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Agriculture and Rural Development: A Key Factor to Achieve Zero Hunger

Zahoor Ahmad Rather*, Dr. Pooja Sharma, Dr. Mushtaq Ahmad Wani and Dr. Naseer Ahmad Wani

Desh Bhaghat University, Amloh Road, Mandi Gobind Garh Fatehgarh Sahib Punjab India, School of Life Sciences (Environmental Science), India

Abstract

In 2015 the Food and Agricultural Organization (FAO) of United Nations, the International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP) prepared an agenda of Sustainable Development Goal of zero hunger and end the poverty by 2030. About 800 million peoples suffering from hunger and almost four-fifths of people living in rural areas are poor. According to FAO, IFAD and WFP, increase inagricultural and rural income is important for the achievement of first two Sustainable Development Goals. The qualitative research discusses that agricultural and rural development is necessary for the elimination of poverty and achieving zero hunger. In the present study it was found that agricultural development, a subset of economic development includes increases in the production level, productivity, standard of living and per capita income of farmers. Besides the sustained increase in the level of production and productivity of all rural dwellers, including farmers and increase in per capita income, standard of living, the rural development also leads to sustained physical, social, and economic improvement of rural communities. Present study also reveals that rural and agricultural development is one of the important steps in the process of the 2030 Agenda for sustainable development goals. Rural areas mostly depend on agricultural activities for livelihood and food products, so rural development enhance food quality, provide food security, infrastructures by increasing food production and enhance the food quality to achieve all of the Millennium Development goals. Therefore, for achieving Sustainable Developments Goals (SDGs) it is important to focus on agricultural and rural development.

Keywords: Food and Agricultural Organization (FAO) of United Nations; International Fund for Agricultural Development (IFAD) and the World Food Programme (WFP), Poverty, Hunger Millennium Development Goals, Rural and Agricultural Development

Introduction

Globally a large number of peoples including men, women and children do not have access to proper food and suffers from hunger, 690 million people in the world sleeps with empty stomach and acute food security affected 135 million people in 55 countries. Among three one suffers from mal nutrition (WFP 2020). According to the World Food Programme (WFP) the acute hunger is accelerated by man-made conflicts, climatic changes and economic downturns. COVID-19 now doubles the rate of acute hunger by putting an additional130 million peoples at risk of suffering acute hunger by the end of 2020. So in order to avoid this and achieve zero hunger by 2030 agricultural and rural development is the basic requirement [1].

Agriculture is the production of crops, poultry and livestock. It includes planting, cultivating, watering, feeding, breeding and upkeep them. Or simply it is the business and science that is behind the cultivation and development of soil and land for farming. Improvement in the investments in rural areas in agricultural infrastructure and increase services along with adopting measures aimed at increasing the households' purchasing power, plays an important role in improving both food availability and food access so, the agricultural sector plays a strategic role in improving food availability [2].

Agriculture and Zero Hunger

Agricultural sector plays a strategic role in the process of economic development of the country. It is the largest sector in many developing countries. Most of the developed countries depend much upon the development of agriculture for the economic development. It was found that even if the country is developed industrially, economic progress is not possible without the progress in agriculture. It is seen that increased agricultural output and productivity tends to contribute substantially an overall economic development of overpopulated country. Rising agricultural productivity and urban industrial development clearly have much contribute to each other. The combination of these two sectors in suitable proportion contributes to overall economic development [3].

Increasing population becomes a great challenge for agricultural scientists to provide the growing demands of food by increasing food production. The population growth continuously increases in many developing countries the increasing production should be sustainable, equally important, minimizing negative environmental effects and the increasing demands can also be achieved by increasing income of agricultural holds to help improve the livelihoods of those employed in agricultural production. There are some issues like

1. The increasing demand of food for the growing population, there is also demand for nutritious food that rich in vitamins, proteins, and some essential minerals (iron and zinc) etc.

2. There will be increase in greenhouse gases CO_2, NO, and Methane that affects the atmosphere and causes climatic change which has a great impact on population by causing droughts, floods, decrease in water table etc.

3. The area of land reduces under agriculture because of urbanization and the use of agricultural land for other purposes also effects the food production. In some parts of the world the Expansion

***Corresponding author:** Zahoor Ahmad Rather, Desh Bhaghat University, Amloh Road, Mandi Gobind Garh Fatehgarh Sahib Punjab India, School of Life Sciences (Environmental Science), India, Tel: +91 7780919683, E-mail: zahoorenvsc@gmail.com

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of agricultural land is possible, but the quality of this land may be poor than the land which is already in use for agriculture.

All the challenges can be minimized by the sustainable agricultural development and rural development as discussed in this paper. Besides increase in the world's food production in order reduce the hunger, insecurity of food and under nutrition remains a serious problem in different developing countries of the world. Political system and socioeconomic conditions also plays a good role in achieving food security. In the developing countries of the world the different factors like population growth, variability in temperature, rainfall, floods, droughts etc. possess a big threat to food security. Reduced the productivity crops and increasing food demand, higher food prices along with income inequalities may negatively affects food access and availability for poor households. Besides this there are various factors like poverty, population growth, climatic change, wars, conflicts and natural disasters are the great factors that causes hunger and malnutrition and. In the developing countries around 13% of the population are suffering from undernourishment as reported by Food and Agriculture Organization of the United Nations (FAO) while it says that it becomes a serious problem in future to feed the growing population of the world [4].

In 2018 it was stated that the global population exceeded by 7.6 billion people (FAO 2020) and it is estimated that it reaches upto 9.2 billion by 2050. With a projected increased food demand of 59%-102% and it is expected to reach 8.6 billion in 2030, with roughly 83 million people being added to the world's population every year. So it is necessary that to increase the food production by about 60%-70% provide food for the global population in 2050. Accordingly, there should be double improvement in the food production by 2050 in order to provide the increasing demand [5].

In order to achieve the food security and the availability of food agricultural plays an important role to achieve the good amount of food production it necessary to increase the productivity of agriculture and increase the area of agricultural land use which is the possible way to finish hunger. In addition to, there are large no. of factors that enhance the development and reduces the hunger like:

1. Reducing poverty to rural development.

2. Reducing the agricultural impacts of agricultural production.

3. Improve the access to international markets.

4. Providing a conducive environment for agricultural production and economic returns, enhance the productivity and income of farmers.

5. Early weather information, providing information about government subsidies and awareness programs through different media sources.

6. State of the art infrastructure availability to rural population.

7. Adequate shelter, education, employment opportunities, health, sanitation and healthy diet.

There should be the technology transfer from developed countries to developing countries in order to remove the gapes of technologies, barriers of knowledge and to reduce the growing demands of the food by increasing population in developing countries. During my research in 2015, I found that Aquatic macrophytes are known as photosynthetic organisms of freshwater habitats and are basic part of fresh water ecosystem. As a result of the higher accumulation of lipids, protein and carbohydrates in fresh water macrophytes (*Typha angustata, Phragmites australis, Nelumbo nucifera, Potamogeton natans, Potamogeton lucens, Ceratophyllum demersum*), these could be involved in the food production process, directly as human food, livestock fodder, fertilizer (mulch and manure, ash, green manure, compost, biogas slurry) and as food for aquatic herbivores, such as fish, turtles, rodents and manatees. The study of biochemical analysis of fresh water macrophytes has showed the ability of aquatic macrophytes to be used as a supplementary source of food, fodder. As with every increasing day there is increase in human population, pollution of water bodies, which results in decreasing output of food resources from land due to urbanization and soil pollution so these macrophytes can serve as an alternate source of food. The use of macrophytes as food for humans, animals and aquaculture purposes is based on their high nutritive value arising from the richness of biochemical constituents such as proteins, carbohydrates and lipids [6].

According to Food and Agriculture Organization, Indian agriculture provides 58% of livelihood to Indians and contributes 17% to 18% GDP. India is the largest grower and producer of bananas, mango, lemon, papaya and vegetables. It also produces spices like ginger, pepper and chilly. In the production of milk India ranked first, second in dry fruit, third in fishes, forth in eggs and fifth in poultry productions worldwide. Indian agricultural production increased 11% on annual growth in the past 14 years and contributes 60% of overall India's agricultural GDP and is one of the largest producers of wheat. In south Asia, still 15% of population is considered under nourished and 40% of employment is attributed to agricultural sector. Agriculture, forestry and fishing sectors contribute only 15.5% to GDP value added [7].

Rural Development and Zero Hunger

Agriculture plays a vital role in the rural development program dimensions. The basics role of agriculture is the development in the rural areas. Development enhances the quality of life of people in rural areas. Agriculture is the primary source that increases the livelihood of rural peoples during last three decades of the twentieth century and also supports the households directly or indirectly, development, growth, and the poverty reduction of small and poor farmers. Agriculture plays an important role in decreasing the poverty through contributing to economic growth and the "quality" of that growth regarding its benefits to the poor as a critical basis of livelihood strategies for hundreds of millions of the world's poorest people. Agriculture becomes a good source of staple foods for the poor and encourages the sustainable management of natural resources (World Bank 2008). The Global Report on Food Crises 2018 (Food Security Information Network 2018) shows that about 124 million people across 51 countries and territories faced crisis levels of acute food insecurity in 2017, thus requiring urgent humanitarian action. Rural development is key factor to improved management of natural resources and the environment. The agricultural sector is the back bone of an economy therefore the role of agriculture is important for the development of an economy of poor's in the rural areas the role of agriculture for the economic development may be stated as:

- Contribution to the national income
- Necessary for food stuffs
- Pre requisite for the raw material
- Creation of infrastructure
- Relief from shortage of capital

Agricultural development in worldwide reducing poverty and improving health and nutrition so improvement in agricultural production directly improves the rural development and reduces the poverty, increases livelihood and natural resources, development of infrastructure etc. Economic growth that focuses on agriculture and that increases the incomes of low-income family farmers and landless laborers is particularly useful in reducing poverty. Agricultural growth affects rural poverty reduction not only by increasing farm incomes but also by stimulating the nonfarm economic sector in rural areas and small towns [8].

Steps to Achieve Zero Hunger

According to (FAO 2006) Rural and agricultural development is necessary in order to reduction of poverty and hunger. A large number of studies indicates that reducing hunger and poverty by economic growth depends on the rural economy which is not done by urban and industrial development or simply we can say that economic growth in the agricultural and rural sector has a much greater impact in reducing poverty and hunger than do urban and industrial growth [9].

1. In agricultural and rural development it is necessary to increase agricultural production which provides a good supply of food to increasing population. In developing countries where there in not adequate food for poor agricultural provides a good supply. It is important to educate the rural peoples about the new policies of government, subsidies, how to use raw materials, naturals resources etc. in sustainable ways.

2. Agricultural sector plays a strategic role in the process of economic growth which generates a large no of employments in rural areas, although small semi-urban centres play a major role in the economic growth of rural areas. Peoples in rural areas where tourism is too low heavily depend on agricultural jobs and other agricultural sectors.

3. Agricultural in rural areas plays a great role in sustainable development by planting more trees, maintain agricultural activities, Use of renewable resources which reduces the environmental risks etc.

4. Zero hunger can be achieved by reducing the wastage of food because the food that is produces will reach to the hungry peoples who need it. I order to increase the nutritional values of food practice the agriculture sustainably and grow local varieties and promote the healthy development of children (WFP 2017).

5. Prefer the healthy diet with low environmental impacts and benefit for present and future generation. Healthy diet ensures the food security, healthy life, economically fair and affordable and protects the biodiversity and ecosystem (FAO 2010).

Conclusion

Considering the fact that increase in population is a challenging task for scientists to meet the demands of food for growing population. With increase in population growth, unsustainable use of natural resources and urbanization, there is continuous decrease in land under the use of agriculture and food production which results in increasing the shortage of food security worldwide. Rural areas of developing countries suffer from the food security, per capita income, livelihood, employment, environmental conditions, economic conditions, proper education about agriculture and lack of government subsidies. Agriculture and rural development is a key factor to meet the demand of food for present and future generation by ensuring the proper land use management, awareness programmes, reduction in wastage of food, etc. The good agricultural production is only possible if there is use of efficient and advanced technologies. Besides this, there are some microphytes as discussed above which accumulates the higher content of lipids, proteins, carbohydrates, etc. These could be involved in food production directly as human food, livestock fodder, fertilizer, green manure, bio gas slurry, compost, manure and mulch, etc. and can be used as supplementary resource of food, fodder. As with every increasing day there is increase in human population, pollution of water bodies which results in decreasing output of food resources of land due to pollution and urbanisation so these microphytes can serve as a alternative sources of food for humans and animals. Zero hunger can also be achieved by reducing wastage of food, having healthy diet and investing more in agriculture [10].

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None

Conflict of Interest

None

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