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Multifunctional Agriculture: Agriculture Renewal as A Modern Paradigm for Agriculture and Rural Development

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Abstract

Multifunctional agriculture (MFA) has emerged as a key concept in science and politics with respect to the future of agriculture and rural development in the recent decade. Overall, MFA implies that in addition to their main function in production and support of rural livelihood, the agricultural activities have some other advantages for the environment including the conservation of water and soil resources and the enhancement of food security. This paper takes a look at the benefits of MFA as a concept and path toward agricultural development from an integrated perspective within the framework of sustainable development. Also, it tries to clarify the distinction between MFA and conventional agriculture in sustainable development approaches.

Keywords:
Multifunctional agriculture, food security, entrepreneurship, sustainable development

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INTRODUCTION

Experts say that agriculture is the centerpiece of the socio-economic development of society, which has always played an unrivaled role despite the spectacular scientific and technological advances (Alibaygi & Borzoo, 2014). In the transitional society of Iran, the agricultural sector has a special significance in meeting the basic needs of the society, national development, and food security and paving the way for boosting rural employment, income, and economy (Hadizadeh Bazaz et al., 2015; Taghizadeh Ranjbari & Mehrabi Basharabadi, 2013). It has been estimated that 80-90 percent of agricultural lands in developing countries are planted by smallholders (Akbari et al., 2010). Similarly, according to the 2014 census in Iran, the average area of the lands owned by farmers is 4.9 ha whilst this is, for example, 273, 72, 71, and 178 ha in Canada, Brazil, the UK, and the US, respectively (Statistical Center of Iran, 2014). Given the facts that the development of innovative crops and new agricultural businesses are top priorities in policymaking and the smallholders in most parts of the world fall short of access to advanced technologies, knowledge, and innovations that improve productivity, it is necessary to consider agricultural approaches that aim to ensure sustainable production and minimize the environmental impacts more seriously (Boody et al., 2005; Marzban et al., 2016). Traditional definitions of agriculture hold that the only function of agriculture is to produce foods and fibers, but sustainability literature has introduced a different definition to the agricultural concepts. The new definition came to be known as multifunctional agriculture (MFA) has found its way into the sustainable agriculture literature on the basis of the historical experience of mankind, indigenous knowledge, and sustainability, and triggered a new stage in agriculture literature in post production-oriented period. This concept focuses the other functions of agriculture than food and fiber production. The conventional agriculture system is based on increasing the production of profitable crops and, in particular, single-cropping and ignores the other functions of agriculture. However, single-cropping systems may fail to satisfy the production security and livelihood of farmers under the present conditions due to the high risks of production and pricing. In fact, the conventional agriculture does not follow the fundamentals of sustainable agriculture, entailing the risk of agriculture eradication (Eftekhari & Shadparwar, 2015). Given the current requirements and conditions, the redefinition of the agricultural concepts and MFA approach can create diverse interests for farmers and society, improve farmers' income, and mitigate their risks. The development of this concept will have further interests for the society and next generations including sound exploitation of nature, conservation of the environment, and agriculture sustainability (Marzban et al., 2016).

Presently, the multifunctionality of agriculture has attracted a lot of attention in scientific and political circles (Batie, 2003; Libby, 2002; Moon & Griffith, 2011; Randall, 2002; Vatn, 2002). MFA is a new approach to sustainable rural development that implies the transition from production-oriented era to post-production-oriented era. The core of the multifunctionality concept is the simultaneous production of several interrelated agricultural outputs, referred to as commodity and non-commodity outputs (Mahmoudi & Chizari, 2013). Broadly talking, MFA implies that the farming activities may have externalities beyond food and fiber production, for example, renewable resource management, the protection of landscape and biodiversity, and contribution to the economic growth of the rural areas (Ragkos & Theodoridis, 2016; Renting et al., 2009). Some authors suggest that MFA can be applied as a framework to change the views on the changing role of agriculture in developing countries in the 21st century, from limiting its role merely to food production to a more general role including environmental and cultural management and rural development (Dobbs & Pretty, 2004; Potter, 2002). Therefore, multifunctionality emphasizes the social and environmental importance of agriculture and focuses on a wider economic basis for rural development via creating income opportunities in addition to doing its primary function, i.e. production (Molders, 2013). All these

arguments show the multiple values of agriculture, such as the availability of residential, recreational, environmental, and cultural capitals. Indeed, this is a powerful antidote against materialist ideology and industrial agriculture and is wider than the materialistic paradigms of development (Groenfeldt, 2001). Obviously, equipping farmers and villagers with MFA mindset can open new horizons to them in different fields, especially optimum production management, job creation, income generation, and rural entrepreneurship (Borzou & Alibeigi, 2012). Due to the single-cropping nature of agricultural production and extensive land use change in Iran, the country needs a transformation in definitions in order to protect this concept. Since the research has been very limited on MFA in Iran and this is a new concept in sustainable development literature, further research is required to recognize and solve the challenges by making use of the concepts pertaining to MFA.

History of Multifunctional Agriculture

Ever since humans embarked on the domestication of plants and animals some 10,000 years ago, agriculture has gone through fundamental changes. These transformations have been induced by the changes in technology, attitudes, food markets, and consumer demands. For example, the invention of the plow about 3,000 years ago allowed planting the already barren lands, helping the rapid development of agriculture in large, dense forests. Since the early 19th century along with the transformation of the global nature of agro-industry chains, agricultural mechanization provided much more efficient and economical forms for crop production. "Industrial" agriculture is often characterized by the mass production of clothes and standard foods. These transformations, and many more changes in the agriculture in thousands of years, are essential so that they are sometimes referred to as "revolution". However, some researchers argue that these processes have been more remarkable than the changes happened since World War II and the developments of the recent 50 years. Some, even, argue that the conventional agriculture whose objective is just food and fiber production is coming to an end and new agricultural models are emerging with much more extensive objectives including production from nature and landscapes for tourism (Wilson, 2007).

All in all, it can be said that the agriculture definitions have changed with the changes in socioeconomic terms over the history, especially after the industrial revolution in the 18th century and the beginning of the modern era. These changes led the agricultural perspective from traditional farming to production-oriented farming and then, it was transited to post-production-oriented, or processing-oriented, era. This transition pushed agriculture from a sustainable, farmer-based production towards industrial production. The development of the Green Revolution concepts (1940-1960) in the middle of the 20th century was another driving force of this transition so that it considerably contributed to changing the attitudes towards agriculture definitions and concepts and its movement to production-oriented production. In fact, there is a growing consensus in the international community as to the fact that agriculture has other roles and functions than its main role in food and fiber production. The main roles and functions of agriculture are related to (i) the impact on landscape and land conservation, (ii) the impact on the conservation of natural resources and biological agriculture – conservation of biodiversity, (iii) contribution to food security, (iv) protection of animals, and (v) cultural and historical role in the protection of the traditions. All these functions are often described by the term "multifunctional agriculture" (Hocevar & Juvancic, 2006).

Multifunctional agriculture (MFA) was officially introduced at the Earth Summit in Rio de Janeiro, Brazil in 1992 with an emphasis on food security and sustainable development (De Vries, 2000). From the agricultural policymaking perspective, the concept was first applied in 1993 by the European Council for Agricultural Law (ECAL) to integrate agricultural laws in Europe. In the last decade, the concept of MFA has been consistently present in discussions on agricultural policymaking and its role in the economies of the countries. The Cork declaration of 1996 reflects the commitment of the European Com-

mission (EC) to the multifunctionality of agriculture and stresses that agriculture is the main link of mankind with the environment and farmers are responsible to conserve natural resources in rural areas. The EC approved the Cork declaration in 1997. Finally, MFA was introduced by the EC to the Organization for Economic Cooperation and Development (OECD) in 1998 and the member states developed it. At the level of the European Union, the agenda of 2000 proposed to develop a model for changing and often approving "the European agriculture model" in order to protect agriculture "due to its multifunctional nature and its role in the economy, environment, and society" (Marsden & Sonnino, 2008). In general, it can be said that the idea of MFA has been very important from 1999 until 2002, but then, it was referred to less frequently.

Concepts and Meanings of Multifunctional Agriculture

Agriculture is a dominant activity in rural areas throughout the world, not only with respect to the land use but also in terms of the impact on natural landscapes. Agriculture operates in complex systems and is multipurpose in nature (Todorova & Ikova, 2014). The concept multipurpose agriculture is a new key term in recent policies of Europe although there is no comprehensive definition for this term like many other words and terms (Arzeni, 2001; Borzou & Alibeigi, 2012; Garzon, 2005; Majkovic et al., 2005).

Overall, the concept multifunctionality has been used by researchers as a key concept to understand agriculture complexities (Wilson, 2007). Multifunctionality is a general view on the production of values beyond foods and fibers that includes such products as marvelous landscapes, biodiversity, residential areas for villages, and food security (Daugstad et al., 2006; Heringa et al., 2013; Marzban et al., 2016; Schimmenti et al., 2016). MFA divides agricultural functions into two broad categories – commodity or on-farm functions and non-commodity or general functions. All these functions can make earning for the farmer and public interests for the society (Mehrjou & Kiani-Feyzabad, 2016). Examples of commodity functions include food and fiber production, diverse cropping, organic farming, and agro-tourism, but the general and off-farm function that has indeed social profit can be listed as the protection of biodiversity, protection of landscape sustainability, environmental sustainability, protection of rural culture, food security, and so on. Some concepts of MFA and their prevailing definitions are presented below.

In 1998, the Organization for Economic Cooperation and Development provided this definition of MFA: beyond its main functions that are producing food and industrial commodities, agriculture can be the natural landscape, can provide environmental benefits like land protection, sustainable management of renewable resources, and biodiversity conservation, and can contribute to the socioeconomic life of most rural areas. Agriculture is multifunctional when it has one or more functions in addition to its major role in food and fiber production (Marsden & Sonino, 2008).

Faber summarizes agriculture functions in four categories:

i. Environmental: beautiful landscapes, aquifer protection, flood control, groundwater recharge;

ii. Food security: elimination of hunger, ensuring food availability;

iii. Rural development: rural income and employment, livable rural areas; and

iv. Social: traditional rural life, cultural heritage (Faber, 2002).

MFA includes the production of specific food commodities for specific markets, provision of services to other farmers and rural workers, and the use of agricultural assets to attract tourists and provide employment opportunities for farmers or the members of farmers' families in other jobs like technical consulting and education. The concept of agriculture multifunctionality includes all commodities, products, and services generated by the agricultural activities (Losch, 2004). Akca et al. (2005) argue that farming has multiple benefits for the community. These benefits are the functions of the agriculture like food security, animal security, biodiversity, nutrient recycling, soil conservation, protection of soil-borne organisms, flood control, cultural values, historical heritage, and the joy

of rural communities. Briefly, the new concept of MFA reflects the capacity of ancient agriculture in supplying a wide range of commodities and services to meet the demands of the society.

The Significance of Multifunctional Agriculture

MFA and food security

One of the most serious challenges of human community in recent decades has been the crisis of food security for the growing population of the world. Population crisis on the one hand and the limitations of production resources, on the other hand, have forced the agriculture to move from its traditional form to the use of technology and industrial agriculture (Saadi & Jalilian, 2017). The reports by the international organizations and UN predict that the global population will exceed 9 billion by 2050 and the present methods will fail to meet the demand for food. The only way to supply the food demand of the societies and protect environment and production sustainability is to apply sustainable agriculture practices like agroecology.

The World Bank defines food security as the access of all individuals at all times to adequate food to make a living. It regards food security as an indicator of development as important as annual income, fair distribution of income, employment rate, environment conservation, and human rights observance. The concept access to food implies both physical and economic access to resources for the supply of food items required by the society. It is a function of the stability of income, employment, and pricing. The agricultural sector is the main sector in charge of food production, supply, and security (Esfandyari et al., 2017). Despite the crucial role of agriculture in economy, there are concerns about its efficiency in alleviating poverty in rural areas, ensuring food security, and creating stable income for rural people, arising from the fact that the agriculture environment and rural areas have been struggling with unprecedented environmental problems in the last two decades (Bosshaq et al., 2013). The increasing demand of the growing population for food and the uncertainties in long-term and short-term impacts of climate change on agriculture have made the sustainability of the agricultural sector a top priority (Wiles, 2012). A sustainable agricultural sector ensures the national food security and hinders malnutrition, which is a major problem in developing countries (Marzban et al., 2016; Shetty, 2015). So, it is imperative to put the agricultural sector in correct perspective considering its decisive role in the process of development. The traditional practices would fail to meet the food requirement of the current growing population in particular and the food security of a country in general. To accomplish food security, the agriculture needs to rapidly transit from the traditional subsistence farming to industrial and commercial production. This calls for the adoption of strategies to renew it completely. One of these strategies is undoubtedly the development of technology and its application (Esfandyari et al., 2017). On the other hand, small-scale agriculture as the dominant form of agriculture is generally in an adverse condition in the global food system and does not allow the application of standard food processing industries and capital-intensive technologies. So, the persistence of these economic units is of importance in terms of the presence of flexible and cheap family labor, the development of alternative food systems, and local markets for food and other services (Groenfeldt, 2001).

The experience of different countries shows that there are various ways for sustainable food production and that MFA can be effective in coping with the challenges of unsustainable food production by using modern farming practices (Horlings & Marsden, 2011). Also, the implementation of MFA in countries like Bulgaria, the UK, the Netherlands, and Norway has revealed that most challenges of the agricultural sector can be resolved by changing the approach to the concept of agriculture that disturbs food production and the sustainability of the rural culture (Horlings & Marsden, 2011; Lanfranchi & Giannetto, 2015; Marsden & Sanino, 2008; Romstad et al., 2000; Todorova & Ikova, 2014; Wilson, 2007). Rasmussen and Reenberg (2015) reported that the concept of "cultivation for food production" tends to underestimate some

extra outcomes of cultivation. They focused on the transfer of agriculture in two villages in Burkina Faso by a conceptual framework containing MFA concept that was first developed to analyze agriculture in northern countries of the world. The results showed that there are different types of families and a single type cannot assume that the provision of food items is always the major result of the cultivation. On the contrary, families have moved away from mere concentration on food production and have been acquainted with the merits of extra cultivation results. Therefore, they argued that researchers and policymakers are faced with the fact of new paths for the transition of agriculture in southern countries. The results of exploring farmers' orientation towards multifunctional agriculture (Insights from northern Iran) showed: About half of the respondents (48.3%) showed highly positive perceptions of MFA, putting emphasis on social acceptability and envi-ronmental health for food security, including also preservation of local traditions (named: guardians ofculture and traditions). Almost a third (31.1%) showed moderately positive perceptions of MFA, withmainly a socio-environmental orientation, whereas a sizeable proportion (20.6%) was indifferent to MFA.Data offer useful insights to decision makers regarding the design and implementation of territorialplanning strategies. Food production remains a key element in farming systems, but besides mainstreamagriculture, the positive perceptions of MFA support that alternative farming systems could be implemented. However, the most successful farming systems are adapted to specific contexts and needs should be promoted, taking into account existing facilities and sufficiency for appropriate rural management (Marzban et al., 2016).

MFA role in entrepreneurship development (job security)

One of the factors underpinning rural development is entrepreneurship. Entrepreneurship refers to the process of technology promotion by starting a new business or organization (Ebrahimi et al., 2014). At present, international scholars argue that it is necessary to address the rural development and the eradication of its deep poverty, in which rural entrepreneurship can play a specific role (Rezaei, 2014).

The agricultural sector plays a remarkable role in creating new economic opportunities in many developed and developing countries (Alston & Pardey, 2014). If in the early industrialization era, the early development theories considered the agricultural sector to be a step towards the promotion and a victim for the economic growth of the industrial sector, this view is presently giving its place in most countries to the coordinated growth and indiscriminate development of all economic sectors. The considerable role of the agricultural sector in the economic growth of the agricultural sector in spite of its reduced share in capital stock as compared to other sectors have led most policymakers to the conclusion that this sector can be a fertile land for the creation of employment and new economic opportunities (Eftekhari et al., 2016).

All in all, one can say that among all economic sectors, the agricultural sector has specific features with respect to employment and, particularly, income distribution. Not only is this sector of crucial significance in ensuring food security, but it also contributes to the growth of other sectors by supplying the raw material. Furthermore, the growth of this sector will entail the enhancement of welfare, income, and food security among rural people who belong to the low-income class of the society. It can, also, harness their migration to the urban areas and the resulting marginalization in the cities (Salami & Ansari, 2009).

On the other hand, faced with the growing rate of urbanization, the reduced income of rural families, and the decline of agriculture, an alternative activity is required to supplement farming in rural areas so that the villagers can enjoy sustainable livelihood along with sustainable rural development that will improve their life quality and satisfaction (Razavi et al., 2013). Indeed, the limitations induced by the reliance on agriculture as a risky activity can be said to imply that the rural development should not depend on traditional farming. Livelihood diversity can be a good option to cope with adverse

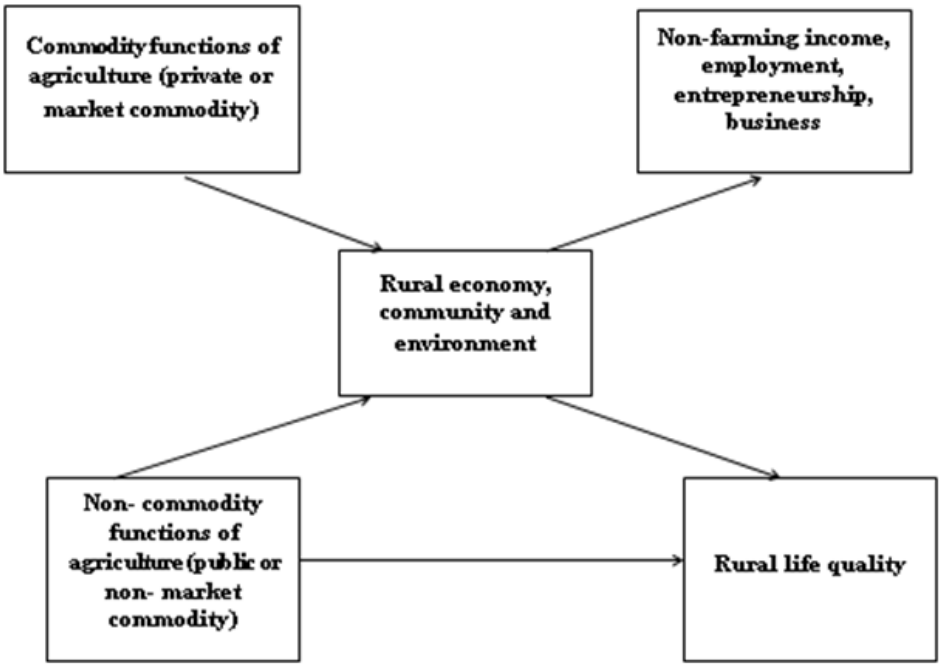

Figure 1. Multifunctional agriculture and its outputs (Arabiun et al., 2010)

living conditions in rural areas. Diversification of rural economy towards non-agricultural activities with the use of achievable resources can be an effective approach to livelihood, survival, and development. Livelihood diversity is the process by which rural families are directed towards a set of production and service activities so as to accomplish a better life. Livelihood diversity is a livelihood approach that refers to a set of on-farm and off-farm agronomic and non-agronomic activities (to improve the survival and a part of assets) including natural, physical, human, material, and social activities (to enhance life standards) (Shahraki, 2014). Therefore, since a major strategy within the framework of sustainable rural development has been to observe the rule of the diversity in economic activities of the families (Esmaeili, 2015), the consideration of various functions of the agricultural sector can be an approach to increase income and provide entrepreneurship opportunity by simultaneous production of "non-market side benefits" and general commodities along with food and fiber production (the features that gives the nature of multifunctionality to agriculture). As mentioned, MFA reflects the fact that today agriculture is expected to fuel rural development by functions beyond its primary functions (i.e. food and fiber production). Among various functions, entrepreneurship development and income generation are of particular importance (Figure 1) because entrepreneurship is a key factor of rural development and can play a significant role in improving the economic status and livelihood of rural people by creating new employment and income opportunities (Arabiun et al., 2010). There are numerous examples of rural entrepreneurship, showing how MFA contributes to entrepreneurship. These can be classified in four categories: (1) activities related to entertainment and housing; (2) educational, professional, and cultural activities; (3) healthcare-related activities; and (4) activities related to the conservation of the environment and natural landscape (Arzeni, 2001).

Furthermore, with respect to the significance of MFA entrepreneurship, it should be noted that unemployment entails a diverse set of social, cultural, and political issues. The problem of unemployment is disturbing for all active classes of the society and inhibitory for the economy. The effective employment of expert human resource constitutes a goal of development in any country. So, its various aspects should be considered in macro programs. The problem is worse in Iran. Every year, 800,000 novice job

seekers come into the job market in Iran and the prediction of 10 million unemployed people by 2020 is a major challenge of socioeconomic development in the Fourth Development Plan and other programs (Aliabadi et al., 2011). Thus, it is imperative to look for approaches to solve this tough problem. Given the high potential of the agricultural sector in creating job opportunities, the modern entrepreneurial policies point to the significance of MFA as a candidate approach in Iran.

MFA role in sustainable rural development

Agriculture plays a key, decisive role in the fate of the rural community and it is irrational to assume that rural development can be accomplished without having a solid and rational solution for agriculture (Nouri Zaman Abadi et al., 2017). Agriculture ecosystems provide the human community with a diverse set of commodities and services. In addition to their main functions of production and support of rural livelihood, agricultural activities encompass other advantages for the environment, such as the preservation of water and soil resources and the improvement of food security (Mehrjou & Kiani-Feyzabad, 2016). The social, economic, and environmental services of agricultural ecosystems are indisputable. Food production is the main service of agricultural ecosystems and how it relates to other services – e.g. food storage and water and soil security – is influenced by the management practices and related policies. MFA has attracted scientists' interest to a great extent and is considered as a way to accomplish sustainability because it emphasizes the mutual complexities and interactions among environmental ecosystems, natural environment, and socioeconomic development. Iran is faced with a lot of challenges in agriculture such as reducing soil erosion, improving water protection, preserving soil fertility, and alleviating poverty. In addition, the sophisticated and vital relationships of agriculture with other ecosystem services are not fully understood yet. Therefore, before the new management approaches are implemented on agriculture, it is necessary to analyze different services and study MFA (Zhen et al., 2017). Undoubtedly, the rural areas are exposed to numerous challenges, such as the structural transformation of agriculture, environmental damages, concerns about new consumers, population decline, and so on. These challenges raise the issue of "new rural paradigm" that not only deals with agriculture in terms of production but it also views rural areas as work and living spaces (Marsden, 2006; OECD, 2006; Van Huylenbroeck et al., 2007).

Multifunctionality should be included in agriculture as a prerequisite for the rural development paradigm, should be involved in the new structure of the agricultural sector that is related to the extensive requirements of the society, and should exploit rural resources towards the goals of the rural development (Marsden & Sonino, 2008). Although the multifunctionality of the agriculture is not a new subject, the important fact lies in the systemic and holistic view of this paradigm to agriculture and the simultaneous consideration of the productive and non-productive functions of agriculture and the enjoyment of farmers and villagers, especially smallholders, from the multiple benefits of the agriculture (Atkociuniene & Petruliene, 2014; Borzou & Alibeigi, 2012). In this paradigm, agriculture has both commodity and non-commodity functions. The commodity functions include, among all, the processed foods, rural life equipment, family labor for the local economy, agro-tourism, and leisure time activities, whilst the non-commodity functions can be listed as landscape quality, water, soil and air quality, cultural heritage, social solidarity, and food security and quality. In this respect, some agriculture functions have a dual nature and can be included in both commodity and non-commodity categories. Examples are the entrepreneurial capital of income, wealth, and employment (Hocevar & Juvancic, 2006). In summary, if the goal is the sustainable development of agriculture, then agriculture should not be confined to some traditional production-based functions. Overall, MFA has been presented as a new paradigm of agricultural and rural development within the context of sustainable development discourse. The purpose of the new topic is firstly the enjoyment of villagers and

farmers from all the benefits of the agricultural sector and secondly the confrontation with the consequences of trade liberalization in the agricultural sector. Multifunctionality of agriculture implies that farming has productive or commercial functions (food, fiber, and wood production) as well as non-productive or non-commercial functions (creation of employment and income, empowerment of social capital, conservation of biodiversity and genetic diversity, empowerment of rural industries, and beautiful landscapes) (Borzou & Alibeigi, 2012).

MFA is a new and necessary paradigm of rural development. According to OECD (2006), in addition to its main functions in food and fiber supply, agricultural activities can shape the landscape and have environmental benefits like land conservation, sustainable management of renewable natural resources, preservation of biodiversity, and contribution to the socioeconomic life of many rural areas. These extensive functions influence the socioeconomic and environmental status of the villages and, in other words, it affects sustainable rural development. They encompass a diverse set of outputs that, finally, lead to the improvement of life quality of villagers as the final goal of sustainable rural development.

Multifunctional agriculture and its adaptation to the macro policies of the country

The sustainable development of the country, rural areas, and agriculture, the improvement of farmers and villagers' livelihood and income, and the conservation of the environment are among the topics emphasized in the development plans of Iran, especially in the third and fourth development plans and the overall policies of the fifth development plan. It is impossible to reach the status assumed for Iran in the 20-Year Perspective Document without realizing these goals and policies. In this respect, the policies in Iran should follow a paradigm, both in mindset and practice that can meet these needs. In this regard, the Economic Cooperation and Development (OECD) presented a new paradigm for agriculture – called multifunctional agriculture – as a way to realize these goals (Arabiun et al., 2010). In fact, we can say that sustainable agriculture, derived from sustainable development discourse, is a goal sought by most countries in the world.

Agriculture is related with the activities of other sectors of the economy, including government through policymaking, nature and the environment and aommunity. Economic change at the national and international levels has a huge impact on the agricultural sector. Now, the expectation of the agricultural sector is not only secure food production, but also beyond that is natural resource development and in general production of public goods. The production of public goods by the agricultural sector, such as the amenity value of the lanscape, food security, the preservation of rural communities and rural lifestyle, is a subject widely accepted by various scholars. In fact, today, apart from the role of private goods production, public goods production is considered as another important part of the agricultural sector. Therefore, the Multifunctionality of the agricultural sector is one of the important and notable issues of economic analysts and policymakers. Since public goods produced by farmers are not supported, farmers need to be given a certain incentive to produce these types of goods. This type of payment is the same as paying directly to farmers to support their income. This type of payment is not related to production, but to the ecological level of production of each farmer. In fact, with this type of payment, it is possible to separate pricing policies from income policies. The history of implementing this type of policy is for some countries (2003), which was implemented under the umbrella of Comprehensive Agricultural Policy and the Development of Rural Investment in Canada.

Considering the multifunctionality of the agricultural sector is significant in two aspects:

1 - Economic reforms and analysis of domestic support policies

The basic economic policies of each country, considering the conditions and facilities, implies the growth and development of that country. Two fundamental protectionist policies, in contrast, are economic liberalization as two major strategies for adopting a policy of economic de-

velopment, which, over the years of economic life, economists still have a general consensus on choosing one of these policies as the preferred policy of development Economic have not been achieved. This is despite the fact that in recent decades, developed countries continue to develop their own strategy of gradual economic and trade liberalization with a protectionist strategy, and recommend this option to other countries. However, no significant changes have been made in this regard, especially in the agricultural sector. The agricultural sector has always enjoyed extensive protectionism due to its specific economic, social and political characteristics. Supportive policies in developing countries have put pressure on the environment and domestic producers, and in Iran, these policies are unthinkable, very limited and scattered.

2 - Globalization and accession to the World Trade Organization

Globalization is considered one of the most effective forces determining the future of the world. Globalization is a process in which incidents, decisions, and activities of a part of the world can have important outcomes for individuals and communities in very remote areas. The conditions for globalization, the removal of borders and trade restrictions, have led governments to seriously think about the strategies needed to achieve a sustainable competitive advantage. Among the issues raised by the World Trade Organization is the access to the market for agricultural products, export subsidies, and domestic support that has been established in order to achieve the goal of reducing government distortions, along with systematic support for agricultural and rural development in the countries. In this regard, many -High-cost countries used multifunctional aspects to justify continued support in the agricultural sector. This is despite the fact that many low-cost countries are not justifying support for the agricultural sector (Kiani-Feyzabad, 2011).

Therefore, considering the importance of multi-functional agriculture in analyzing the policies of the country, policy makers and analysts of the agricultural sector should consider the important role of producing public goods in predicting the effects of the economic policies applied in this sector.

CONCLUSION

MFA has been introduced to the world as a new paradigm of agricultural and rural development in recent years. The countries adopting this paradigm have enforced specific policies in the context of social, economic, and environmental functions to realize the goals of this paradigm. These policies include:

• developing trade and market policies through creating a balance among activity fields and opportunities for gaining added-value;

• increasing the availability of financial products and services, e.g. saving, crop insurance, and insurance for natural disasters as tools for asset supply and the mitigation of the risks of adopting new technologies;

• transiting to sustainable agricultural practices and innovative methods for crop production and marketing;

• empowering farmers to preserve the diversity of agriculture and food system with a close consideration of the cultural limitations;

• investing in developing information and communication technologies in order to increase the potential to access educational and mutual learning opportunities;

• investing in enriching technical training courses for farmers and villagers to facilitate their activities in development processes;

• supplying safe water and enhancing water productivity;

• reducing greenhouse gases emission;

• minimizing the harmful effects of climate change by integrating and increasing crop and animal diversity in a diverse and resistant system with the minimal risk;

• preserving and improving environmental and cultural services by supporting agro-ecological activities; and

• improving crop quality standards.

A look at the general policies of Iranian government in the agricultural sector, approved in nine articles in 2005, shows that the terms like conservation of basic natural production resources, the supply of food security, food safety, improve-

ment of water productivity, reduction of the risk of production losses, balancing farmers' profitability with other economic sectors, improvement of villagers and farmers' income and lifestyle, and diversification of economic and supplementary activities especially processing industries and modern services are in accordance with the concept and mindset of MFA; so, it is feasible to integrate this paradigm with the agricultural sector of Iran (Mehrjou & Kiani-Feyzabad, 2016).

The paper tried to present an important part of MFA to the researchers and those interested in development, especially sustainable development. Although there are a lot of scientific papers in this field, familiarity with this paradigm can encourage the researchers and scholars in Iran to explore MFA in Iran and find its actual examples.

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