Journal of Advances and Scholarly Researches in Allied Education
Vol. 18, Issue No. 3, April-2021, ISSN 2230-7540

Importance of Agriculture and Its Contribution to the Economy

Dr. Tapan Kumar Nayak*

Professor, IMS, Ghaziabad

Abstract – India's farming industry accounts for 13.9 percent of the country's GDP and hires just under 54.6 percent of the workforce. Cultivation and Cooperation ministry, which is part of Agriculture Ministry, is the nodal body in charge of developing India's agriculture market. The aim of the research is to learn about the current state of the Indian agriculture market, the numerous challenges and obstacles that farmers, the agro-industry, and governments face in developing agriculture in sensitive uncontrollable environments, as well as various government interventions, investments, and policies for agricultural production and the importance of agriculture in the Indian economy.

Keywords – GDP, Agriculture Sector, Agriculture, Food Security, Economy.

----------X----------

INTRODUCTION

Plants and animals, the foundation of agriculture, have been a section of human experience since the dawn of time. It is thought that our earliest ancestors were nomads, but as their population grew, providing food for everyone became increasingly difficult, and their movement was slowed by the growing group, they chose to settle and the first societies arose. Agriculture was developed by our forefathers as a means of self-sufficiency, which was something they couldn't do as nomads. Agriculture is a significant development in human history; given the benefits agriculture and its products have provided us since then, it is unlikely that we would have progressed to this point without our participation in and development of agriculture. In India, agriculture is the most common occupation. Agriculture directly or indirectly supports two-thirds of the population. It is not only a revenue stream, but also a way of life. It is the primary source of food, fodder, and fuel for the animals. It is the fundamental pillar of economic development.

Agriculture is extremely important to the Indian economy. Agriculture supports more than 70% of rural households. Agriculture is a significant part Indian Economics, accounting for roughly 17% of total GDP and employing over 60% of the population. Over the last few decades, India's agriculture has grown at a rapid pace. Food grain production increased from 51 million tonnes (MT) in 1950-51 to 250 million tonnes (MT) in 2011-12, the highest since independence. Agriculture has always been a significant portion of every country's economy. Agriculture not only helps to connect and interact with all of a country's related industries, but it also tends to provide food for the entire population. If the agriculture sector is very stable, a country is generally thought to be socially, politically, and economically stable. Developing countries people who rely on agriculture for a living, on the other hand, are always Poorer than those employed in other countries industries. And, in general, those who are working the agricultural sector make up a large proportion The estimated number of deprived people living in the countries. As a result, there is a pressing need to improve the agriculture industry. Agriculture is the foundation of a country's economic system. Agriculture provides employment opportunities to a large percentage of the population in addition to providing food and raw materials. Read this article to learn more about the importance of agriculture. Agriculture is at the heart of India's economy. As a result, the growth of this sector is critical to the economy's long-term stability. Agriculture in India helps to meet three basic needs: food, shelter, and clothing. As a result, widespread adoption of new technologies is critical for increasing yield per acre. Farmers' reactions to new technology are influenced by the financial resources available to them. As a result, a lack of financial resources has been identified as a major impediment to marginal and small farmers adopting new farming methods. Farming was still the economic backbone of India. It still holds a place of honour. While that is the case agricultural sector's share of GDP has been steadily declining since the adoption of the New Economic Policy, agriculture still employs 66 The whole percentage workforce. The absence of loans provided to farmers by informal institutions necessitates greater strengthening of structured credit.

Indian Economic Position of Agriculture

India is an agriculture-based country, with agriculture employing more than half of the population. This is how the main wealth stream is structured. As a consequence of importance of agribusiness in India's national income, it is often said that agriculture is the backbone Indian Economics. During the first two decades of the twentieth century, agriculture contributed between 48 and 60 percent of total national output. In the years 2001-2002, this contribution dropped to just over 26%. Farming and allied industries, which include agribusiness, domesticated animals, ranger service, and fishery sub segments, accounted for 13.9 percent of GDP in 2013-2014 at 2004-05 prices. Agricultural exports account for one-fifth of the country's total exports. In light of the agricultural sector's dominant position, the collection and dissemination of agricultural statistics should be predicted be extremely important. The fourth Advance Estimates of Food Grain Production for 2013-14 estimates aggregate food grain production at 264.77 million tonnes (MT). On the back of creative promoting strategies, inventive bundling, quality in quality, and an in number appropriation system, India's spice exports By 2016-17, USD 3 billion is projected to be reached. The Indian flavours industry is estimated to be worth Rs 40,000 crore (US$ 6.42 billion) per year, with the marked portion accounting for 15%. From Rabi 2007-08, the NFSM was a national mission for food safety initiated. The National Food Security Mission's (NFSM) main goals are to increase Rice, barley, and peas coarse cereals production in a maintainable way in the recognised the country's provinces, restore soil ripeness and profitability at the individual ranch level, and improve Restoring confidence in the agriculture (i.e. ranch benefits) among farmers.

Importance Agriculture's Position in the Indian Economy:

Even though industry has played an important function in Indian economy, agriculture's contribution to the country's growth cannot be overlooked.

The following statistics and figures should be used to calculate and gauge this:

1. Agricultural influence on national income:

During the first two decades of the twentieth century, agriculture contributed between 48 and 60 percent total national product. Over the years 2001-2002, this contribution fell to about 26%.

2. Agriculture plays vital role in generating employment:

At least two-thirds of India's working population earns a livelihood from farm labour. Other industries in India have struggled to provide enough jobs for the country's rising working population.

3. Agriculture provides food for the growing population:

Food output is the at a rapid pace as a result of the unsustainable Labor surplus economies like India and strain of population the rapid rise in demand for food. In these nations, food intake is currently very low, and even a small increase in per capita income causes food demand to skyrocket (In other terms, in developed countries, the income elasticity of food demand is very strong).

As a result, unless agriculture is able to increase its marketed surplus of food grains on a consistent basis, a crisis is likely to emerge. Many developing countries are going through this process, and agriculture has been designed to meet the rising food demands.

4. Contribution to capital formation:

On the importance of capital accumulation, there is wide consensus. Agriculture, as the largest sector in a developing country like India, will and must in an important position increasing capital development rates. If it fails to do so, the whole sustainable growth mechanism would be hampered.

The following measures are implemented to generate surplus from agriculture:

(i) Farm labour and resources was transferred to non-farm operations.

(ii) Agriculture should be taxed but that is the way cost on agriculture exceeds the government's provision of services to agriculture. As a result, generating surplus from agriculture would potentially require a considerable rise in agricultural productivity.

5. Supply of raw material to agro-based industries:

Agriculture provides raw materials to a broad spectrum agro-based sectors, including sugar, jute, cotton textiles, and vanaspati. Similarly, the food manufacturing industry is reliant on livestock. Consequently, farming is completely reliant on the development of these industries.

6. Market for industrial products:

Since two-thirds of India's population lives in villages, an increase in rural buying power is critical for industrial growth. Because of their higher revenue and low tax burden, big farmers' buying power increased during the green revolution.

7. Influence on Trade both domestic and foreign and commerce:

Agriculture in India is critical to the country's internal and foreign exchange. Internal exchange in food grains and other farm goods aids the service sector's growth.

8. Contribution in government budget:

Starting with the First Five-Year Plan, Agriculture is the major source of revenue both the federal and state governments. Agriculture and related practises such as cattle ranching, animal husbandry, poultry breeding, and fishing, in the contrary, generate significant revenue for governments. Freight charges for farm goods, both semi-finished and finished, bring in a lot of money for the Indian railway and the state transportation system.

9. Requirement of manpower:

For building and other fields, Many trained and unqualified workers are needed. Agriculture in India provides this labour.

10. Greater competitive advantages:

Because of low labour costs and self-sufficiency in input production, Indian agriculture has a cost advantage in many agricultural commodities in the export market.

Growth and Agriculture Growth Sector

India's economy is heavily reliant on agriculture. Furthermore, agriculture is not only a source of income in India, but also a living style. Furthermore, because the entire nation relies on this sector for food, the government is constantly working to develop it. Agriculture has been practised Tausend years' time, but it has remained underdeveloped for a plenty of time. Furthermore, since independence, we relied on food imports from other countries to meet our needs. However, after the green movement, we were self-sufficient and began exporting our excess to other nations. Furthermore, we used to rely entirely on the monsoon for food grain cultivation, but we've got now dams, canals, tube wells, and pumping stations. In addition, we now have a wider range of fertilizers, nutrients, and crops, allowing us to raise Food more than ourselves did previously. For the progress of technology, advanced equipment, improved irrigation facilities, and specialised agricultural knowledge began to improve. Our agriculture sector has also become stronger than that of many other nations, and we're the only food exporter crops.

- **Agricultural significance in the Food supply**

Agriculture is the world's most important source of food. All essential food substances, such as vitamins, minerals, and amino acids Agriculture is responsible For vegetable, protein and oils manufacturing. Carbohydrates provide all living objects with nutrition. These are grains made from farmland grains like rice, wheat and potatoes. The formation of our bodies is helpful to proteins. They are distributed as grammes and other leguminous goods by agriculture. Beans and pulses are representations of these goods, such as black gramme, bengal gramme, greens and others. Farming often depends on other forms of nutrition, such as meat, fish and milk. Vegetarian-based protein is cheap and disease-free. Consequently, people use farm protein to meet their daily needs. Agriculture is vital to the overall health of a country's economy. Agriculture is the foundation of a country's economic structure. Agriculture offers job options to a significant proportion of the populace in addition to supplying food and raw materials. Agriculture's importance is summarised below:

- **Source of Livelihood**

Agriculture is the primary Revenue Source many citizens. Agriculture is a direct Revenue Source about 70% of the population. This large proportion of people working in agriculture is due to a lack the absorption of non-farming practises rapidly increasing population. The majority of citizens in developing countries, on the other hand, do not work in agriculture.

- **Contribution to National revenue**

In most developed countries, agriculture is the main origin revenue. Agriculture, in the contrary, contributes a lower percentage of national income to developing countries.

- **Food and Fodder supply**

Domestic animals need fodder, which is provided by the agricultural industry. People get milk from cows, which is a kind of protective food. Furthermore, livestock satisfies people's nutritional needs.

- **International Trade Significance**

Sugar, tea, corn, spices, and tobacco items, and coffee are among the most important exports of agriculture-dependent countries. Imports are decreased while exports rise significantly while agricultural production is smooth. This aids in the reduction of a country's negative balance of payments while still preserving foreign exchange. This money could be put to good use importing other necessary inputs, equipment, raw materials, and other infrastructure for the country's economic growth.

- **Marketable Surplus**

The agricultural sector's expansion leads to marketable surplus. As the country expands, more

citizens work in construction, mines, and other non-agricultural sectors. Both of these people depend on food processing, which they can get from the country's marketable surplus. If the agriculture industry develops, demand rises, resulting in an Marketable surplus development. It may be sold to other countries.

- **Origin of natural resource**

The agriculture of cotton and jute fibres, corn, tabaco and foodstuffs as well as non edible oil is the main raw material supply for major industries. Many others, including fruit and vegetables and rice, depend heavily on farming for their raw materials.

- **Significance in Transport**

Agricultural goods are shipped by train and highway in bulk from farms to factories. Mostly of agricultural commodities, external exchanges occur. In addition, the income of the government depends mostly on farming performance.

- **International trade capital**

The agriculture sector accounts for a substantial portion of the country's export trade. Agricultural goods the overall volume of a country's exports comprises approximately 18 per cent, for instance jute, tobacco, spices, olive seed, raw cotton, tea and coffee. This indicates that agricultural products remain an important foreign exchange outlet for a country.

- **Great opportunities for jobs**

The development of irrigation systems, drainage systems and other farm operations is essential, as they provide additional jobs. The agriculture sector provides greater labour opportunities, lowering the high unemployment rate in developing countries as a result of demographic development.

- **Economic Development**

Agriculture leads to sustainable growth since it hires many citizens many people As a result, both the national income and the population's quality of life has changed. The rapid development of the agricultural sector gives a gradual outlook and motivates development. This helps to create a favourable environment for the general economic development of a country. As a consequence, economic development is driven by agricultural productivity.

- **Source of Saving**

Agriculture development can also maximise savings. The wealthy farmers of today began saving during the green revolution. This surplus amount could be re-invested Area of cultivation to help it develop.

- **Food Security**

A secure agricultural sector ensures food security for a nation. Food protection the biggest thing is prerequisite for every region. Malnutrition is prevented by food security, which has long been thought to be one of the most significant issues confronting developed nations. The main revenue stream for most countries is farm goods and related industries.

LITERATURE REVIEW

Lusk et al. (2020) the effect of Covid-19 on the agricultural sector is the subject of this article. The study is organised on a global scale, but it focuses specifically on India. To begin, it assesses the global food supply situation and even the situation in India to determine the likelihood of food crises. While the food situation in April and May 2020 seemed to be stable, the paper finds that if the pandemic continues, there would certainly be widespread food scarcity in countries that depend on food imports. This was particularly true if food-exporting countries took precautionary measures and limited exports. In the case of several livestock goods, the paper finds that supply shortages occurred in both the industrialised and developed planet developing countries such as India April & May 2020. Second, it considers how the pandemic has disrupted agricultural production chains. During the lockdown, Agricultural foreign exchange shrank as imports plummeted and ports stayed locked. The drop in regular market arrivals for 16 crops between March 15 and May 31 in 2019 and 2020 is studied using detailed data from more than 2000 Indian markets. During this period, the amount of reporting markets decreased. Just paddy, lentil, mango, and banana were among the 16 crops studied where market arrivals in 2020 accounted for more than 75% of market arrivals in 2019. Finally, market research shows that global wheat, dairy, and meat price indices dropped in April and May 2020. During the lockout in India, neither wholesale nor retail prices of agricultural goods increased across the board. The decline in wholesale prices for grains, vegetables, eggs and poultry chicken showed that the prices are poor for growers. At the same time, the growth of the urban CPI for cereals, vegetables and eggs suggested a tightening of supply chains in those commodities, particularly in April 2020. In conclusion, the pandemic Covid-19 prompted the world to recognise and appreciate the role of migrant work. Migratory workers' movement was heavily limited after the lockdown started, and a substantial majority of them returned home. Agriculture was particularly hard hit, with labour shortages wreaking havoc on farmers all over the planet.

De Luca, A. I. et. al. (2018) Advances in the introduction of technical advances are a major factor Productivity of the Italian extra virgin olive oil (EVOO). This thesis analyses the oil return and the quality of an integrated extraction plant and their

economic and environmental impacts (with low oxidative effects, heating of paste before malaxation, and a special decanter that escapes final vertical centrifugation). Methodologies were used to calculate economic and environmental impacts both for the expense of life cycles and for life cycles. There was also a sensitivity analysis to highlight hidden factors that have a substantial effect on the result. The findings showed that the frying olives of advanced plants have generated dramatically higher quality olive oil, although the yield is considerably higher than that of conventional technological applications. A cumulative growth of 4.5% in all categories was reached in terms of environmental performance. The new scenario has the highest extraction costs and the lowest profitability even if due to an increase in the sales price of olive oil a strong return on investment productivity can be achieved. These findings could help highlight key points in EVOO growth and make improvements for longer-term management. These results could be useful.

Peter et. al. (2017) a number of calculators have been created to estimate greenhouse gas (GHG) emissions from agricultural goods, including biomass for bioenergy processing. These calculators are nevertheless also used struggle to account for variations in pedoclimatic pressures, farm management methods, and perennial crop and crop rotation characteristics. As a consequence, these calculators' estimates of GHG pollution are marked by a large degree of volatility, and the calculators' potential to identify mitigation solutions in the supply chain may be compromised. The objective of the study was to evaluate usable calculators to measure GHG emissions from energy cultivation through carbon footprint methods (CFP) with the calculator objective and scope in view of GHG emissions from energy cultivation, crop management strategies and crop rotation modelling capability. This analysis was carried out in accordance with calculator target and scope. Among 44 environmental evaluation calculators for agricultural products, we find 18 calculators capable of measuring GHG emissions from energy crop processing. Gone is it difficult to compare and appreciate the results of these CFP assessments because of varying targets or ranges of these calculations as well as increasing agricultural practises related to crop management. Just seven of the 18 calculators measure the emission of greenhouse gas from rotations of oil crops. Currently, neither of these calculators can represent the actual rotating effects of fertiliser shifts in energy crops, decreased farm operation costs, or the seed rotation series and composition. As scheme constraints are extended to cover the whole rotation of energy crops and local agricultural management practises, the potential to identify additional GHG mitigation strategies is increasing.

Goswami et. al. (2017) Smallholder Built country farms are critical to global food protection and agricultural system sustainability. To evaluate the effectiveness of these programmes for long-term policy initiatives, appropriate resources are needed. By combining ecological structures and sustainable livelihood frameworks, we propose The evolution of a sustainability index for smallholder systems. The evolution of indicator system, the collection of indicators, their estimation and weighting, and aggregation to arrive at a composite index are all critically defined. A realistic instrument focused on this index may be useful for assessing long-term viability in developing-country smallholder farms.

METHODOLOGY OF THE STUDY

Data collection

Data was collected using a secondary data collection system. The below are the specifics:

Current Status

The Ministry of Agriculture's Economic and Statistical Directorate (DESMOA) is in charge of data collection:

A. Supermarket rates on a weekly and regular basis B. Critical commodity retail rates C. Crop rates on farms

140 agricultural goods from 620 markets are covered by the weekly wholesale rates. The employees of the State Market Intelligence Units, State Directorates of Economics and Statistics (DESs), and State Department of Food and Civil Supplies gather retail prices of basic commodities on a weekly basis from 83 market centres for 88 commodities (49 foods and 39 non-foods). Farm Harvest Prices are obtained by state revenue departments' field workers the end of the each crop season for 31 crops and issued by the DESMOA.

ANALYSIS OF DATA AND INFORMATION

A. Investments in India's farming sector:

The following are several recent big agricultural investments and relevant developments:

L. Under the name NuPro, Mahindra and Mahindra (M&M), India's leading tractor and utility vehicle maker, has confirmed its entrance into the pulses retailing sector. The group intends to expand into eretailing and the marketing of dairy goods in the future. 2. IFFCO, a fertiliser cooperative, has founded a Mitsubishi Joint Venture Corp, a Japanese company, to manufacture agrochemicals in India. 3. Acumen, a non-profit multinational investment fund, has invested Rs 11 crore (US$ 1.7 million) in Sahayog Dairy, a fully integrated dairy company headquartered in Madhya Pradesh's Harda district. 4. For the first close of its second company, India Agri Business Fund II, Rabo Equity Advisors, the private share subsidiary of Rabo Group in the Netherlands was awarded $100 million. In ten to

twelve companies, this fund would invest $15-17 million. 5. GSP Crop Science, an agrochemical company headquartered in Gujarat, obtained an investment of Rs 95 crore (US Dollars 14.62 million) from the Oman India Joint Investment Fund, the State Bank of India (SBI) joint venture with the State General Reserve Fund (SRF) (SGRF). 6. The seventh largest agrochemical company in the world, ADAMA Agrochemicals, anticipates that over 3 years they will invest at least $50 million in India. Univeg, which is based in Belgium, worked together to establish a fresh fruit supply chain with Mahindra & Mahindra in Germany. 7. The transition of best practises, links between institutes, agriculture, cold chain management, market entry, and development enhancements such as the introduction of new seed and plant biotech technology has been highly desirable for companies in the United States, Canada, Australia, Israel, Netherlands and elsewhere. 8. A variety of Indian universities have made substantial expenditure in food security studies through the International Food Protection Development Fund, headquartered in Canada. These boost the eco sustainable food processing and agricultural practises.

B. Government Initiatives

The any of the above more current major government agriculture initiatives:

L. India and Lithuania, in particular in the field of food and milk processing, decided to extend their agricultural cooperation. 2. The Government of Gujarat aims to link 26 Agricultural Product Market Committee (APMC) to an electronic market network as part of the National Agriculture Market (NAM) initiative. 3. The State Government of Telangana is planning to spend Rs 81,000 crores over the coming three years in order to finalise current irrigation schemes and launch two new water-producing projects from the rivers Godavari and Krishna. 4. 42 dairy ventures with Rs 221 crore (US$ 34.02 million) in total expenditure to increase milk yield and per cow milking output have been announced by the National Dairy Development Board (NDDB). 5. The government intends to invest Rs 50,000 (US$7.7 billion) in restoring four fertiliser plants and building two farming nutrient plants. 6. Some major measures have been taken by the Ministry of Food Processing Industry in order to broaden the food processing industry, increasing farmers' revenues and food-processing exports, etc. In the first phase of the farm-loan forgiveness scheme, the Telangana administration has reserved Rs 4,250 crore (US$ 654 million). The scheme could benefit 3.6 million farmers if they accept Rs 100,000 (US$ 1,539) loans or less prior to 31 March 2014. 7. Outsource trader.

C. Major Challenges

In India, the agriculture sector has experienced major systemic shifts, with its share of GDP falling from 51.90 percent in 1950-51 to 17.00 percent in 2014-15, reflecting a transition away from the conventional agrarian economy and toward one dominated by services (Figure 1). This decline in agriculture's A fall of the share in agriculture's employment has not balanced the contribution to GDP. In the rural economy, however, the share of non-farm income has increased.

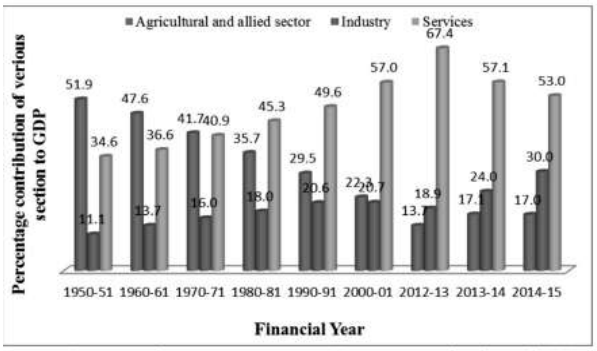

Figure 1: Indian GDP sector-specific contribution (1950-2015)

Area of agriculture and alliances grew at an average annual rate of 3.6 percent during the eleventh five-year plan (2007-12), compared to a goal of 4.0 percent. This sector's growth not only did it fall short, it was still short of standards particularly inconsistent. After two years of close recession, development accelerated to 7.9% in FY11, accompanied Higher FY12 and FY13 development rates (Figure 2). In FY13, slow and irregular monsoons had an adverse impact on agriculture. The negative growth in all major agro-commodities, including grain for bread, petroleum seeds, cotton and sugarcanes, is predicted to drop by 3.5% of food grain production in FY13.

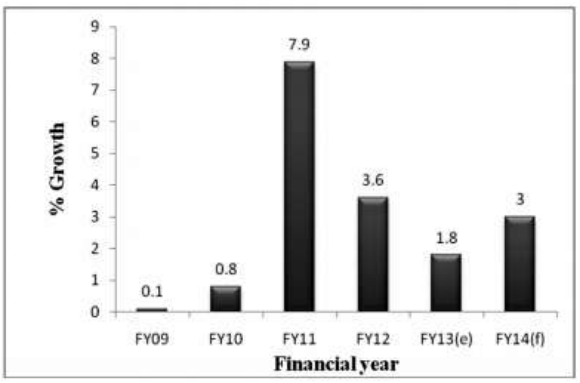

Figure 2: Agricultural growth and the allies

The average scale of the working holdings in India decreased from 2, 28 hectares in 1970-71 to 1,55 hectares in 1990-91 and 1,07 hectares in 2014-15 (Figure 3) The Census of Agriculture 2014-15, the proportion of marginal holdings (less than 1 hectare) has risen by more than 65 percent over the previous year.

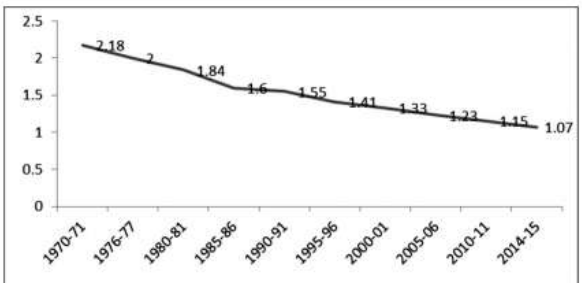

Figure 3: Average holdings size (ha) as described in different census

Fertilizer is another essential component of agricultural growth. Although total fertiliser use has increased, overall, fertiliser usage in India increased 6% from FY07 to FY12 from 45 MMT to 60 MMT, before plummeting Due to the high channel inventory by 11 to 53 MMT in FY 13 and a poor monsoon. Furthermore, post-NBS increases in P&K rates resulted in market destruction, with NPK revenues dropping In FY13, by 23%. The market for fertilisers was renewed in FY15, with total volumes increasing by 6% due to strong sales of P&K fertilisers (Figure 4)

Table 1: Consumption in India of different fertilisers

Financial Year	Urea	DAP	MOP	SSP	NPKs
2007	24	7	3	8	45
2008	26	7	2	7	46
2009	27	9	3	8	51
2010	27	10	3	9	53
2011	28	11	4	11	58
2012	30	11	5	11	60
2013	30	9	4	8	53
2014	30	7	4	8	51
2015	31	8	4	9	54

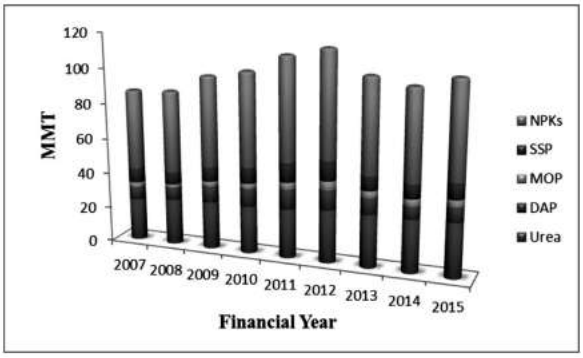

Figure 4: Consumption in India of different fertilizers

RESULT AND DISCUSSION

This transformation is facilitated by credit because it enables new farm supplies to be bought. Although over the last five years or so, overall agricultural credit has risen drastically and interest rates have decreased to 7% for farmers (4% after having taken account of the interest subsidy of 3% for the repayment of crop loans on time), the biggest challenge is increasing accelerated access to credit, especially for the poorest 40% of the population. More innovative models are necessary for joining this community, as they depend on the informal sector for high interest rate loans. The use of natural resources (land/soil, water, agri-biodiversity, and climate) efficiently and judiciously is important for the stability of food and nutrition and long-term alleviation of hunger and unemployment. Inefficient use and maladministration of productive resources, especially land, water, electricity and agrochemical products, has greatly decreased soil productivity and affected its physical, chemical and biological characteristics The level of land availability in agriculture has already been exceeded. Our continued lack of intelligent management of non-renewable natural resources will have important implications.

However, with other sectors the, the total contribution of agriculture to nation GDP has fallen. In India's overall economic condition, however, agriculture continues to play an important part. (Published originally on 30 June 2015) Agriculture accounts for 18% of the country's GDP, according to new Indian economic figures. According to the Central Bureau of Statistics, the agricultural sector and its associated industries (including agriculture, livestock, forestry, and fisheries) account for 16,1% of the 2014-2015 gross value added (GVA) (CSO). In Q1 FJ2016, agriculture and its associated sectors increased by 1.9% year-on-year, representing 14.2% of GVA. Agricultural exports represent 10 per cent of overall exports and are the fourth largest primary exporting commodity in the world. The Indian agro industry consists of canned, milky, dry, frozen and fished rice, meat, poultry and food grains.

CONCLUSION:

Finally, it was determined that the agricultural sector faces many threats due to existing uncontrollable environmental conditions. Government action in agriculture investment is needed, as are policies that promote Agricultural development, import-export and GDP contribution Increasing Agro-allied companies need to handle their inputs carefully in order to achieve the agricultural sector goals in India.

REFERENCES:

Lusk, Jayson, Langemeier, Michael, and Mintert, James (2020). “COVID-19’s Impacts on U.S. Food and Agriculture,” Webinar, April 15, Centre for Commercial Agriculture, Purdue University, available at https://ag.purdue.edu/commercialag/home/resource/2020/04/covid-19s-impacts-on-u-s-food-and-agriculture-webinar/, viewed on May 22, 2020

Lynn Martin Tamara McNeill Izzy Warren-Smith, (2013). “Exploring business growth and eco innovation in rural small firms”, International Journal of Entrepreneurial Behaviour & Research, Vol. 19 Issue 6 pp. 592–610 [4] Prime minister’s council on trade and industry report 2014-15

Goswami, R.; Saha, S.; Dasgupta, P. (2017). Sustainability assessment of smallholder farms in developing countries Agroecol Sustain Food Syst., 41, pp. 546–569.

De Luca, A.I.; Falcone, G.; Stillitano, T.; Iofrida, N.; Strano, A.; Gulisano, G. Evaluation of sustainable innovations in olive growing systems: A Life Cycle Sustainability Assessment case study in southern Italy. J. Clean. Prod. 2018, 171, pp. 1187–1202

Peter, C.; Helming, K.; Nendel, C (2017). Do greenhouse gas emission calculations from energy crop cultivation reflect actual agricultural management practices?—A review of carbon footprint calculators. Renew. Sustain. Energy Rev., 67, pp. 461–476

Kekane M. A., (2013). Indian Agriculture- Status, Importance and Role in Indian Economy, International Journal of Agriculture and Food Science Technology., reviewed by Research India Publications, ISSN 2249-3050, Volume 4, pp. 343-346.

Balasha AM (2019). Drivers of Adoption of Integrated Pest Management among Small-scale Vegetable Farmers in Lubumbashi, DR Congo. American Journal of Rural Development; 7(2): pp. 53-59.

Rahman M, Norton GW (2019). Adoption and Impacts of Integrated Pest Management in Bangladesh: Evidence from Smallholder Bitter Gourd Growers. Horticulturae; 5(2): pp. 32.

Ikenganyia EE, Anikwe MA, Ngwu OE (2017). Influence of Rhizobacteria Inoculant Application Methods and Phosphate Fertilizer Rates on Dry Matter Accumulation, Yield of Bambara Groundnut [Vigna subterranea (L.) Verdc] and Soil Total Nitrogen Content in a Degraded Ultisol in Southeast Nigeria. Agrotechnology; 6: pp. 165

Agyepong JK, Barimah J. (2018). Physicochemical properties of starches extracted from local cassava varieties with the aid of crude pectolytic enzymes from Saccharomyces cerevisiae (ATCC 52712). African Journal of Food Science; 12(7): pp. 151-64.

Corresponding Author

Dr. Tapan Kumar Nayak*

Professor, IMS, Ghaziabad