Our Heritage

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Green Entrepreneurship In Organic Farming

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ABSTRACT

Green Entrepreneurship, an activity of providing **green goods and services** has become a major evolving dynamic business in last few decades. Green Entrepreneurship however became familiar with the green revolution, farming using modern and sustainable techniques for large scale production. As generations passes bythese techniques increased production by various unethical ways which causes the risk of contagious disease and deterioration of health to individuals and nature. In this paper we deal with the possibility and responsibility of providing goods and services for profit without harming the **nature** through **sustainable business commitment** and corporate strategy. These business practices thereby increasing the organic farming yields and supply it through Producer to Consumer relationship. This study also reveals the growth and limitations of Green Entrepreneurship in Organic farming, Steps taken by the Government for reliable Organic farming, Opportunities in the Marketplace for evolving business ideas and the steps to overcome the limitations in this business.

KEY WORDS: Green Entrepreneurship, green goods and services, nature, sustainable business commitment.

Introduction

Green Entrepreneurship is a type of business where the good and service provider addresses the problems in the environment and solving it with sustainable methods. The extreme globalization and industrialization resulted in the exploitation of the Earth's natural resources. But in the last three decades the world realizingthe importance of green which paved way for various Global Green businesses. The responsibility of the good and service provider is to make sure that the global citizens eradicate the use of non degradable plastics and accepting the Bio degradable plastics; stop using unhealthy artificial fertilizers for larger production and converting to latest Organic farming methods; handling of wastes and producing nature friendly automobiles. According to Gustav Berle," **Green Entrepreneurship is taking responsibility to create the world we dream of".** Our paper deals with the Green Entrepreneurshipin Organic farming.

Organic farming system in India is being followed from ancient time. It is a method of farming which aimed at cultivating the land and harvesting crops in such a way that the soil is in good health by use of organic wastes (crop, animal and farm wastes, aquatic wastes) and other biological materials along with beneficial microbes (biofertilizers) to release nutrients to crops for increased sustainable production in an eco friendly pollution free environment.

Organic farming is a system which avoids or largely excludes the use of synthetic inputs (such as fertilizers, pesticides, hormones, feed additives etc.) and to the maximum extent feasible rely upon crop rotations, crop residues, animal manures, off-farm organic waste, mineral grade rock additives and biological system of nutrient mobilization and plant protection.

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Need of organic farming

With the increase in population our compulsion would be not only to stabilize agricultural production but to increase it further in sustainable manner. The scientists have realized that the 'Green Revolution' with high input use has reached a plateau and is now sustained with diminishing return of falling dividends. Thus, a natural balance needs to be maintained at all cost for existence of life and property. The obvious choice for that would be more relevant in the present era, when these agrochemicals which are produced from fossil fuel and are not renewable and are diminishing in availability. It may also cost heavily on our foreign exchange in future.

The key characteristic of organic farming includes:

1. Organic farming prohibits the use of chemical synthetic products, including pesticides,herbicides, fungicides and other chemical pesticides during the cultivation process.
2. Organic farming prohibits the use of materials involving any genetic modification.
3. Farming uses organic fertilizer to maintain the balance of soil nutrient structure while keeping the water source free from pollution.
4. Organic farming does not use chemical fertilizers or pesticides to promote the growth of crops.
5. Organic farming uses insects that are natural and do not interfere with the ecosystem.

Research objectives

- To incorporate efficient farming Organic farming techniques.
- To study the various market opportunities for Green Entrepreneurs.
- To suggest steps for overcoming contradictions in Organic farming.
- To develop a business model in bridging producers and consumers.

Methodology

This study explores the concept of green entrepreneurship using all the available secondary literature sources such as research papers, innovator profiles on NIC website and innovator's interviews on magazines and newspapers.

This study further goes on to explore the motivating factors for organic farming businesses and challenges faced by green entrepreneurs in the same and also deals with the solution to overcome it. Hence, offering suggestion to foster an enabling environment for green entrepreneurship in the country.

Efficient Organic Farming Techniques

Crop rotation:

Crop rotation refers to the cultivation of different crops on a particular piece of land over time. The succession of crops to be grown is carefully designed to ensure soil nutrients are sustained, pest populations are controlled, weeds are suppressed and soil health is built.

Multiple crop practices:

Farming techniques likeBaranaja (meaning twelve grains) helps for sustainable living. Baranaja is a traditional mixed farming system widespread across the rain fed agricultural regions. In the baranaja system, there is intercropping of twelve crops. Cereals, lentils, vegetables, creepers and root vegetables are grown in this companion planting system. All crops are planted together on the same terraced fields in the monsoon season.

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Supporting predators and parasites of crop pests:

Beneficial insects provide valuable pest control and pollination for farms and gardens, but they need a little help from you as well. Many of these insects benefit from having access to flowering plants to provide critical nectar and pollen food through the season.

Non-synthetic lures, traps, and repellents:

Organic pest management with PHEROMONES is the result of many years applied scientific investigation. Pheromones are volatile chemical substances released into the air by insects that are deliberately captured by other insects of the same species and can trigger a behaviour or response in the recipient organisms.

Mulching:

Mulching can reduce weed competition against vegetable crops, and save fuel and labour costs for weed control. Covering the soil surface with suitable mulch can: Reduce weed seed germination; Shade and physically hinder emerging weeds: Enhance crop growth and competitiveness by conserving soil moisture and sometimes by modifying soil temperature. Synthetic mulches like black polyethylene film (the most widely used plastic mulch) or landscape fabric are laid on a prepared seedbed just before transplanting or seeding a vegetable crop through holes or slits cut into the mulch.

Livestock grazing:

The waste collected from the live stock is used efficiently for manuring and weeding without harming the nature in sustainable way.

Hand and mechanical weeding

Nitrogen derived from cover crops through biological fixation can be used as a best fertilizer and weeds.

Profitable Business opportunities in Marketplace

1.Vermicomposting Organic Fertilizer Production

It requires a very low investment and hence can be considered profitable for the startup Agricultural business. You can simply start this business by the proper know-how of the production process.

2. Fertilizer Distribution Business

One can start this business with a moderate capital investment. It is mostly controlled by the Government.

3. Organic Farm Green House

The increased demand for organically grown farm products has led to the growth of this agricultural business. As there are many health risks in the foods grown with chemicals and fertilizers, people are growing organic food.

4. Hydroponic Retail Store

It is a new plantation technology which requires soil free way of plantation for both commercial and home use. E-retail platform for plant nutrition products gets right products at right price.

5. Botanical Pesticide Production

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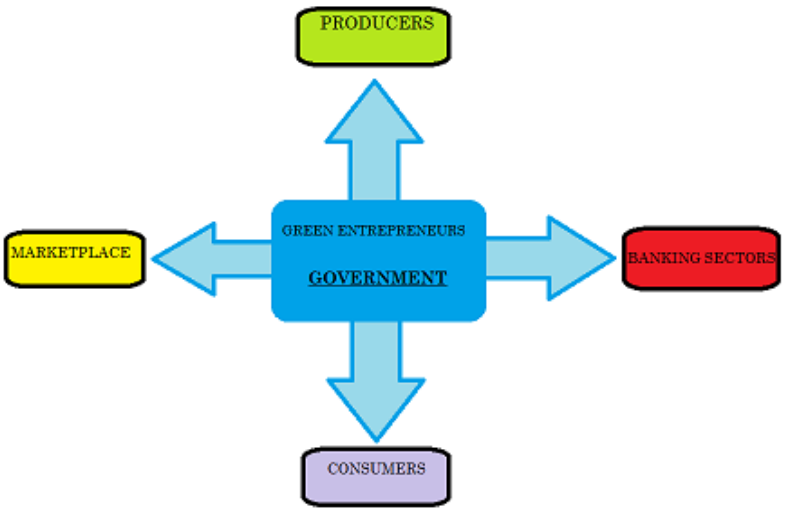
It is very essential and mandatory for organic farming. As the demand of this product is high, it is considered as one of the most profitable agriculture business ideas.

Online business model for Green Entrepreneurs



ONLINE BUSINESS MODEL

The diagram reveals the role of Green entrepreneurs as connecting Producers, where they yield green products; Banking sectors, providing aid to the producers; Consumers, the users; and Marketplace, disclosing the median price for the consumers and producers everything through online network. In this diagram also the Government plays a major role in providing guidance and approaching for better sustainable living thereby stabilizing the development of economy.

In the 2012 Census, direct-to-consumer sales equalled $1.3 billion, up from $812 million in 2002, an increase of 60 percent. The number of farms that utilize direct-to-consumer sales was 144,530 in 2012 in comparison to 116,733 in 2002.Direct-to-consumer sales include farmers' markets, community supported agriculture (CSA), on-farm stores, and roadside farm stands. Some organic farms also sell products direct to retailer, direct to restaurant and direct to institution.According to the 2008 Organic Production Survey, approximately 7% of organic farm sales were direct-to-consumers, 10% went direct to retailers, and approximately 83% went into wholesale markets. In comparison, only 0.4% of the value of convention agricultural commodities were direct-to-consumers.

While not all products sold at farmer’s markets are certified organic, this direct-to-consumer avenue has become increasingly popular in local food distribution and has grown substantially since 1994. In 2014, there were 8,284 farmer’s markets in comparison to 3,706 in 2004 and 1,755 in 1994, most of which are found in populated areas.

Limitations and Steps to overcome

1. Producer-level Challenges

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PRODUCER - In this case, Small Group of Farmers or Individual Farmer or Group of Minimum 25 & Maximum 500.These producers faces challenges like expensive fertilizers and farmland costs for production. The online business model helps these farmers to join clusters for efficient farming and support them by latest Government financial aids.

2. Population factor

Organic agriculture can contribute to ecological sustainability, especially in poorer countries. The application of organic principles enables employment of local resources (e.g., local seed varieties, manure, etc.) and therefore cost-effectiveness. Local and international markets for organic products show tremendous growth prospects and offer creative producers and exporters excellent opportunities to improve their income and living conditions and also this practice helps to achieve the Millennium Development Goal (MDG), particularly in poverty reduction efforts in the face of climate change, is shown by its contribution to both income and non-income aspects of the MDGs."organic methods could produce enough food on a global per capita basis to sustain the current human population, and potentially an even larger population, without increasing the agricultural land base."

2. Certification Process

The cost involves for getting organic certification in a farm is very high. Still, it is basic, expensive & lengthy procedurefor a small group of farmers or individual farmers. So initially prices can be lowered for verification certificates and as the production yields rapidly, then the market price can be applied by the business model.

3.Awareness about organic farming to farmers

Asian Development Bank Institute (ADBI) and published as a book compilation by ADB in Manila document these contributions to both income and non-income aspects of the MDGs. These include poverty alleviation by way of higher incomes, improved farmers' health owing to less chemical exposure, integration of sustainable principles into rural development policies, improvement of access to safe water and sanitation, and expansion of global partnership for development as small farmers are integrated in value chains.

3. No standardisation for the certification of different commodities

Fruits have different standard & vegetables have different standards. When farmers will produce the two different commodities on the same farm, they need to apply differently. For example, Herbal & Medicinal Products have different standards & dairy products have different. Hence, those company having multiple commodities needs to obtain multiple certifications & their records as per the applicable standards. The farmers must be accessed with single smart certificate where the joining price be lesser and that keeps accounts of their yields and requirements.

4. High Dependency on Conventional Agriculture

Only 1% of the Organic Area India have but at the same time, we are the highest number of produces in the world. Conventional Production System of Agriculture is more profitable to the farmers than Organic Farming. An awareness has to be created for natural commodities to all groups of people that they must turn back to organic livelihood.

5. Low Incentives for Farmers

The cost of buying organic manure is very high &in initial years, the yield from the organic farm is very low. When it comes to shifting from Conventional to Organic, Farmers tends more towards Conventional**.**Small scale industries must adopt making organic manures for the abundant production. This boosts the low price of manures. As everyone adopts Organic foods, the farmers would no more tend towards Conventional agriculture.

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6. Lack of Input Support & Subsidy on Organic Inputs-

There is a shortage of reliable, quality input for Organic farming along with that no subsidy from the Government on such Input products (For Example, Bio fertilisers &Bio pesticides.Farmers need to use their farm-grown manure in large quantities. Sometimes, it costs too & yields are low, then it becomes a loss-making business model. The Government must subsidize the prices and the farmers must be united` with the consumers directly by the sustainable online business model.The online model can be helpful for the farmers that they can get instant prices for the crops and farming details and sell them directly to the consumers. The steps taken by the Government as follows.

Steps taken by Government for Organic farming

1. National Mission for Sustainable Agriculture (NMSA)

NMSA is envisaged as one of the eight Missions outlined under National Action Plan on Climate Change (NAPCC), NMSA aim at promoting Sustainable Agriculture through climate change adaptation measures. The major thrust is enhancing agriculture productivity especially in rain fed areas focusing on integrated farming, soil health management, and synergizing resource conservation. Besides, NMSA also a committed target to fulfil National and International commitments on Sustainable Development Goals (SDG) &Intended Nationally Determined Contribution (INDC). All the components of NMSA such as Rain fed Agriculture, Soil Health Management, Organic Farming, etc. have significant role in achieving SDGs & INDC.

NMSA as a programmatic intervention caters to Mission Deliverables that focuses mainly on conservation agriculture to make farm sector more productive, sustainable, remunerative and climate resilient by promoting location specific integrated/composite farming systems; soil and moisture conservation measures; comprehensive soil health management and mainstreaming rain fed technologies.

2. Pradhan Mantri Krishi Sinchai Yojana (PMKSY)

The Pradhan Mantri Krishi Sinchayee Yojana (PMKSY) was launched on 1st July, 2015 with the motto of 'Har Khet Ko Paani' for providing end-to end solutions in irrigation supply chain, viz. water sources, distribution network and farm level applications. PMKSY not only focuses on creating sources for assured irrigation, but also creating protective irrigation by harnessing rain water at micro level through 'Jal Sanchay' and 'Jal Sinchan'. Micro irrigation is to be popularised to ensure 'Per drop-More crop'. PMKSY adopts State level planning and projectised execution that allows States to draw up their own irrigation development based on District Irrigation Plans and State Irrigation Plans.

3.Micro Irrigation Fund

A dedicated Micro Irrigation Fund created with NABARD has been approved with an initial corpus of Rs. 5000 crores (Rs. 2000 crore for 2018-19 & Rs. 3000 crores for 2019-20) for encouraging public and private investments in Micro irrigation. The main objective of the fund is to facilitate the States in mobilizing the resources for expanding coverage of Micro Irrigation. MIF would not only facilitate States in incentivizing and mobilizing resources for achieving the target envisaged under PMKSY-PDMC but also in bringing additional coverage through special and innovative initiatives by State Governments.
An Advisory Committee has been set up to provide policy direction and ensure effective planning, coordination and monitoring of the Micro Irrigation Fund.

4. Agriculture Contingency Plan:

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Central Research Institute for Dry Land Agriculture (CRIDA), ICAR has prepared district level Agriculture Contingency Plans in collaboration with state agricultural universities using a standard template to tackle aberrant monsoon situations leading to drought and floods, extreme events (heat waves, cold waves, frost, hailstorms, cyclone) adversely affecting crops, livestock and fisheries (including horticulture). Total 614 district agriculture contingency plans are placed in the 'farmer portal' of the Ministry of Agriculture and Farmers Welfare, Government of India.

Conclusion

This study lights up Green Entrepreneurs in setting up various businesses in the field of sustainable farming with profitable means and also looking after the environment. The evolution of such Entrepreneurs where the gap between the Producer and Consumers can be bridged by affluent online marketing strategies through online business model. Hence the study concludes that there is immense opportunity for green entrepreneurs in the emerging green market scenario in India and thus boosting the environment and economic gains.

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