# Proposed Motivational Methods to Route Farmers towards Organic Farming

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***Abstract:*** *This paper charts motivational methods to direct farmers towards organic farming. The analysis has been drawn using secondary data on organizational motivational theories and organic farming method and its benefits. The study explores various motivating factors which influence the farmers to switch from conventional farming to organic farming methods which are sustainable. Factors such as concern for the environment, moral and social responsibility, and economic considerations are studied through a qualitative research method. Agriculture is a field which has undergone constant and rapid changes. Conventional farming practices due to certain deficiencies are paving the way for organic farmers. A factor analysis shows that environmental awareness, bright market prospects, observable economic benefits and health consciousness are the major factors influencing farmers' decisions on the conversion to organic production. Motivating factors such as profit, health and soil fertility plays an important role when they choose organic farming.*

***Keywords:*** *Conventional farming, Organic farming, Motivation, bright market prospects*

## I. INTRODUCTION

During the era of Green Revolution, introduction of high-yielding varieties, extension of irrigated areas, use of high analysis NPK fertilizers and increase in cropping intensity, propelled India towards self-sufficiency in food production.

Another issue of great concern was the sustainability of soil productivity as land began to be intensively tilled to produce higher yields under multiple and intensive cropping systems. Water logging and secondary Stalinization have been the banes associated with excess and irrational irrigation. Groundwater table declined sharply as more and deeper bore wells were drilled. The occurrence of multi nutrient deficiencies and overall decline in the productive capacity of the soil due to non-judicious fertilizer use, have been widely reported.

Such concerns and problems posed by modern-day agriculture gave birth to new concepts in farming, such as organic farming, natural farming, biodynamic agriculture, do-nothing agriculture, eco farming etc. The essential feature of such farming practices imply, i.e., back to nature. (Source: NAAS, 2005).

Motivating factors such as profit, health and soil fertility plays an important role when they choose organic farming. The farmers are habitual to conventional farming and require powerful boost to be propelled towards organic farming. This can be done by adopting proven motivational methods advocated by management scientists and through restructuring agro practices from unorganized to organize.

## II. REVIEW OF LITERATURE

The Organic farming is a form of agriculture that relies on techniques such as crop rotation, green manure, compost and biological pest control. Organic farming uses fertilizers and pesticides but excludes or strictly limits the use of manufactured (synthetic) fertilizers, pesticides (which include herbicides, insecticides and fungicides), plant growth regulators such as hormones, livestock antibiotics, food additives, genetically modified organisms, human sewage sludge, and nonmaterial.

Motivation is a theoretical construct used to explain behaviour. It gives the reason for people's actions, desires, and needs. Motivation can also be defined as one's direction to behaviour or what causes a person to want to repeat behaviour and vice versa. A motive is what prompts the person to act in a certain way, or at least develop an inclination for specific behaviour. According to Maehr and Meyer, "Motivation is a word that is part of the popular culture as few other psychological concepts are."

Various studies find that versus conventional agriculture, organic crops yielded 91%, or 95-100%,along with 50% lower expenditure on fertilizer and energy, and 97% less pesticides, or 100% for corn and soybean, consuming less energy and zero pesticides. The results were attributed to lower yields in average and good years but higher yields during drought years. A review notes independent estimates suggesting that organic agriculture potentially could support about 3 to 4 billion people. Organic farms withstand severe weather conditions better than conventional farms, sometimes yielding 70-90% more than conventional farms during droughts. Organic farms are more profitable in the drier states of the United States, likely due to their superior drought performance. Organic farms survive hurricane damage much better, retaining 20 to 40% more topsoil and smaller economic losses at highly significant levels than their neighbors. The decreased cost of synthetic

fertilizer and pesticide inputs, along with the higher prices that consumers pay for organic produce, contribute to increased profits. Organic farms have been consistently found to be as or more profitable than conventional farms. Without the price premium, profitability is mixed. Organic production was more profitable in Wisconsin, given price premiums.

Organic farming is rapidly increasing in every part of the world. Organic industry growth has reported at a rate of 30 percentage per annum and it is worth 33 billion dollars.(Rural Industries Research and development corporation,2006) and the study conducted by Assocham and Techs research shows that the organic food market in India is growing at a rate of 25-30 %. Several factors influence the farmers to switch from conventional farming to organic farming. People believe that switching to organic farming and related crop protection techniques will give them a better status in the society. They wanted to be known as someone who has immense care for land and soil. Farmers are influenced by social concerns and moral concerns than the monetary benefits. (Rigby et al, 2001; Carlsson et al,2007). Moral concerns are those which are within an individual which includes ethics and personal satisfaction whereas social concerns are those which influence the individual's behavior because of similar people in the reference group; may be farmers of the same cluster or region. More than monetary benefits farmers take up this one as an environmental good. Increasing number of papers are focusing on the moral and social concerns of people when adopting a certain practice.(Venkatachalam,2008;Frey and Stutzer,2008).

**Objectives**

- To understand factors that motivates farmers.
- To investigate the reasons behind the adoption of organic farming by farmers.

## III. METHODOLOGY

This is a conceptual research which is related with some abstract idea(s) or theory. The research is generally used by philosophers and thinkers to develop new concepts or to reinterpret existing ones. The entire research study is based on referring some abstract idea(s), theories and concepts developed by earlier researchers across the world. The abstract idea(s) and theories have been taken from research papers written by eminent authors in the area of 'motivation'. The study is divided in two sections. Section-I discuss the Reason to switch from convectional farming to Organic Farming and section-II discovers the Suitable motivational factors to adopt Organic farming.

**Section-I: Reason to switch from conventional farming to Organic Farming**

As organic farming becomes a major commercial force in agriculture, it is likely to gain increasing impact on national agricultural policies and confront some of the scaling challenges faced by conventional agriculture.

**Productivity and profitability**

Various studies find that versus conventional agriculture, organic crops yielded 91%, or 95-100%,along with 50% lower expenditure on fertilizer and energy, and 97% less pesticides, or 100% for corn and soybean, consuming less energy and zero pesticides. The results were attributed to lower yields in average and good years but higher yields during drought years. A review notes independent estimates suggesting that organic agriculture potentially could support about 3 to 4 billion people. Organic farms withstand severe weather conditions better than conventional farms, sometimes yielding 70-90% more than conventional farms during droughts. Organic farms are more profitable in the drier states of the United States, likely due to their superior drought performance. Organic farms survive hurricane damage much better, retaining 20 to 40% more topsoil and smaller economic losses at highly significant levels than their neighbors. The decreased cost of synthetic fertilizer and pesticide inputs, along with the higher prices that consumers pay for organic produce, contribute to increased profits. Organic farms have been consistently found to be as or more profitable than conventional farms. Without the price premium, profitability is mixed. Organic production was more profitable in Wisconsin, given price premiums.

**Sustainability (African case)**

In 2008 the United Nations Environmental Programme (UNEP) and the United Nations Conference on Trade and Development (UNCTAD) stated that "organic agriculture can be more conducive to food security in Africa than most conventional production systems, and that it is more likely to be sustainable in the long-term" and that "yields had more than doubled where organic, or near-organic practices had been used" and that soil fertility and drought resistance improved.

**Employment impact**

In a survey of 1144 organic farms in the United Kingdom and Republic of Ireland, researchers found that organic farms employed more workers than conventional ones. This difference persisted when factors such as the size of each farm (organic farms are typically larger) are taken into account. The researchers concluded that there would be 19% more farming jobs in the UK, and 6% more in Ireland, if 20% of all farms became organic.

**Externalities**

Agriculture imposes negative externalities (uncompensated costs) upon society through land and other resource use, biodiversity loss, erosion, pesticides, nutrient runoff, water usage, subsidy payments and assorted other problems. Positive externalities include self-reliance, entrepreneurship, respect for nature, and air quality. Organic methods reduce some of these costs.

**Pesticides**

Unlike conventional farms, most organic farms largely avoid pesticides Some pesticides damage the environment or with direct exposure, human health. Children may be more at risk than adults from direct exposure, as the toxicity of pesticides is frequently different in children and adults.

Food quality and safety

The weight of the available scientific evidence has not shown a consistent and significant difference between organic and more conventionally grown food in terms of safety, or nutritional value. In 2009 a review of all the relevant research comparing organic to conventionally grown foods was carried out by the United Kingdom's Food Standards Agency which concluded:

**Soil conservation**

In *Dirt: the Erosion of Civilizations*, geomorphologies David Montgomery outline a coming crisis from soil erosion. Agriculture relies on roughly one meter of topsoil, and that is being depleted ten times faster than it is being replaced. No-till farming, which some claim depends upon pesticides, is one way to minimize erosion. However, a recent study by the USDA's Agricultural Research Service has found that manure applications in tilled organic farming are better at building up the soil than no-till.

**Climate change**

Organic agriculture emphasizes closed nutrient cycles, biodiversity, and effective soil management providing the capacity to mitigate and even reverse the effects of climate change. Organic agriculture can decrease fossil fuel emissions and, like any well managed agricultural system, sequesters carbon in the soil. The elimination of synthetic nitrogen in organic systems decreases fossil fuel consumption by 33 percent and carbon sequestration takes $CO_2$ out of the atmosphere by putting it in the soil in the form of organic matter which is often lost in conventionally managed soils. Carbon sequestration occurs at especially high levels in organic no-till managed soil.

**Nutrient leaching**

Excess nutrients in lakes, rivers, and groundwater can cause algal blooms, eutrophication, and subsequent dead zones. In addition, nitrates are harmful to aquatic organisms by themselves. The main contributor to this pollution is nitrate fertilizers whose use is expected to "double or almost triple by 2050". Organically fertilizing fields "significantly [reduces] harmful nitrate leaching" over conventionally fertilized fields: "annual nitrate leaching was 4.4-5.6 times higher in conventional plots than organic plots".

**Biodiversity**

A wide range of organisms benefit from organic farming, but it is unclear whether organic methods confer greater benefits than conventional integrated agro-environmental programs. Nearly all non-crops, naturally occurring species observed in comparative farm land practice studies show a preference for organic farming both by abundance and diversity. An average of 30% more species inhabits organic farms. Birds, butterflies, soil microbes, beetles, earthworms, spiders, vegetation, and mammals are particularly affected. Lack of herbicides and pesticides improve biodiversity fitness and population density.

**Sales and marketing**

Most sales are concentrated in developed nations. These products are what economists call credence goods in that they rely on uncertain certification. Interest in organic products dropped between 2006 and 2008, and 42% of Americans polled don't trust organic produce. 69% of Americans claim to occasionally buy organic products, down from 73% in 2005. One theory was that consumers were substituting "local" produce for "organic" produce.

**Distributors**

In the United States, 75% of organic farms are smaller than 2.5 hectares. In California 2% of the farms account for over half of sales (Lotter 2003:4) Small farms join together in cooperatives such as Organic Valley, Inc. to market their goods more effectively. Organic foods also can be a niche in developing nations. It would provide more money and a better opportunity to compete internationally with the huge distributors. Organic prices are much more stable than conventional foods, and the small farms can still compete and have similar prices with the much larger farms that usually take all of the profits.

**Farmer's markets**

Price premiums are important for the profitability of small organic farmers. Farmers selling directly to consumers at farmers' markets have continued to achieve these higher returns. In the United States the number of farmers' markets tripled from 1,755 in 1994 to 5,274 in 2009.

Capacity building Organic agriculture can contribute to ecologically sustainable, socio-economic development, 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 exporter's excellent opportunities to improve their income and living conditions. Organic agriculture is knowledge intensive. Globally, capacity building efforts are underway, including localized training material, to limited effect. (New Zealand's Ministry of Agriculture and Forestry).

**Section-II: Suitable motivational methods to adopt Organic farming:**

The prospective methods to promote organic framing are:

1. Education Exchange Programmes: Organic Farming needs boost and promotion through governmental and private organizations to penetrate the remotest villages. For instance, the WWOOF program that started in the United Kingdom in 1971, by Sue Coppard, a London secretary, under the name 'Working Weekends on Organic Farms'. 'WWOOF' subscriber, spend about half a day on a host farm, learn about the organic movement and sustainable agriculture, and receive room and board - with no money exchanged between hosts and WWOOFers. WWOOF is an educational and cultural exchange program. WWOOF is a way to learn practical farming skills, be part of the organic agriculture movement. Similar exchange programmes must be designed to attract organic farming practitioners.
2. Strategic partnership: The government organization can liaison with development agencies and donors or in alliance with partners and affiliate to support the Organic Movement´s vision as IFOAM promotes the adoption of organic practices as sustainable solutions to poverty, food insecurity, soil erosion, biodiversity decline and climate change. IFOAM has developed synergies to achieve its objectives and fulfil its vision. Foam's strategic partners are its long-term allies, who share IFOAM's vision and collaborate to make their goals more sustainable and fairer.
3. Official Committees: Professional groups must be organized for specific purposes ranging from the development of standards to the facilitation of Organic Agriculture in rural areas by the government organic agricultural agencies.
4. Knowledge Campaigns: The government agriculture department must organize organic farming vitality campaigns to enlighten producers and consumers on food security, climate change, inclusive sustainable development, ecological intensification and sustainable agriculture at length.
5. Organic Courses: The Agricultural department of all the states can offer organic courses providing space for learning and experience, and for developing innovative strategies and strong networks. The course must be targeted at present and future leaders of the organic movement. As ICCOA, Karnataka, International Competence Centre for Organic Agriculture (ICCOA) is India's leading Organization in the organic agriculture sector. ICCOA is a knowledge and learning centre for organic agriculture which caters to the needs of all stakeholders of organic agriculture including farmers, farmers' organizations, NGOS, certifying agencies, retailers, traders, processors, consumers, and their organizations, input manufactures, exporters, national and state government departments linked to agriculture, etc. The course must be offered to aspirants with the following background to build future organic farming leaders as IFOAM:

- Farmers' organizations or national organic movements;
- Organic companies;
- Organic producers, processors, traders or retailers;
- Organic certification bodies;
- Consumers' organizations;
- Organizations campaigning for sustainable rural development;
- Research, extension, education or rural development institutions;
- Government institutions (e.g. ministries of agriculture, development or environment);
- Development agencies.

1. **Regional Centers**: National center of organic farming, department of agriculture, govt. of India should have its regional centers in all the states of the country for balanced growth of organic agriculture throughout the nation.
2. **Multi product campaigns**: The suggested approach towards multi-product campaigns would be a step forward to promote specific quality aspects such as organic products of a certain region. Applicants should have the freedom to plan the promotional campaign and also market individual products of a multi-product campaign separately.
3. **Advertisements:** The organic logo and punch lines must be catchy to attract more consumers to organic market. Organic products should be prioritized among product ranges covered by the scheme. It is important to promote organic products and their quality among consumers, and additional campaigns will result in increased recognition of the new organic production logo. The affluent organic producers and govt. agencies must earmark sufficient budget for the promotion of organic farming through mass-media, hoardings, documentaries and advertisements.

4. **Training Camps:** The organic course certificate holders must be employed by the government to train farmers for the scientific practice of organic farming and certification criterion.
5. **Collaborations with agricultural and Business management Institutes:** The government and private organizations can collaborate with B-schools across the nation for the development of agro- business plans to capitalize upon expert business strategies. The faculty and student team can conduct e-seminars and participatory training sessions for the farmers thereby strengthening the economic viability of agricultural projects.
6. **Social Media Marketing:** Social media marketing programs usually center on efforts to create content that attracts attention and encourages readers to share it with their social networks. A corporate message spreads from user to user and presumably resonates because it appears to come from a trusted, third-party source, as opposed to the brand or company itself. Hence, this form of marketing is driven by word-of-mouth, meaning it results in earned media rather than paid media. Social media is a platform that is easily accessible to anyone with internet access. Increased communication for agricultural organizations would foster organic farming awareness and often, improved customer service. Additionally, social media serves as a relatively inexpensive platform for organizations to implement marketing campaigns.
7. **Contract Farming:** There should be an agreement between a buyer (Government agencies and enlighten organizations) and farmers, which establishes conditions for the production and marketing of a farm product or products. The farmers will be provided technical guidance or training from the buyer in return of quality products. This will be benefited to both farmer and buyer in terms of assurance of quality, market and price at lower risk.
8. **Organized retail:** The private sector is equipped financially, committed and risk-bearer thereby fits to undertake organized organic retail. It would be an important step towards the development of market for the organic produce that a consumer would need through organized retail. The produce available in the outlets would come from several organic farmers groups. These retail shops will help to attract more and more customers which will create awareness about organic products.
9. **Rural marketing:** Multinationals and huge business groups should build upon the potential of organic to tap and penetrate rural markets. Rural marketing of organic products for instance, FMCG companies must market their organic food to expand domestic market and motivate farmers to switch over to sustainable agriculture.
10. **Export leaflet:** The Exim bank should come up with export leaflets summarizing the international market potential of the nation. This would update the knowledge of farmers to channelize their undertakings towards export expansion.
11. **Support group**: The support groups can help in promotion of *organic farming* by arranging agro-ecological technology, education and training of farmers. These groups can adopt some villages to educate farmer for organic farming. For eg. NGO's like AOFG, BAAI, and SOA are endeavoring in the same direction.
12. **Product placement through films:** When a product placement is done well, it allows consumers to see brand, whether they watch their favorite film on an airplane, at the theater, in a hotel on Pay per View, at home on television, by renting a DVD or online on their computer. This can be prolific for spreading the organic ideas amongst masses.
13. **Celebrity endorsement:** Celebrity endorsement has been established as one of the most popular tools of advertising in recent time. It has become a trend and perceived as a winning formula for product marketing and brand building. It would thrust up organic market in domestically. The affluent organic producers and govt. agencies must set sufficient budget for the promotion of organic farming through this medium.
14. **Entrepreneurship:** They may well be hailed as a new breed of entrepreneurs who shuffled careers, fired by a mission to take farmers back to their organic roots. These entrepreneurs can bring awareness among farmers by developing their own methods to expand **organic** farming. A Central government undertaking, Small Farmers Agriculture Business Consortium (SFAC), will organize the organic farmers into groups and help the government in transforming these farmers into entrepreneurs.
15. **Banking and Finance:** There is a lot of money involved in establishing organic farmers groups, technical training and extension work, certification, value addition related investments and market development. These are areas where the banks could extend group financing. Banks and finance institutes can motivate farmer by providing loans at low rate for the growth of organic farming.

## IV. CONCLUSION

Awareness campaigns are motivating and make all the difference in adoption trends of organic farming. As the farmers they are ignorant about scientific implementation of organic farming. They do practice organic techniques by default thereby making the awareness programmes an essence to dispel ignorance. Thus

the methods discussed must be exercised to motivate farmers towards organic ideology for green and better tomorrow.

As the farmers are ignorant about scientific implementation of organic farming ,it is imperative to organize promotional programmes for organic know –how and to develop a positive attitude towards its adoption. They do practice organic techniques by default thereby making the awareness programmes an essence to dispel ignorance. Thus the methods and models discussed must be exercised to support organic ideology for green and better tomorrow.

Organic farming has a severe drawback of scientific composting and animal manure issues the solution foe the anomaly lies in Vegan organic farming, has the potential to improvise ecology and agricultural practice. Vegan –Organic farming is the solution to manuring issues thereby strengthens the viability of organic agriculture. Vegan-Organic is a promising way to enrich soil fertility mainly by farm produce without relying on external source of manure. Manure tends to be commercially expensive given to treatments, packaging and transportation. Plant based fertilizers prove to be user friendly for unskilled farmers. Vegan-organic farming needs extensive exposure and promotion to capture market. Advertisement and workshops on vegan food would stimulate consumer discussion to create demand. So, steps must be taken to educate farmers in vegan-organic farming for the betterment of agricultural industry and environment as a whole.

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