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Linking SDGs to Cooperatives through Organic Farming

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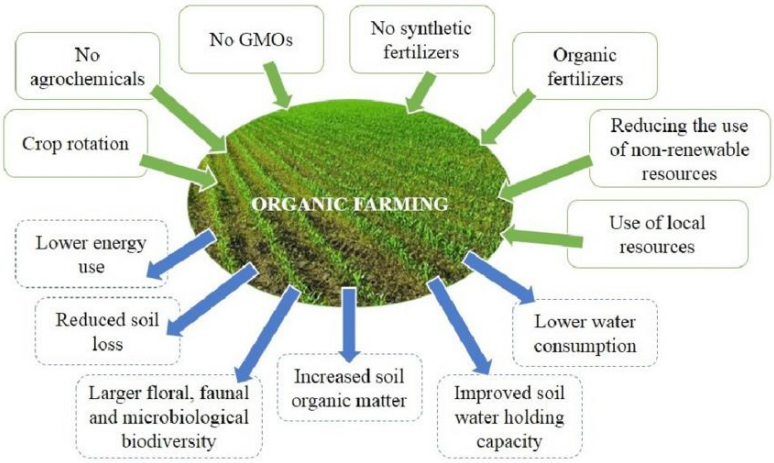
Abstract

Organic Farming has been perceived has an important solution to preserve the health of the ecosystem amidst the increasing demand for the food grains on account of increase in the population across the human habitats. The increasing demand has compelled the different stakeholders of the foodgrains production to make extensive use of fertilisers and pesticides. This has no doubt increased the production, but at the same time, it was at the cost of damage to the environment and its ecosystem. Although agricultural production has increased thanks to our existing food system over the years, it has also had a negative impact on the environment and society. We face several difficulties today, including soil degradation, biodiversity loss, water pollution, climate change, and ocean dead zones. The on-going improper and excessive use of pesticides contaminates nearby soil and water supplies, leading to a significant loss of biodiversity, wiping out populations of helpful insects that serve as pests' natural enemies, and lowering the nutritional content of food. The global community joined together in 2015 to announce the 2030 Agenda for Sustainable Development, an action plan based on 17 Sustainable Development Goals (SDGs), in an effort to address these and other pressing concerns. These SDGs are increasingly dictating the global sustainability agenda. These objectives are greatly affected directly, either positively or negatively, by food production and consumption. Majority of the countries have ratified the SDGs in their macro-economic policies so that it can be achieved by 2030. India was also a signatory to it. It is obvious that these heroes might be considered as contributing to the answer because organic farmers use as little hazardous agro-chemicals as possible and work as closely as they can with nature.
Switching to more sustainable agricultural methods like organic is crucial if the international community is serious about attaining the SDGs by 2030.As such India also had taken various pro-active measures to safeguard the ecosystem in terms of SDGs. However, such measures have to be initiated at the grassroots levels, where cooperatives can play a significant role in facilitating the SDGs along with the process of inclusive development.

Keywords: Sustainable, Organic farming, cooperatives, Marketing and Ecosystem

Introduction

Organic Farming is a holistic system that promotes and enhances the agro ecosystem health. It uses biological fertilisers and pest control acquired from animal or plant waste. It is nascent in India. Sikkim is the first organic state of India. The total production of organic products was around 3430735.65 MT like oil seeds, fibre and sugar cane, Cereals & Millets, Cotton, Pulses, Aromatic & Medicinal Plants in 2022. Today, the increase in human numbers has forced the different stakeholders to increase the foodgrains production by the use of measures which has affected and is affecting the health of millions of people across the world. Some people are putting people's life at risk with the usage of harmful toxic pesticides and chemical fertilizers to fulfil the need for food production. Organic Farming is one of the ways to protect ourselves and nature from deadly chemicals. Now among the farmers the awareness about organic agriculture in India is increasing. The practise of farming using organic methods is not new. The goal of organic farming in India is to cultivate crops that preserve the life of the land. Utilising organic waste, leftover crops, agricultural and animal waste, marine waste, and other organic resources in excellent health. It is a new system of agriculture that repairs, maintains, and improves the ecological balance. Organic farming uses organic inputs, green manures, cow dung, etc. There are four principles of organic farming are as follow (*https://www.iasgyan.in/daily-current-affairs/organic-farming*):-



- ✓ Principles of Health – The health of the ecosystem, people, and communities.
- ✓ The Principles of Ecology – The right balance between ecosystem and environment or nature.
- ✓ Principles of Fairness – Good human relationships and quality of life.
- ✓ Principles of Care – The considerations about the environment and environment of the future.

In one of the study conducted by Dutch organic specialist Eosta, it was found that Organic farming can achieve 8 of 17 SDGs (Zero *Hunger, good health and well-being, Clean water and sanitation, decent work and economic growth, responsible production and Consumption, Climate action, Life below water and life on Land*); the most important being tackling of Climate change, protection of bio-diversity, reducing hunger and ensuring clean water for all. If the global community is serious about achieving the SDG's by 2030 it is essential that we switch to more sustainable farming practices like organic farming.

Cooperatives and Achievement of Select SDGs through Organic farming

Theoretical Perspective

Earnings

Cooperative societies assist farmers in expanding their operations by raising the price at which they sell their produce and by assisting them in implementing new agricultural technology by acquiring agricultural production inputs on their behalf in a coordinated fashion. As a result, farmers earn more money and may expand their enterprises. Large-scale operations may also reduce fertiliser use, help the environment significantly, and promote environmental sustainability. Therefore, large-scale farms may increase yields while using less fertiliser. Contrary to smallholder farmers, large-scale farmers grow crops to increase their dependency on the land and pursue bigger economic rewards. As a result, they make investments in environmentally friendly agriculture that will benefit the land in the long run. The small and marginal farmers (85%) can benefit a lot through cooperatives as their landholdings are smaller in size and are fragmented.

Knowledge Acquisition

Farmers can also get an exposure to learning and adapting different technologies and professional managerial skills through cooperatives. This lowers the cost of technological education, encourages specialisation and teamwork in production, lowers the frequency of common pesticide applications, and lowers agricultural pollution. Small-scale farmers find it challenging to implement pricey new technology, which makes them less reluctant to embrace green production methods on their own. Cooperatives offer assistance with the purchase and use of green industrial technology as well as technical advice.

Widening of Marketing Base

In terms of marketing also cooperatives can be a great channel for the farmers to market their organic produce. Tiered buying structures are used by cooperative organisations to encourage its members to produce green agricultural goods. Farmers are encouraged to use more ecologically friendly producing techniques by this system of rewards and penalties. In order to fulfil the need for sustainable products, cooperatives are encouraged to improve the quality of the agricultural products produced by their members. The cooperatives supervise its members' fertiliser application methods and encourages them to follow sustainable farming practises in order to meet market demand, uphold brand image, and guarantee product quality.

As per one of the UN report, the on-going improper and excessive use of pesticides contaminates nearby soil and water supplies, leading to a significant loss of biodiversity, wiping out populations of helpful insects that serve as pests' natural enemies, and lowering the nutritional content of food. Both the excessive use of chemical compounds and the misuse of chemical fertilisers, particularly nitrogen fertilisers, have had a negative impact on the ecosystem. In particular, the eutrophication of aquatic organisms brought on by the

misuse of nitrogen fertilisers endangers the quality of the air, water, soil, and biodiversity. As a result, the conflict between protecting ecosystems and ensuring food security is becoming more prominent in academic studies. Despite a huge increase in China's grain production capability, excessive or unneeded fertiliser usage is a major cause for worry. In China, agricultural pollution overtook industrial pollution in 2015 as the main cause of water pollution, raising serious concerns for food security. In addition, China uses 6-7 times more chemical fertilisers per hectare than the United States, the European Union, or Japan, and exceeds the international environmental safety limit. In addition to depriving farmers of financial benefits and reducing the safety of agricultural goods, this rise in environmental pollution puts a significant pressure on the ecosystem. It is here that cooperatives through organic farming can play a significant role in eliminating or minimising the health distractors of the ecosystem. Since organic farmers build healthy soils that take up C02 and do not use agrochemicals that produce CO2, organic agriculture can very much be seen as part of the solution for the climate debate. Cooperatives are operated on the basis of the values of self-help, self-responsibility, democracy, equality, equity, and solidarity. The seven principles of cooperatives infact act as an important framework to adopt a local and community based approach in achieving the goals of equitable and sustainable development. There are 1,00,428 Primary Agricultural Credit Societies (PACS)/ Large Area Multi-Purpose Societies (LAMPS)/Farmers Services Societies (FSS) and 619 State Cooperative Agriculture and Rural Development Banks (SCARDB) and Primary Cooperative Agriculture and Rural development Banks (PCARDBs) in the agriculture sector (PIB, March 2023). With this strong base of agro cooperatives which have been expanding not only in numbers but also in terms of its revenue and diversifying nature, organic farming can be a source of doubling their income and at the same time contributing to the health of the ecosystem. About 2.78 million hectares of land in India are used for organic farming. Oilseeds, tea, coffee, dried fruits, millets, cereals, spices, and others are some of the major organic goods cultivated in India. India produces a lot of these goods and exports them. The three states that produce the most of India's organic goods are Sikkim, Uttarakhand, and Tripura. Madhya Pradesh, Rajasthan, and Maharashtra are other states that practise organic farming. The global organic market is currently worth approximately ten lakh crores. While, the India organic food market stood at a value of 1238 million dollar in 2022 and is expected to grow at about 22% in the forecast period of 2022 and 2028 to reach a value of about 4082 million dollar by 2028. According to an economic analysis conducted in 2023–2024, around 59.1 lakh hector acres were used for organic farming in 2021–2022. 10 million farmers would urgently need financial aid from the government over the next three years to buy supplies for producing organic crops. Although still in its infancy, India exports organic food items valued around 7,000 crores, with over 16 lakh farmers working in this field. According to India Stat (India Stat, 2023), the percentage of net area in India that is used for organic farming grew from 2.38 percent in FY 2021 to 2.45 percent in FY 2022. Therefore, the percentage of agricultural area that will benefit from goal growth from natural and organic farming will not exceed 3%. However, Cooperatives can play an important role in enabling farmers to take up to organic farming by replacing chemical based practices of agriculture. The Northeast Organic Farming Association is a non-profit organization of over 5,000 farmers, gardeners, landscape professionals and consumers working to promote healthy food, organic farming practices and a cleaner environment. Its basic purpose is to advocate for and educate on organic and sustainable agriculture, family-scale farming and

homesteading in rural, suburban and urban areas, agricultural justice and other related policy issues. It is dedicated to a vision of interconnected healthy communities living in ecological balance deeply rooted in a sense of place, grounded in organic care of the land. Sikkim is another classic example where organic farming is at its roots and it has sustained its brand as an organic state till date. It is also referred as a biodiversity "hotspot," the only state of India with five climatic zones, occupying merely 0.2% of the country's total landmass but also home to 26% of the country's flowering plants. Today, Sikkim continues to remain India's only fully Organic State, a feat which can be ascribed as much to its small size which presents fewer logistical challenges, as to the State Government's continuing commitment to the Organic Mission. The conferment of Padma Shri Award on January, 2023 to 98 year old Tula Ram Upreti, a farmer from Assam-Lingzey village in Pakyong district of Sikkim for his dedicated efforts in using organic methods for 80 years over his small 12 hectares of land where he grew rice, wheat, buckwheat and seasonal vegetables is an classic example of the actual practice of organic farming in Sikkim.

However it's worth noting that in spite of having a Brand of being an organic State, the farmers have not yet been able to reap the economies of scale as the promotional measures announced have remained on papers. This is not only the situation of Sikkim, but also other states like Maharashtra, Madhya Pradesh etc. there is a need for an integrated approach, so that organic farming---a tool to achieve some of the SDG goals can go a long way in creating a robust healthy ecosystem in a sustainable manner. Though some cooperatives have made their marks, but they are scattered and as such, there is a need to bring them together. This will not only help the organic growers, but will also contribute towards a positive climate change. The Ministry of Cooperation is undertaking a variety of additional steps to speed up organic farming in the nation, which will increase the value of the farmers' organic output and make it easier for Indian organic goods to enter the global market. As per the available records, Utilising organic manure and other organic inputs, a total area of 29.41 lakh ha, 38.19 lakh ha, and 59.12 lakh ha have been converted to organic farming in the previous three years (2019-20, 2020-21, and 2021-22). These areas make up 2.10%, 2.72%, and 4.22% of the 140 million hectares of arable land, respectively (PIB, 19th July, 2022). In addition, Integrated Nutrient Management (INM), which encourages the balanced use of fertilisers such as chemical, organic, and bio-fertilizers, is recommended for all cultivable land in the nation. Through the specialised programmes Paramparagat Krishi Vikas Yojana (PKVY) and Mission Organic Value Chain Development in North East Region (MOVCDNER), the government has been encouraging organic farming. Organic inputs including seeds, bio fertilisers, bio-pesticides, organic manure, compost or vermi-compost, botanical extracts, etc. are subsidised financially for farmers. In actuality, there are around 34 lakh organic farmers worldwide, covering 749 lakh hectares (1.6% of all agricultural land), with Australia having the highest land coverage at 357 lakh hectares. With 27 lakh hectares of organic land, India is ranked fourth, with 7.6 lakh hectares in Madhya Pradesh, 3.5 lakh in Rajasthan, and 2.8 lakh in Maharashtra. Sikkim has been a fully organic state since 2016. Presently, certified Indian organic product retail sales market is around Rs 27,000 crore, including export worth Rs 7,000 crore.

To enhance the area under organic cultivation utilising organic manure or bio-fertilizers, big area certification and organic farming on each side of the Ganga River have also been adopted under PKVY. Further, with the assistance of the pertinent ministries, the Union Cabinet made the historic decision to establish and promote a

multi-state cooperative society at the national level for organic goods. It will be promoted by Gujarat Cooperative Milk Marketing federation, NAFED, National consumer's federation of India (NCCF), NDDB, and NCDC. To realise the aim of "Sahakar-se-Samriddhi," every effort is being made to take advantage of cooperatives' capabilities and turn them into prosperous and thriving business businesses. To take advantage of their comparative advantage, the cooperatives are trained to think globally and act locally. By offering certified and genuine organic products, the cooperative organisation will oversee a variety of operations relating to the organic industry. The society is expected to assist in maximising the demand for and consumption of organic goods in both domestic and international markets. By permitting testing and certification at a reasonable price, it will also facilitate cooperatives and eventually its farmer members in benefiting from the high price of organic products through aggregation, branding, and mass marketing. Additionally, financial assistance for organic farmers will be arranged through member cooperatives, such as Primary Agricultural Credit Societies/Farmers Producer Organisations (FPOs), as well as institutional support for organic product marketing, branding, labelling, packaging, storage, and testing. Through its member cooperatives, the organisation will oversee the full supply chain of organic goods made by cooperatives and affiliated organisations.

The ground-breaking initiative will help cooperatives, and ultimately their member farmers, benefit from the high price of organic products through aggregation, branding, and marketing on a large scale by facilitating testing and certification at a reasonable cost. It also aims to improve farmers' livelihoods and assist India in becoming a $5 trillion economy as envisioned by Prime Minister Narendra Modi. By adopting several business models and using the brand and marketing network of AMUL, it would manage a variety of cooperative organic sector operations from aggregation to marketing while concurrently developing the same on its own. Additionally, it will make it easier to provide technical advice, training, and capacity building for organic growers, among other things.

Conclusion

It may be stated that organic farming in India do exists, but lacks a uniform approach in terms of required logistics in the hinterlands and the rural India. The lack of infrastructure very often has adversely affected the marketing of the organic products and infact has deprived many farmers of their actual returns. The cooperatives being 'vocal to Local' and Local to vocal can play an important role in bridging the gap between the farmers and the market delivery so that the farmers get the actual market value or at least close to the market value for their organic produce. The initiatives of Ministry of cooperation and the Ministry of Farmers welfare will also play a significant role in integrating cooperatives with organic farming so that not only the farmer's benefits, but the nation and the world will also benefit thorough Sahakaar se Samriddi in the preservation of the health of the ecosystem through cooperatives.

Abbreviations

SDGs – Sustainable development Goals

UN – United Nations

Co2 – Carbon Dioxide

FY – Financial year

INM - Integrated Nutrient Management

PIB – Press Information Bureau

PKVY - Paramparagat Krishi Vikas Yojana

MOVCDNER - Mission Organic Value Chain Development in North East Region

GCMMD - Gujarat Cooperative Milk Marketing federation

NAFED - National Agricultural Cooperative Marketing Federation of India Ltd

NCCF - National consumer's federation of India

NDDB – National Dairy development Board

NCDC – National cooperative development cooperation.

FPOs – Farmer Producer Organisations

AMUL – Anand Milk Union Ltd

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