic pesticides and fertilizers. The region farmland is irrigated mostly with water from a clean source based on the streams. There are no sources of pollution such as road network, industrial organization in Valley. In the region practices supported by modern organic farming techniques can be increased productivity and can be provided biological, economic and social sustainability of the region.

Results

Isolated valley is most suitable for organic fruit, vegetable and honey production. Development and protection of these sources are very important living for people in the region. Çoruh Valley has a wide area suitable for the production of organic bee products like pasture and grassland, forest trees, nectar and pollen plants. On the world, there is an increased demand for organic honey, which achieves higher prices than conventionally produced one.

In the region, most of local species cultured pear, quince, red and white mulberry, apple plum, cherry, sour cherry, apricot, wild apricot, peach, pomegranate, walnut, cornelian cherry, medlar and grape and wild fruit species has been produced and grown without the use of chemical fertilizers and pesticides. Production and marketing of organic fruits, vegetables, spices, foods, fruit and vegetable juices, cosmetic products, perfume, organic herbal tea, and many other commodities increase income inhabitant in the region. Cultivation of organic basil, thyme, oregano, mint, raspberry, strawberry, blackberry, centaury, garden sage, balm Melissa, and caper rose haw, fruit and ornamental plant species, flower plants and İspir beans are appropriate for in small piece of agricultural land in the region. Collection and cultivation of wild medicinal and aromatic plants will make an important contribution to the region's economy and request or the necessity of the medical and aromatic plants.

Rural development policy must aim to meet the nutritional and other human needs of present and future generations; and maintain, and where possible, enhance the productive and regenerative capacity of the natural resource base, it must also provide for the durable employment of those generations, reduce their vulnerability and strengthen their self-reliance (Darnhofer 2005).

Organic agriculture can have a positive impact on the cultural landscape (Tress 2001), it is seen as creating employment opportunities in rural areas (Knickel ve Renting 2000) and increasing farm income (Nieberg ve Offermann 2002). Organic farming can benefit the regional economy (Pugliese 2001, Smith and Marsden 2004, Schermer 2005). Organic farming can potentially turn into a dynamising engine of regional development. Furthermore, organic agriculture helps develop local and regional food markets through direct producer consumer supply chains that, in turn, encourage people to eat their local foods.

Çoruh Valley must be taking up as national nature protection and organic food production area. Organic growers must be certified and educated. Çoruh Valley has quite diverse product range due to its geographic location and suitable climate conditions. Considering these conditions Çoruh Valley has a potential of developing the organic agriculture rapidly.

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