

Feasibility of Agricultural Systems and Organic Agriculture

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ABSTRACT: *The need for sustainable agriculture is critical, but deciding how to get there remains a challenge. It is discussed to what extent the concept of sustainable agriculture has practical importance. Sustainability, in addition to organic farming, is a sector that is quickly growing in many nations. In India's post-independence period, the most pressing problem has been providing enough food to feed an expanding population. Irrigation water, pesticide infusions, and fertilizers are all utilized to produce higher-producing crops. This addition of high-yielding manufacturing technology has aided the country's capacity to produce huge quantities of food, but it has resulted in challenges and problems with soil health, pesticide toxicity, environmental degradation, and agricultural production sustainability. When it comes to agricultural commodities, the role of regulation through the use of synthetic agrochemicals, the required level of self-sufficiency in farming systems, and the scale of production and trade of agricultural commodities are all discussed in the context of this debate on sustainability. Organic farming has the potential to provide high-quality food that is neither damaging to the soil's health nor the environment; nevertheless, it is unclear if large-scale organic farming will be able to supply enough food for India's enormous population.*

KEYWORDS: *Agricultural Systems, Environmental Degradation, Fertilizers, Organic Farming, Pesticides.*

1. INTRODUCTION

The principle of sustainability dishonesties at the heart of discussions that happen presently the utilization of the natural resources of the plants, however its intuitive objection there is no type of consensus on its significance. While there is no agreement on this basic dimension of sustainability, the paper highlights sustainable agriculture [1]. Therefore, improvement in using the concept of sustainability to change policy and management requires clarification of conflicting definitions and careful examination of the assumptions that underlie them. The paper emphasizes sustainable agriculture, in which lack of consensus significance is consistent with the general trend for issues of “sustainability.” [2] The paper discusses the common themes which developed from attempts to establish sustainable agriculture as the first step towards explaining consequences for agricultural policy and practice and describes the key streams inside the sustainable agriculture movement.

Several have contended that the organic farming as well as sustainable agriculture, for instance, are associated, others observes it as different concepts not to be equated with [3]. So this paper explores relationship among organic farming system with the agricultural sustainability. The reason for concentrating on organic farming is the increasing growth in organic department in North America and Europe. Such growth has led to a total of 2.5 per cent of organic agricultural land. The increase in the need of for eco-friendly, “natural” or food goods free from chemical has led to a development of organic certification schemes in Europe and North America. Such schemes are seen as ensuring customers that the goods they purchase are manufactured in a certain method, with a number of agricultural inputs banned. Often discussed in the sense of agricultural sustainability are the impact of such schemes on farmers, as well as the result of expanding the

world market of these products. This increases concerns size, sustainability as well as local organization of the sustainable agriculture of future [4].

1. Organic Farming

In India, organic farming is not a newer form of system which has been followed since ancient times. It is a farming method that aims primarily to cultivate the soil and to grow crops in this a manner as to maintain the soil intact and in good health by using organic waste (crop, waste, aquatic waste) and the other biological materials together with favorable microbes to release the nutrients in the crops for enhancing agricultural production in an environmentally friendly emission.

There are different number of meanings of organic farming in different sustainable agriculture. It is referred to by researchers as view of agriculture focusses at reflecting the fundamental. Researchers also demonstrate that the organic farming may not generally refer to the utilization of living material, but demonstrates the principle of “wholeness” which implies the “systematic connection or coordination of parts in a whole.” The concerns that inspired earlier exponents of the organic farming are integral member of existing agricultural sustainability discussion, involving- soil health as well as problems in structure, the increasing value of chemical fertilizers, the human health.

With population growth our duty will be not only to maintain agricultural production and to further raise it in a sustainable way. The researchers recognized that the “Green Revolution” with high input consumption has hit a plateau and is now supported by dropping dividend returns [5]. Therefore, a natural equilibrium for the nature of life and property needs to be preserved at all costs [6]. In current age, when such level of agrochemicals which are developed from fossil fuel and are not renewable and decrease in availability, the obvious option for that will be more important. As shown in Table 1, the presentation of essential requirements for the production and processing in organic farming is one the most significant expositions of the aims and basics of organic farming [7]. While this statement becomes obvious, the scope of principles extends to matters of justice as well responsibility beyond mere biophysical aspect (Table 1).

Table 1: The Principle Aim of Organic Production and Processing.

S. No	Aim
1.	To produce food of high quality in sufficient quantity.
2.	To consider the wider social and ecological impact of the organic production and processing system.
3.	To interact in a constructive and life-enhancing way with natural systems and cycles.
4.	To develop a valuable and sustainable aquatic ecosystem.
5.	To promote the healthy use and proper care of water, water resources and all life therein.
6.	To maintain and increase long term fertility of soils.
7.	To minimize all forms of pollution.
8.	To produce fully biodegradable organic products.
9.	To process organic products using renewable resources.
10.	To produce textiles which are long-lasting and of good quality.
11.	To create a harmonious balance between crop production and animal husbandry.
12.	To use, as far as possible, renewable resources in locally organized production systems.

2. Sustainable Agriculture

According to Hodge, some of the tendencies in contemporary farming are causing some people to doubt the long-term viability of existing agricultural practices [8]:

“Agriculture has come to draw on inputs it requires from more distant sources, both spatially and the sectorally, for obtaining a rising proportion of supply of energy from the non-renewable sources, to depend on a smaller genetic base. This is expressed especially in its strong dependence on chemical fertilizers, its dependency on subsidies and cost aid and its externalized costs like risks to other value of species, and the degradation of environment, loss of habitat and problems to health and welfare of human [9]”

“Sustainable agriculture implies an efficient system of practices of plant as well as animal production with a site-specific application that will”:

- a) In request to meet human food and fiber requests in the long haul, it is important to: work on the nature of the biological system and the regular asset base on which farming economy is based;
- b) Make the most productive utilization of nonrenewable and on-ranch assets and, where suitable, incorporate normal natural sources and controls;
- c) Maintain the monetary reasonability of ranch tasks;
- d) Improve the personal satisfaction for ranchers and society overall.

The emphasis is laid on organic farming, especially connection to principle of sustainability. There is several factors for this accent. One is organic farming surpasses other “environmentally friendly” approaches in agriculture[10]. Second, in several countries it's a quickly developing agricultural sector. There are number of reasons for this expansion, and differs across countries. Public awareness has risen in response to ongoing food safety, animal welfare issues and concerns about environmental effects of industrial farming[8], [9].

2. DISCUSSION

Some of the procedures of organic agriculture that distinguishes it from other of previously established alternative trends in agriculture is that it comprises of a legislative background. A full collection of certification methods regulate organic agriculture, from movement of soil to dining table[11]. This history of the regulation makes it considerably easier to address what organic farming really is, since there are established requirements that producers must follow. While these standards vary across distinct organic bodies among the national boundaries, the standards form a basis on basis of debate could be focused.

No real question indicates that the concepts of sustainable farming and the organic farming have been closely connected. However, there is discrepancy about the precise nature in its relationship. To some of 2 are associated, to other it is misguided to equate them[12]. Given the variety of interpretations of organic farming, the consensus about what is required for organic production are in complete contrast to the controversies and disputes raging about the essence of agricultural sustainability [13]. Any of the work on historical value of relationship among the system of agriculture and sustainability of communities they serve highlights the argument that this type of farming system does not need to be new, mechanized which use synthetic chemicals fundamentally unsustainable.

Given the impact of natural creation on ranch edges, soil usefulness, and rustic work, accomplishing a fair equilibrium in a total calculation is testing. Not no joking matter assuming the results are all in a similar course, yet if one starts to understand the compromises that happen when one variable develops while another brings down, then, at that point, this element turns out to be more huge over a wide scope of aspects. A test won't be addressed simply by expanding public comprehension of the effects of assorted creation frameworks; even with complete information on the effects, one should understand that advancement towards targets may be joined by inversions in different everyday issues. However difficult it may be to make trade-offs, the usage of the notion of sustainability as an objective, rather than a destination, is nonetheless

beneficial when making decisions regarding goals [10]. Thought of this manner, convergence to sustainable agriculture can be seen as an asymptotic process.

3. *Perspectives and Issues on Sustainable Agriculture*

The paper focuses on the agricultural sustainability, as well as its relationship to different methods to agriculture. It has given utterly purposely no new concepts of sustainability or sustainable agriculture. These have resulted from acknowledging the view that sustainable farming is seen as a method instead of a rigid set of the production practices. Sustainable practices differ temporarily and temporally, and it can only be fully defined retrospectively. It's not just a matter of tools as well as inputs however the method where they're being used. It increases the chances of considering sustainability as such a concept that this has little sense, and must be removed [9], [10]. A consequence of this interpretation of agricultural sustainability was that the development of yet more abstract interpretations of the term appears to give little to benefit. For the many, a preferred choice has been to incorporate their idea of more sustainable agriculture. While agricultural production may not occur in isolation from rest of society, there is potential to regulate much of the system, to be able to alter certain aspects of it, and to try to put into action one's vision of the agricultural sustainability.

One such issue is how much any horticultural framework is connected to a general public that isn't ecologically supportable. These connections might appear as bought sources of info, power, or the offer of ranch created merchandise. While talking about the connection between natural cultivating and horticultural supportability, it was featured that there is an absence of agreement on the exact meaning of natural cultivating and farming maintainability. There has been an extensive progression around here, with the foundation of normalized rules for natural cultivating. When applied to concentrate on regions burdened by contrasting understandings, translations, and implications, these ideas offer a powerful starting point for conversation and discussion. The issue that emerges subsequently is that certain individuals may truly attempt to restrict natural creation to what has been found in those rules, albeit natural creation for those connected with works out in a good way past what has been found in those measures. Therefore, natural cultivating may be seen of as being pushed in two unique ways.

For those who do not believe that sustainable agriculture necessitates the abolition of large-scale farming, this is an important point to consider. Even in this circumstance, producers and consumers may continue to be separated geographically, and the process of certification and inspection will serve to link the organic producer and the organic consumer. Any individual or organisation that seeks to reduce a gap between the producer and the consumer, as well as the methods by which food is produced, comes under the "similar variations of size, distance, and regulation as the normal food system," which regulates key concerns.

4. *Organic Farming, Synthetic Chemicals, and Sustainability*

The diagrammatic representation used to highlight this point in his paper are of the form displayed Figure 1[9]. This indicates that the organic farming reports for a certain sustainable and some non-sustainable agriculture, although some non-organic farming methods also make a contribution to sustainable agriculture[9].

To some extent, choosing synthetic chemical use as a classification here is ambiguous, even if the prohibition of these inputs is one of the distinguishing features of the organic farming systems. Two of the fundamental features of organic systems are “the prevention of fertilizers in form of the soluble mineral salts” and “the prohibition of the agro-chemical pesticides”. This group of the synthetic chemical inputs together poses problems. Putting mineral fertilizers in same group as synthetic pesticides can result as much from an antipathy to science and agricultural industrialization as from scientific categorization. The fertilizers, for example, provide nutrients same as organic manure, much more soluble form. Different pesticides are biocidal agents that have no natural counterpart. Therefore, it is highly debatable to consider all varieties of chemical inputs. Nonetheless, since the use or prohibition of these inputs describes many agricultural systems, these are used here.

Forms of organic and biodynamic farming involve agricultural practices which may be put in this field. Another group of farming systems that could be found here, it could be argued. Use of agricultural machinery on the farms, powered by the fossil fuels, to manufacture products for sale back to ‘unsustainable’ society can be seen as undermining the sustainability of these farming systems.

Observations are made on the fact that, although sustainable agricultural systems are now nearly universally endorsed, there is substantial debate over the criteria on which these systems should be evaluated. The issue of whether farms must be self-sufficient and to what degree they may interact with agricultural output are both important considerations. That is shown in this argument, which demonstrates why it is inappropriate to simply link such prescribed farming operations with agricultural sustainability.

3. CONCLUSION

This paper focuses on the agricultural sustainability, as well as its relation to different methods to agriculture. It has given utterly purposely no new concepts of sustainable agriculture. The sustainable activities vary from one another in terms of time and space, and they can only be completely described retroactively. One such issue is the extent to which any farm system meant to be sustainable should be linked to a society that is not intended to be sustainable. Although the endeavor to provide overly prescriptive explanations of sustainable agriculture may be of little use, it is important to be clear about the overall notion that one has for these systems in the first place. If there is a conflict between the sustainability ethics of green farming, some of which could be synonymous with a rejection of consumerism, and the reality of organized, high-volume industrial food markets, this inconsistency must be addressed in order to advance the discussion on sustainable agricultural practices. Greater control and enforcement of quality are essential for those who do not believe that sustainable agriculture inherently necessitates the abolition of large-scale farming and who believe that the sector will continue to produce food for such a large urban population with little to no interaction with agricultural producers.

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