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## SUSTAINABILITY OF SUSTAINABLE AGRICULTURE

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### Abstract:

Agriculture that focuses on producing long-term crops and livestock with little impact on the environment is known as sustainable agriculture. Sustainable agriculture is the practice of farming in a way that doesn't risk the ability of present or future generations to satisfy their own requirements in terms of food and textile production. Understanding of ecological services may serve as the foundation. Farmers that apply sustainable practices will use less chemical input, less nonrenewable energy, and save limited resources. When you consider the expanding population and the need for food, maintaining the health and replenishment of the soil may go a long way. Sustainable agriculture is far from mainstream in India, with most SAPSs being practiced by less than five million (or four per cent) of all farmers.

**Keywords:** ICT, SAPS, Agriculture, sustainability, Rural Development

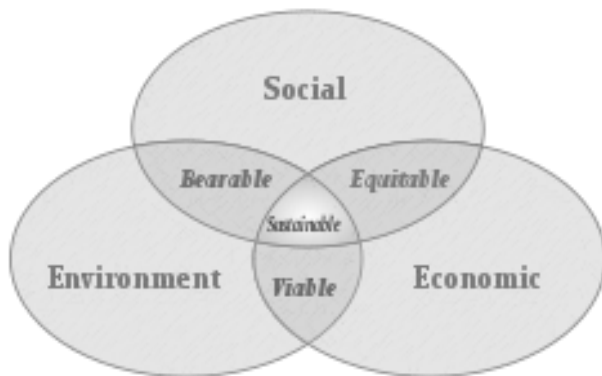
### 1. INTRODUCTION

Sustainable agriculture assists crops with helping themselves develop. Sustainable means Manageable agribusiness likewise centers on keeping up financial steadiness of ranches and helping ranchers improve their methods and personal satisfaction. Agriculture also focuses on maintaining economic stability of farms and helping farmers improve their techniques and quality of life. The rule of thumb is that if you have a have a farming practice which maintains yields while increasing environmental goods and benefits, then this is sustainable. Simply describe as "A sustainable agriculture is one that, over the long term, enhances environmental quality and the resource base on which agriculture depends; provides for basic human food and fiber needs; is economically viable; and enhances the quality of life for farmers and society as a whole."

Farming is the life saver for food of life on earth. Agriculture envelops each part of human endurance by straightforwardly or by implication interfacing through the items devoured - from the air we inhale to the petroleum derivatives we depend.

## 2. GOAL

Sustainable agriculture coordinates three fundamental objectives – ecological wellbeing, monetary benefit, and social value.



An assortment of ways of thinking, strategies and practices have added to these objectives, however a couple of regular subjects and standards weave through most meanings of reasonable agribusiness. Sustainable food and agriculture (SFA) contribute to all four pillars of food security – availability, access, utilization, and stability – and the dimensions of sustainability (environmental, social and economic).

ADVANTAGES	DISADVANTAGES
Sustainable agriculture likewise benefits nature by keeping up soil quality, diminishing soil corruption and disintegration, and sparing water. Notwithstanding these advantages, supportable horticulture likewise builds biodiversity of the region by furnishing an assortment of creatures with solid and indigenous habitats to live in.	One of the biggest disadvantages to sustainable agriculture is that you can't develop the same number of harvests at a solitary time considering a more manageable methodology normally prompts less yields in a single plot so plants don't drain supplements out of the dirt.

## 3. WHY SUSTAINABILITY

Sustainability is significant for some reasons including Environmental Quality – In request to have solid networks, we need clean air, characteristic assets, and a nontoxic situation. For instance, numerous medical problems are legitimately identified with air and water quality.

The idea of sustainable development turned into a proper reason for characterizing future improvement objectives for farming. In spite of the fact that Brundtland Commission Report mostly focused on the ecological harm brought about by extraordinary industrialization, it made express references to inadequacies in world agriculture frameworks and furthermore the requirement for another comprehensive methodology. The report pushed rural frameworks that center as much consideration around individuals as they do on innovation, as much on assets as on creation, as much on the long haul as on the present moment. This was the harbinger of another worldview of sustainable farming.

Sustainable living techniques assist in saving natural resources like water and electricity in addition to lowering pollution. Businesses and individuals that value sustainability are also less likely to interfere with the habitats of wild animals, therefore preserving our planet's biodiversity.

Sustainable agriculture was immediately recognized as the most significant part of supportable turn of events.

## 4. INDIAN SCENARIO

In a sustainable agricultural rural framework, the cultivators avoid any type of synthetic substances or pesticides. This helps keep the food solid and eatable, and diminishes sickness inside the network. In India, a significant part of the country's agribusiness is subject to precipitation.

As the backbone of the Indian economy, the agriculture industry contributes to around 16.5% of India's GDP. As of 2022, the Indian agriculture market value stood at USD 435.9 billion and is expected to reach USD 580.82 billion by 2028, growing at a CAGR of around 4.9% between 2023 and 2028.

Crop diversification methods include intercropping (growing a mixture of crops in the same area) and complex perennial crop rotation. Crop rotation is the most popular SAPS (Sustainable Agriculture Practices and Systems (SAPS) in India, covering about 30 million hectares (Mha) of land and about 15 million farmers.

Crop rotation is the most popular SAPS in India, covering around 30 million hectares (Mha) of land and approximately 15 million farmers. Agroforestry, mainly popular among large cultivators, and rainwater harvesting have relatively high coverage - 25 Mha and 20-27 Mha, respectively.

Currently, just 2.8 Mha, or 2% of India's 140 Mha net seeded land, is used for organic farming. Around 800,000 farmers in India have embraced natural farming, which is the sustainable agricultural practise that is expanding the quickest. After decades of persistent promotion, integrated pest management (IPM) has reached a coverage area of 5 Mha.

Government of India have been taken several steps for sustainable agriculture development. The existing effort like improvement in soil fertility on a sustainable basis through introduced Soil Health Card Scheme, 'Pradhan Mantri Krishi Sinchai Yojana' for efficient access of irrigation and increased water efficiency. To support organic farming system through the 'Param parogat Krishi Vikas Yojana' and minimization of risk in agriculture sector a new scheme "Pradhan Mantri Fasal Bima Yojana has been launched and implemented.

The collaboration among biological system segments is overlooked in present agro-the executives.

- Ecological agribusiness may possibly reestablish soil productivity and multi-usefulness.
- Commercialization of biological agribusiness may conceivably take care of the developing populace.
- Internalization of control inside the agro-environment through administration is required.
- Integrative factors as substitute can be utilized to in a roundabout way oversee connections.

## 5. EMERGING THEMES

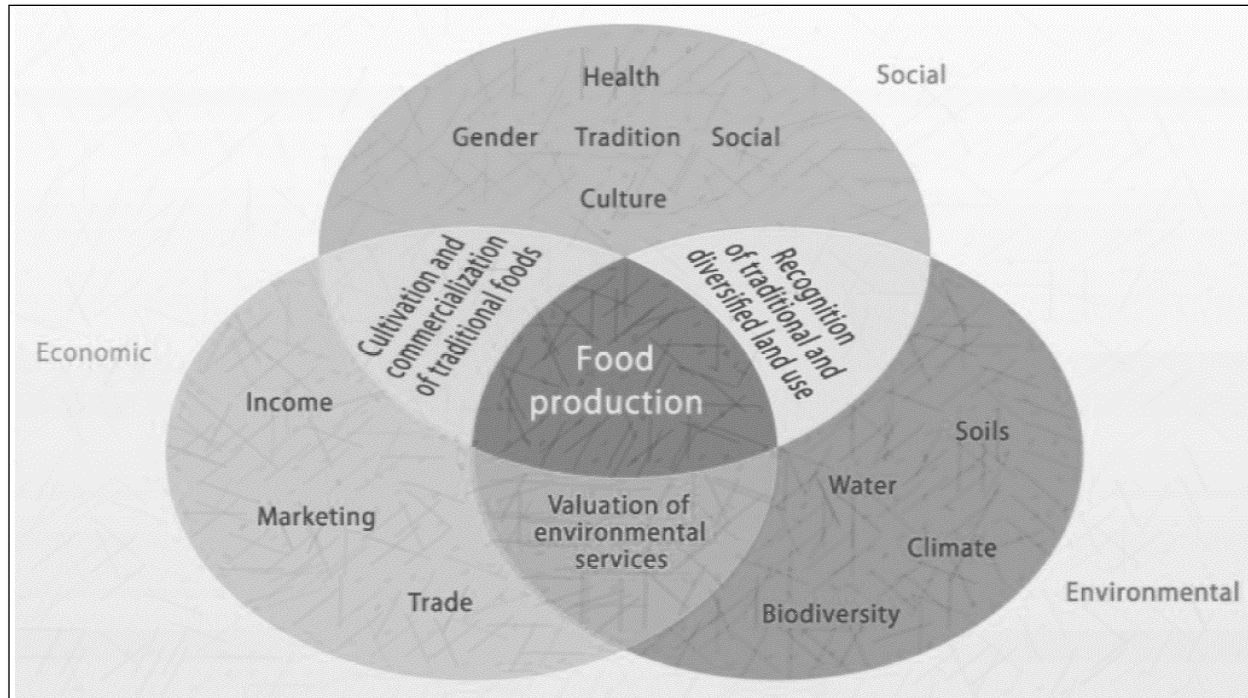
- ❖ **The importance of knowledge:** The majority of SAPSs are knowledge-intensive, and farmers must increase their ability to successfully adopt them.
- ❖ **The dependency on agricultural labour:** Since SAPSs are specialized, mechanization for different input preparations, weed control, or even harvesting in a field of mixed crops is still not widespread. As a result, SAPS need a lot of manpower, which may prevent medium- to large-scale farmers from implementing them.
- ❖ **Motivation:** Farmers are looking for alternatives because of traditional agriculture's detrimental long-term effects. Farmers who do not utilize a lot of external inputs and who operate in resource-constrained areas are also prepared to gradually switch to SAPSs.
- ❖ **Security of nutrition and food:** Through a variety of food and revenue sources, SAPSs increase the food security of farmers. They also improve families' access to nutritional security.

## 6. CHALLENGES

Five major challenges threatening the future of sustainable farming practices in India :

1. Drop in yields in initial years, 2. Increased drudgery 3. Availability and access to necessary materials, 4. Overall food sufficiency, 5. Political economy.

These key difficulties are Instability, for example, struggle between countries. Administration, for example, political will to change improvement programs into economical long haul rehearses. Overall improvement needs as below all sectors concern with Social-Economic-Environment for Food production as a central part.



Sustainable agriculture has been practiced, and everyone is aware that it is what the world needs right now. However, switching to eco-friendly practices is still difficult for the following reasons:

- Growing enough food
- Water scarcity
- Loss of usable land
- High energy use
- Climate change
- Cost-efficiency of sustainable practices

Here are the steps we can take to solve the problems of sustainable agriculture.

- Creation of adequate policies and incentives
- Funding more research, development, and innovation
- Providing financial aid to promote sustainable farming.
- Innovative governance and mechanisms

## 7. IMPORTANT SUGGESTIONS

- Rainfed regions might be the first to scale up since they currently practice low-resource agriculture, have poor productivities, and have the most to gain from the change.
- Reorganize government assistance to farmers by directing incentives towards resource preservation and rewarding results such as improved ecosystem services or overall farm productivity rather than just outputs such as yields.
- Support the creation of reliable evidence by conducting extensive comparisons between traditional, resource-intensive agriculture and sustainable agriculture.
- Ensure that players in the agriculture ecosystem have broader views and are more receptive to unconventional ideas.

- Provide short-term transition assistance to those who could be negatively impacted by a widespread switch to sustainable agriculture.
- Integrate data to make sustainable agriculture visible.

## 8. CONCLUSION

Social, economic, and environmental are firmly interlaced and essential segments for a genuinely sustainable agriculture. For instance, farmers confronted with destitution are regularly compelled to mine common assets like soil fruitfulness to make a decent living, despite the fact that ecological corruption may hurt their employments over the long haul. Just by making strategies that coordinate social, ecological, and monetary interests would societies be able to advance more sustainable agricultural systems. Sustainable agriculture is far from mainstream in India, with most SAPSs being practiced by less than five million (or four per cent) of all farmers.

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