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An analysis on the role played by the economy sector in upgrading in the farming sector

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Abstract

India is an agricultural country with majority of the people working in farming sector, with demand for ayurvedic medicine and indoor farming, today in the urban India majority of the people have started home farming which is helping to alleviate the problem of food security. If farming is practiced in every house in a small manner, imports will reduce in India and export will amplify. Smart farming and smart technology has helped urban India to adopt farming. Hydroponics and aquaponics is taking grounds in India. Demand of herbal products is rising where India herbal plants have reached to North America, Middle East, Europe and Africa thus contributing to the GDP. India being a

leading export of agriculture, it place an outstanding role in the economic growth. If we promote agri tourism followed by proper land reforms and educate the farmers on the use of technology, followed by at schools if children are taught how to grow plants the amount of food production will rise in no time, with growing population, the demand also needs to be fulfilled, at old age home, tribal areas people are adopt horticulture, permaculture where each citizen have access to good amount of food, with the use of new technologies so that we don't have food wastage and the import reduce and export rises, contributing to the economy where poverty will be limited.

Keywords: Ayurvedic, indoor farming, technology, smart farming, food security, import, export, Agri tourism

Introduction

Agricultural sector is the largest growing industry in the world, even after industrialization countries have been highly dependent on the agriculture culture. There are major countries where country is the primary source of income and also contributes maximum to the GDP for instance countries like China, India and Bangladesh are the top agricultural countries. Agriculture includes a lot of things from crop productivity, genetic engineering, production of resistant, fertilizers, breeding, farming, seeds, livestock etc. Agriculture includes horticulture, poultry, fishery cultural etc, Farming is cover all parts of agricultural, the land where agriculture is practiced is called farming, the farm lands. Today, with climate change happening across the globe, people are shifting to different methods of farming, from the time technology has started taking grounds, Technology has been introduced into the agricultural sector people have adopted sustainable farming, we see a rise in organic farming, vertical farming, permaculture, natural farming, rise in horticulture, agricultural engineering. The way the agricultural sector is enlarging so it the economy, agricultural provides maximum employment opportunities to the people, in fact in Bangladesh 90% of the people are farmers, in India 70% of the people are farmers. With advance n technology the agricultural sector has entered the urban sector. Horticulture and indoor farming has started and we estimate that in near future it will double the producing rate which will require the imports of a country. India is a growing economy, always by 2050 it will become the country with the largest populace, we need to increase our productivity to serve the growing civilization, in fact by 2050, the planet will have 10 billion population for which in the upcoming years the food production needs to escalate by 70%, where all the countries have been shifting towards modern techniques for cultivation in order to enhance farming, where water is being a crisis. There is used for artificial intelligences, machine learning, remote sensing, GPS, farm mapping to reduce crop failure, to maintain the health and nutrient level of cultivation, seed quality, climate change, temperature checking, weather pattern etc. India is a country which is filled with traditional values, people don't prefer to adopt new techniques for cultivation which has resulted in poor productivity, lack of irrigation, crop failure, use of fertilizers. Today India is adopting organic farming to reduce it reduce the use of fertilizers and chemical pesticides to grow healthy and fresh crops. Indian farming also produce raw materials for many industries in particular for textile industry like cotton, fibers, rubber, Jute etc. The scope which Indian have in farming, it can double the economy growth by the use of new technology, India is also the largest producer of ayurvedic medicine.

Research Methodology

For the purpose of this exploration, I have used an amalgamation of two of the archetypical social sciences research tools application –as they are authentic and brilliant method to assemble statistics from multiple appellants in a methodical and convenient way. Questions were asked to the common youth, public policy Analyst, urban people, farmers, interviews –consisting of several interrogations which were dispersed among representative of each contender group.

Objective of the Research Paper

The main areas of exploration in this paper incorporate:

1. How smart farming can contribute to the GDP of India.
2. A study on agricultural growth and export business.
3. How can we become food sufficient and also double our economy through farming.

Literature Review

The government has introduced artificial intelligence, machine learning, remote sensing into the Indian agriculture, where the farmers are informed of 24 hours details of the field which guide them on the right amount of seed to be used, soil quality, the amount of nutrient required, ways to prevent crop failure. However technology advancement has happened only in few states. India's horticulture industry is growing, it has the second largest horticulture industry. India produces the maximum number of fruits and vegetable after Brazil (when it comes to fruits) and after China it is the largest producer of vegetables. It has employed 42% of the people, Horticulture has also helped in the providing nutrient security to its people. It is more about cultivation in a garden which provides less pollution, greenhouse emission, doesn't require much soil and water compared to the agricultural field crops, it has also empowered women by introducing them to horticulture. Floriculture is also progressing in India, the use of flowers from traditional, economy and decorative purpose. It is home to both traditional and commercial flowers. Lily, orchids, rose and jasmine. As per 2018, India contributes 18% to the GDP, where horticulture contributes to 29.5 % of agricultural GDP, Floriculture contributes 241 billion Indian rupees to the Indian Economy. Majority of the agricultural products in India are exported to Middle East, Brazil, US, Netherlands. India is the second largest producer of wheat, rice, sugarcane, dry fruits and jute. Largest producer of Bananas, Mango, papaya and Guava. Eggplant, potato, Gourd, Pumpkin and potato also. India's main problem is the poor distribution of agriculture land. Only certain states in India have a proper land distribution system like Andhra Pradesh, Punjab, West Bengal, Western Uttar Pradesh, India's leading agricultural state is Uttar Pradesh. Where West Bengal is the largest producer of rice followed by Punjab, Uttar Pradesh and Andhra Pradesh. Wheat -Uttar Pradesh along with that we have Punjab, Madhya Pradesh and Haryana. Cotton, India is the largest producer and acts as raw material for textile industry, India has the largest textile

Industry where Gujarat is the largest producer followed by Telangana, Maharashtra, Karnataka and also the largest producer of groundnut. Again Uttar Pradesh is the highest producer of sugarcane which is a monsoon crop followed by Tamil Nadu, Maharashtra and Tamil Nadu. For vegetables, West Bengal is the largest cultivator, we also have Bihar, Madhya Pradesh and Uttar Pradesh where ginger and okra are grown in massive quality, then we also have onions, potatoes, cauliflowers and cabbages. Jute which is a raw material for textile industry, with a reduction in the use of plastic bags we can promote the use of jute bags which will double the exports, West Bengal, Bihar, Andhra Pradesh and Assam produces maximum amount of Jute in India.

Findings

Tea and coffee are other main products which India produces in humongous amount. India's also produces rubber and pulses in huge amount. Now the fact is India is facing food crisis, and majority of the farmers are shifting from non-agricultural jobs, because of the poor development and lack of income. In spite of so much production, India imports many agricultural products. The main problem with the farming system is we have not yet adopted technology in all the states followed by land reforms, there is poor land reforms in India, even if technology is brought in every farm, but farmers don't have a big land to use it. There are marginal, small and large farms. The rich farmers have large farms so they get access to the technology easily moreover the technology are not eco-friendly for everyone to afford. So in order to double the production and grow more than one crop at the same time, Community farming has shared where a big hectare of land is there and most of the farmers work together with the use of technology. Organic farming has become very common today, practiced in the North East region. Only 4% of the population has adopted sustainable farming which can actually increase productivity. The biggest reason for high imports is the lack of cold storage system in India, 60% of the food turns rotten in India, crops are grown in particular seasons. Vertical farming has started in India since 2019, which has increased productivity, Aquaponic is common, Kerala has been successfully implementing it. Noida, West Bengal and Punjab are practicing vertical farming. Indoor farming is growing momentum in Bangalore and Hyderabad. Permaculture is common in the outskirts region. Indoor farming in India can help to eliminate the problem of food security, it can act as a substitute for income. People are earning in crore by moving adopting indoor farming hence adding to the GDP growth, even rural and urban today produce more and more through horticulture and indoor farming, they will be no need to import food and moreover the food industry of India will develop along with that India will be food secured and poverty will also reduce. Indoor farming has a huge scope in India which can double the export, reduce the import and remove poverty and hunger from India.

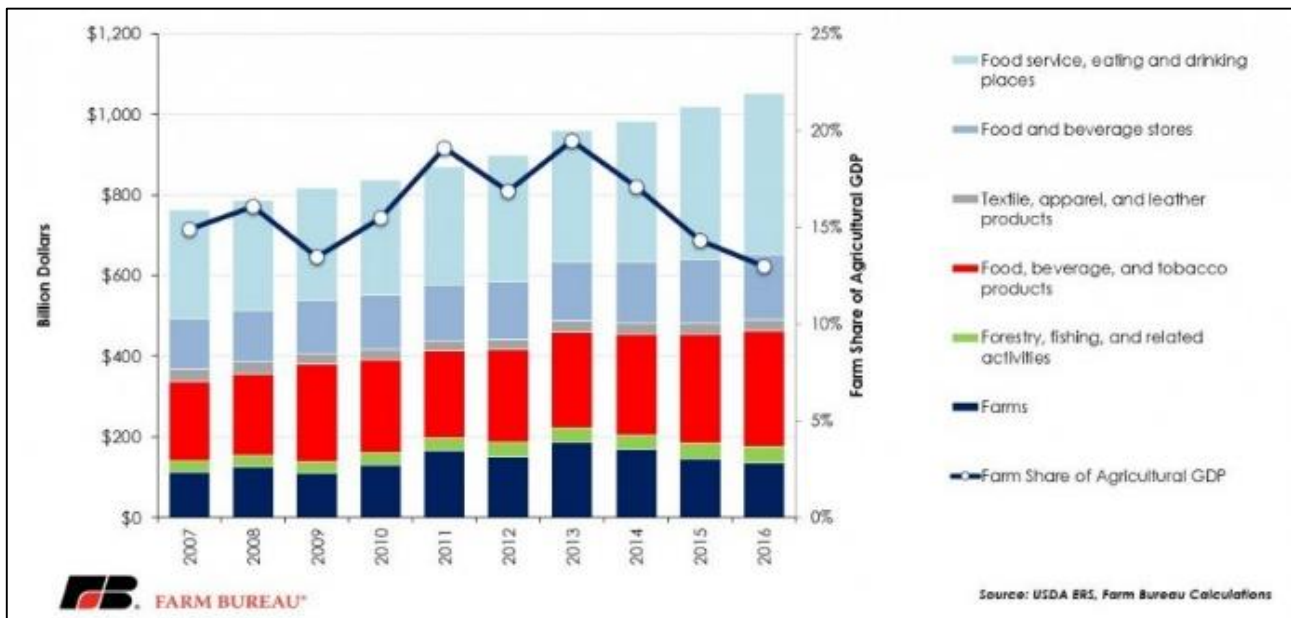
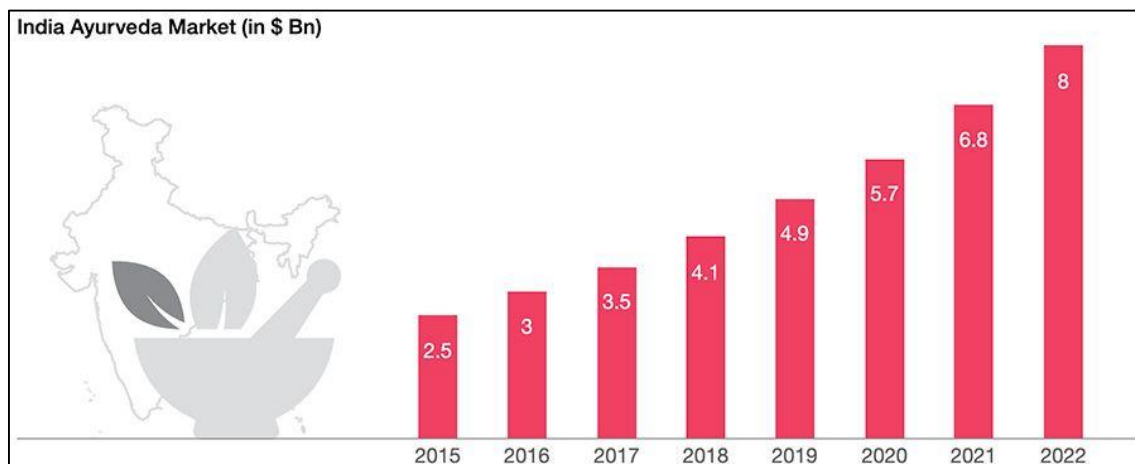


Fig 1: Agricultural contribution to GDP by farm sector and farm share of Agricultural GDP

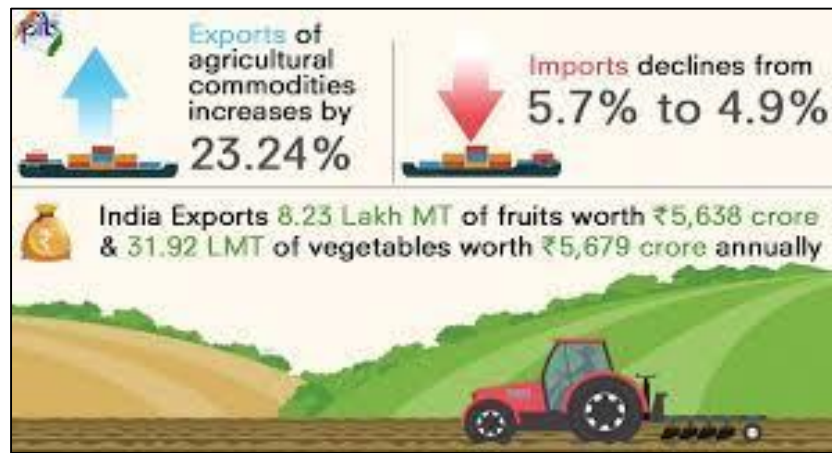
India exports a variety of agricultural products, the food grain production rise to 296.65 million for the year 2019 -20. Horticulture was 326.6 million metric tonnes for the FY20. India is in the top 15 list when it comes to export of agricultural products, the export reached to 38.54 billion dollar for the year 2019 and it was 35.09 billion dollar for the year 2020. The India food industry is to rise by 535 billion

dollar by 2025, the food industry employs 177 million people and FDI is 100 %, the government has been working in infrastructure development and plan to allocate 1 trillion dollar for infrastructure. Apart from that tea export stood at 709.28 million dollar for the years 2020, coffee export stood at 742.05 million for FY20. India has 8186 crore cold stores which is not enough.



India's ayurvedic Industry which is also India's soft power have gained momentum which high demand from Middle East, North America, Europe and East Africa for natural treatment and medicines. Importance Medicinal plant are Aloe vera, Tulsi /Basil, Neem, Ginger, Turmeric. There are used to cure many common remedies to many health issues, they are considered more safe than synthetic drugs. India produces humongous amount of herbal plants. Ayurvedic remedies are considered to be best for fighting throat, fever, digestive problems and boosting immunity and these ayurvedic have no side effects. Apart of them some others medicine are Malabar nut, pineapple, coriander, thyme leafed

gratiola, Indian Gum, Holy Basil, Elephant Creeper, Eagle wood, greater Cardamon, Country Mallow, Margosa Tress, Camel thorn, Aloes, Siris Flag, Dita, Sorrowless tress, India Bdelium, Indian Gooseberry, Three leafed Caper, Long pepper, Bark Cinnamon, India lateech and hundreds of other. The demand for ayurvedic medicine is gaining demand. Indoor farming and in Horticulture India produces ample amount of herbal plants. India's export adds to revenue in India plus new technology advancement will help India to produce more which will reduce imports, amplify farmers income and end poverty.



Way Forward

In order to enhance the farming sector we need to bring in a new land reform, where each farmer has right over a land, which will reduce poverty like in Andhra Pradesh 94% of the people have land and the poverty is only 8%, even in Kerala 90% of the people have right over the land. With land rights the farmers will produce more, there will be used of technology and farmers will adopt smart farming. Urban India has adopted to smart farming which has added to the GDP growth and people are selling them and earning in crore, many Urban people have started gardening and are practicing horticulture, indoor farming and permaculture, We should promote door to door indoor farming which will reduce the impact of climate change and keep the planet warm. On the roof tops of huge building vertical farming can be started. India should double its herbal plant production, as the demand is increase, in this way India's export will increase and imports will reduce. We need to establish research centres for farming in every villages, guide the farmers on smart farming and the benefits of indoor farming, Kitchen gardens are at a rise in the rural region where women's are forming groups and cultivating crops. The women have been working in the floriculture sector, the demand for flowers are at high, with majority of the flowers are used for religious and wedding purpose in India. We should promote agri-tourism in India which will add to the economic growth. Flower culture, Mushroom culture and Aquaponic attacks tourism. We also need to develop cold storage at highways in every district to store food so that we can control food wastage. We need to introduce geo-textiles in the farming system. Promote the production of hemp plant which can be used for multipurpose and help in the economy growth of farming and textile industry. At the school level we should teach students on farming and growing of plants which will also increase food productivity, in the school and at home also, at old age homes people can stay indoor farming, growing of herbal plants which will provide them health and economic benefits.

Conclusion

The farming sector in India plays a remarkable for the economic development with sustainable agriculture and smart farming the demand has increased. India contributes maximum to the GDP being the primary sector. The food processing industry, horticulture are employing more and more people, which in one way is reducing poverty and unemployment in the country and on the other hand with more production with smart technology, the imports will reduce and the export with amplify with special focus on

ayurvedic medicines. We need to educate the farmers on the new technologies and encourage them to move from traditional to modern techniques of cultivation.

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