

ISSUES OF FOOD SECURITY IN INDIA: AVAILABILITY, ACCESSIBILITY AND AFFORDABILITY

Written by Mili Vakil & Tanzim Surani***

5th Year BA LLB Student, GLS Law College, Gujarat University

ABSTRACT

Food is considered as basic amenity essential for the sustenance, development and growth of an individual. In the recently released Global Hunger Index, 2018 India ranked 103rd out of 119 countries and this report is quite disturbing since India is one of the largest producers of food grains in the world. India is home of 25 per cent of hungry population. There are various challenges faced by India in attaining food security. Natural calamities like excessive rain fall, accessibility of water for irrigation purpose, drought, soil erosion, undulating topography and various soil types such as degraded soil, infertile soil, acidic & alkaline soil and further non-improvement in agriculture facilities, growth in population, lack of education and job opportunities have further added to the problems.

The concept of Food Security is multifaceted. Food security exists when each and every person at all times have physical and economic access to sufficient and nutritious food that meets their food preference for an active and healthy life. This paper examines performance, issues, challenges and policies in terms of availability, accessibility and affordability. Further, it suggests some ways to achieve food and nutritional security in India for overall growth of an individual and sound and sustainable development of Indian economy.

To solve this issue of food security the government has implemented various programs i.e. The National Food Security Act, 2013 which aims to provide coverage of up to 75% of the rural population and up to 50% of the urban population for receiving subsidized food grains under Targeted Public Distribution System (TPDS), thus covering about two-thirds of the population. The Act also has a special focus on the nutritional support to women and children. Besides meal to pregnant women and lactating mothers during pregnancy and six months after the child birth. Children up to 14 years of age will be entitled to nutritious meals as

per the prescribed nutritional standards. In nutshell, despite ensuring ample availability of food, existence of food insecurity at the micro-level in the country has remained a challenge for India.

Keywords: Food Security, Sustainable Development, problems, The National Food Security Act 2013, TPDS.

INTRODUCTION

Food security is a measure of the availability of food and individuals' ability to access it. Affordability is only one factor. There is evidence of food security being a concern many thousands of years ago, to release food from storage in times of famine. Food security is not just about food production; interactions of social, economic and environmental factors add to and complicate the challenges faced.ⁱ For example:

- Reduction in productive agricultural land
- Increased consumption of meat and animal products
- Growing urban populations
- Rising cost of crude oil

The initial focus, reflecting the global concerns of 1974, was on the volume and stability of food supplies. Food security was defined in the 1974 World Food Summit as:

“Availability at all times of adequate world food supplies of basic foodstuffs to sustain a steady expansion of food consumption and to offset fluctuations in production and prices”.ⁱⁱ

In 1983, FAO expanded its concept to include securing access by vulnerable people to available supplies, implying that attention should be balanced between the demand and supply side of the food security equation: “Ensuring that all people at all times have both physical and economic access to the basic food that they need”.ⁱⁱⁱ

In 1986, the highly influential World Bank report “Poverty and Hunger”^{iv} focused on the temporal dynamics of food insecurity. It introduced the widely accepted distinction between chronic food insecurity, associated with problems of continuing or structural poverty and low incomes, and transitory food insecurity, which involved periods of intensified pressure caused by natural disasters, economic collapse or conflict. This concept of food security is further

elaborated in terms of: “access of all people at all times to enough food for an active, healthy life”.

By the mid-1990s food security was recognized as a significant concern, spanning a spectrum from the individual to the global level. However, access now involved sufficient food, indicating continuing concern with protein-energy malnutrition. But the definition was broadened to incorporate food safety and also nutritional balance, reflecting concerns about food composition and minor nutrient requirements for an active and healthy life. Food preferences, socially or culturally determined, now became a consideration. The potentially high degree of context specificity implies that the concept had both lost its simplicity and was not itself a goal, but an intermediating set of actions that contribute to an active and healthy life.

The 1994 UNDP Human Development Report promoted the construct of human security, including a number of component aspects, of which food security was only one.^v This concept is closely related to the human rights perspective on development that has, in turn, influenced discussions about food security. (The WIDER investigation into the role of public action into combating hunger and deprivation, found no separate place for food security as an organizing framework for action. Instead, it focused on a wider construct of social security which has many distinct components including, of course, health and nutrition).^{vi}

The 1996 World Food Summit adopted a still more complex definition:

“Food security, at the individual, household, national, regional and global levels [is achieved] when all people, at all times, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life”.^{vii}

This definition is again refined in The State of Food Insecurity 2001: ***“Food security [is] a situation that exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”.***^{viii}

This new emphasis on consumption, the demand side and the issues of access by vulnerable people to food, is most closely identified with the seminal study by Amartya Sen.^{ix} Eschewing the use of the concept of food security, he focuses on the entitlements of individuals and households.

The international community has accepted these increasingly broad statements of common goals and implied responsibilities. But its practical response has been to focus on narrower, simpler objectives around which to organize international and national public action. The declared primary objective in international development policy discourse is increasingly the reduction and elimination of poverty. The 1996 WFS exemplified this direction of policy by making the primary objective of international action on food security halving of the number of hungry or undernourished people by 2015.

Essentially, food security can be described as a phenomenon relating to individuals. It is the nutritional status of the individual household member that is the ultimate focus, and the risk of that adequate status not being achieved or becoming undermined. The latter risk describes the vulnerability of individuals in this context. As the definitions reviewed above imply, vulnerability may occur both as a chronic and transitory phenomenon. Useful working definitions are described below.

Food security exists when all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food which meets their dietary needs and food preferences for an active and healthy life. Household food security is the application of this concept to the family level, with individuals within households as the focus of concern.

Food insecurity exists when people do not have adequate physical, social or economic access to food as defined above.^x

Things affecting food security today include^{xi}:

- *Global Water Crisis* - Water table reserves are falling in many countries (including Northern China, the US, and India) due to widespread over-pumping and irrigation.
- *Climate Change* - Rising global temperatures are beginning to have a ripple effect on crop yields, forest resources, water supplies and altering the balance of nature.

- *Land Degradation* - Intensive farming leads to a vicious cycle of exhaustion of soil fertility and decline of agricultural yields.
- *Greedy Land Deals* - Corporations and Governments buying rights to millions of acres of agricultural land in developing countries to secure their own long-term food supplies.

PERFORMANCE

“Availability of food means food production within the country, food imports and the previous years, stock stored in government granaries.”

Attainment of self - sufficiency in food grains at the national level is one of the country's major achievements in the post-independence period. After remaining a food deficit country for about two decades after independence, India became largely self-sufficient in food grain production at the macro level. There have hardly been any food grain imports after the mid-1970s. Food grain production in the country increased from about 50 million tonnes in 1950-51 to around 233.9 million tonnes in 2008-09. The growth rate of food grains has been around 2.5 percent per annum between 1951 and 2006-07. The production of oilseeds, cotton, sugarcane, fruits, vegetables, and milk has also increased appreciably.

The experience of the last two decades shows that growth rates of production and yield have declined for crop groups/crops during the period 1996-2008 as compared to the period 1986-97. The growth rate of food grain production declined from 2.93 per cent to 0.93 per cent during the same period. There was also a decline in growth rates of production and yields for cereals, pulses, oilseeds, rice, and wheat^{xii}.

➤ *Reasons for Decline in Food Production*^{xiii}

1. Overcrowding in Agriculture:

The real problem of Indian agriculture seems to be that there are too many people who depend on agriculture. The natural increase in population—from about 35 crores in 1947 to 113 crore in 2007— over 3 times could not be absorbed in industries. Moreover, dependence on agriculture increased due to the decline of handicrafts. Over-crowding and the consequent pressure of population on land have led to subdivision and fragmentation of holdings, decline in the area of land per capita, disguised unemployment and almost zero marginal productivity of labour.

2. Unhealthy Rural Atmosphere:

The Indian farmers, generally speaking, are illiterate, ignorant, superstitious, and conservative and bound by old customs and institutions such as the caste system, and the joint family system. Superstition and belief in fate are the curse which keep the farmers totally satisfied with their primitive system of cultivation. They have non-experimental outlook and are hardly motivated by considerations of economic progress.

3. Inadequate Non-Farm Services:

Indian agriculture has suffered because of the inadequacy of such non-farm services as provision of irrigation, seed, finance, marketing, etc. Irrigation facilities in India are inadequate. Even after 60 years of planning most of the cropped area are rain-dependent. Institutional sources of credit are mostly directed to the rich farmers. Problems get multiplied once the question of marketing of agricultural produce becomes dominant. Marketing facilities are extremely inadequate.

4. Size of Holdings:

The average size of holding in India is very low, less than 2 hectares or 5 acres. Not only agricultural holdings are small but they are fragmented too. So no scientific cultivation with improved implements, seeds, etc., is possible.

5. Insecurity of Land Tenure & Investment Inadequacy:

A potent force behind low agricultural productivity has been the absence of proper incentives. The cultivator does not often own the land; he has no security of tenancy; and he may be turned out of his land at any time the landowner desires. Landlordism in a different garb still prevails; eviction of tenants from land is still continuing, ceiling laws have been violated. Thus, land reform measures not only failed to ensure social justice but also productivity of land could not be raised. Low productivity in Indian agriculture may be attributed to low volume of governmental investment compared to the industrial sector. Agricultural sector is largely subsidized. All these result in low volume of investment in the agricultural sector.

6. Poor Techniques of Production:

The Indian farmers have been using old and inefficient methods and techniques of production generation after generation. Increase in production is possible only if proper and adequate manures are used. But, in India, the use of both farmyard manure and chemical fertilisers is mostly inadequate compared to our needs.

7. Inadequate Irrigation Facilities:

One of the proximate causes of the weaknesses of Indian agriculture has been that most of the farmers throughout the country have to depend upon rainfall and very few of them can enjoy the facilities of artificial irrigation. It is the inadequate spread of irrigation facilities that acts as the main barrier for the adoption of HYV seeds^{xiv}.

➤ *Food grain Management*^{xv}

“A large public distribution system, supplemented by arrangements for moderating prices in the open market and concerted efforts for achieving self-sufficiency in food grains, coupled with measures for maximizing procurement from surplus areas, have been the twin objectives of food policy in modern India, ever since the Bengal famine of 1943. These objectives have held sway over the last 55 years, though with changes in emphasis and varying degrees of rigidity, from total control to total decontrol, depending upon the prevailing situation and assessment at each point of time^{xvi}”.

➤ *Buffer Stock*^{xvii}

The importance of building up a buffer-stock of food grains -- normally rice and wheat -- is to provide food security to the country. The argument in favour of buffer-stocking is that where there is large variation in food grain output, either due to weather conditions or due to man-made factors, it becomes essential for the State to ensure food security for the large mass of people by building adequate buffer stocks from the surpluses in good production years and/or by arranging to import the requisite amounts of food grains in times of need. Various committees have suggested the optimal size of the buffer-stock, which varies from 15 to 25 million tonnes, depending on the season. The actual level of and the norm for buffer stocks as on 1st July for the years between 2002 and 2009. Continuous rise in procurement prices, which were higher than market prices, coupled

with the rise in issue prices and the obligation to purchase all grains offered by the farmers led to accumulation of rice and wheat stocks to the extent of 63 million tonnes by July 2002.

The drought caused a reduction in the food stocks in 2003. In fact, the actual buffer stocks in 2006 and 2007 were below the norm and the country had to import wheat during 2006-08. However, the stocks accumulated in 2008 and 2009 were once again much higher than the norm. Presently, the government has more than 50 million tonnes of food grains.

➤ *Performance on Nutrition Indicators*

There are two possible ways to assess the adequacy of food and nutrition and to detect the presence of inadequate intake among individuals and population:

1. Nutritional Intake Assessment^{xviii}

Calories, Protein and Fats, the per capita calorie intake for rural population declined from 2240 kcal per day in 1983 to 2047 kcal per day in 2004-05. During the same period, per capita protein consumption declined from 63.5 grams to 55.8 grams per day in rural areas. Per capita fat consumption, however, has not declined over time. Per capita calorie intake by quartiles in that there was significant decline in the case of the top quartile while for the bottom quartile it has been stagnant. It may be noted that the per capita calorie consumption for the bottom

2. Nutrition Status Assessment^{xix}

We now examine performance based on nutrition status or the outcomes using the anthropometric evidence. The National Nutritional Monitoring Bureau (NNMB) provides the nutritional status of rural households in nine sample states. Children aged 1-5 years are classified into different nutritional grades based on weight for age. The NNMB data shows that the proportion of underweight children declined from 77 per cent in 1975-79 to 55 per cent in 2004-05. NFHS data shows that the proportion of underweight children declined only marginally from 47 per cent in 1998-99 to 45.9 per cent in 2005-06, although stunting among children declined to a much greater

extent. International studies have shown that the rate of decline of child undernutrition tends to be around half the rate of growth of per capita GDP. This level is much below the norm of 2400

calories in rural areas. However, there is a controversy over the minimum calorie consumption per consumer unit per diem. The present level of per capita calorie consumption for the bottom quartile is extremely low.

➤ ***Per capita nutrition supply in India among the lowest in the world^{xx}***

India has one of the lowest per capita daily supply of calories, protein and fat, according to the Organization for Economic Co-operation and Development (OECD), a club of rich nations. In an October report, the World Bank said India has been the biggest contributor to poverty reduction between 2008 and 2011, with around 140 million or so lifted out of abject poverty. Even that hasn't been enough. With the country accounting for 30% of those living in extreme poverty in the world in 2011. ***“India is a hugely demand-constrained economy. People don't have enough money because of which per capita food supply is low despite high production. If people had enough resources, per capita food availability would have been higher and India would not have the huge buffer stocks it currently has^{xxi}.”***

When demand is low, an increase in local production need not translate into increased availability as a larger portion of the produce may be exported. In India's case, it also depends on changes in government stocks. The Economic Survey show that net cereal production has hardly changed at 465gm per person per day from 2000 to 2013. However, per capita availability of cereals has increased from 422gm in 2000 to 468gm in 2013. Factors such as wastage of stocks are also to blame for poor availability. For instance, Food Corporation of India data show 3,000 tonnes of food grains were damaged in 2015-16. In 2014-15, quantity of damaged grains stood at 19,000 tonnes. Actual consumption may be even lower depending on the magnitude of losses and wastage in a household, for instance, while cooking and preparation. As data from the National Sample Survey Office show, both total calories and proteins consumed have fallen in the two decades to 2011-12. The average rural Indian consumed only 2,099 kcal per day and urbanites 2,058 kcal per day. Poor supply of nutritious food and inadequate per capita income to access good food feeds into health issues such as disability and malnutrition.

The government is making efforts to fill shortages in dietary consumption, it is long-term solutions that are truly needed. One fear among experts is that policy makers will start working towards short-term solutions.

THE CHALLENGE

With nearly 195 million undernourished people, India shares a quarter of the global hunger burden. Nearly 47 million or 4 out of 10 children in India are not meeting their full human potential because of chronic undernutrition or stunting. Stunting has consequences such as diminished learning capacity, poor school performance, reduced earnings and increased risks of chronic diseases. The impacts are multi-generational as malnourished girls and women often give birth to low birth-weight infants. There has also been an increase in the prevalence of overweight and obesity in children and adolescents in India, which has life-long consequences of non-communicable diseases in adulthood.

The government has large food security and anti-poverty programs but there are critical gaps in terms of inclusion and exclusion errors. Women and girls are particularly disadvantaged. Despite the achievement of national food self-sufficiency, new challenges have emerged: Slowing agriculture growth, climate change, land degradation and shrinking biodiversity. Large tracts of farmlands in India have become barren due to imbalanced fertilizer use and excessive use of a single fertilizer, urea.^{xxii}

POLICIES

➤ *National Food Security Mission (NFSM)*

National Food Security Mission was launched in 2007-08 to increase the production of rice, wheat and pulses by 10, 8 and 2 million tonnes, respectively by the end of XI Plan through area expansion and productivity enhancement; restoring soil fertility and productivity; creating employment opportunities; and enhancing farm level economy. The Mission is being continued during 12th Five Year Plan with new target of additional production of 25 million tonnes of food grains comprising of 10 million tonnes rice, 8 million tonnes of wheat, 4 million tonnes of pulses and 3 million tonnes of coarse cereals by the end of XII Plan.^{xxiii}

The Mission met with an overwhelming success and achieved the targeted additional production of rice, wheat and pulses. The Mission continued during 12th Five Year Plan with new targets of additional production of food grains of 25 million tonnes of food grains comprising of 10 million tonnes rice, 8 million tonnes of wheat, 4 million tonnes of pulses and 3 million tonnes of coarse cereals by the end of 12th Five Year Plan. Considering the

experience and feedback received from the State's major changes were made in approach, norms of financial assistance and programme implementation strategy which are reflected in the revised operational guidelines.

Based on past experience and performance of 12th Plan, it has been decided to continue the programme beyond 12th plan i.e. 2017-18 to 2019-20, which is co-terminus with Fourteenth Finance Commission (FFC) period with new targets to achieve 13 million tonnes of additional food grains production comprising of Rice – 5 million tonnes, Wheat- 3 million tonnes, Pulses- 3 million tonnes and Coarse Cereals- 2 million tonnes by 2019-20.^{xxiv}

➤ ***Integrated Scheme of Oilseeds, Pulses, Maize and Oilpalm (ISOPOM)***

The Department of Agriculture & Cooperation has been implementing the following Centrally Sponsored Schemes under TMOP&M for increasing production of oilseeds, pulses, maize and oil palm in the country:

- i. Oilseeds Production Programme (OPP)
- ii. National Pulses Development Project (NPDP)
- iii. Accelerated Maize Development Programme (AMDP)
- iv. Oil Palm Development Programme (OPDP)

To provide flexibility to the States in implementation of these programs based on regionally differentiated approach, to promote crop diversification to provide focused approach to the programs and in view of the suggestions of the Planning Commission the above four schemes have been modified and merged into one Centrally Sponsored Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM) during the 10th Five Year Plan. The Integrated Scheme of Oilseeds, Pulses, Oil Palm and Maize (ISOPOM) will be implemented from 2004-05.^{xxv}

➤ ***Rashtriya Krishi Vikas Yojana***

RKVY scheme was initiated in 2007 as an umbrella scheme for ensuring holistic development of agriculture and allied sectors. The scheme has come a long way since its inception and has been implemented across two plan periods (11th and 12th). The scheme incentivizes States to increase public investment in Agriculture & allied sectors. The Cabinet has approved (as on 1st November 2017) for continuation of the ongoing Centrally Sponsored Scheme (State Plans) - Rashtriya Krishi Vikas Yojana (RKVY) as Rashtriya Krishi Vikas Yojana- Remunerative

Approaches for Agriculture and Allied Sector Rejuvenation (RKVY-RAFTAAR) for three years i.e. 2017-18 to 2019-20 with a financial allocation of Rs. 15,722 crores with broad objectives of making farming a remunerative economic activity through strengthening the farmer's effort, risk mitigation and promoting agri-business entrepreneurship.^{xxvi}

➤ ***Pradhan Mantri Fasal Bima Yojana***

The Pradhan Mantri Fasal Bima Yojana (PMFBY) launched on 18 February 2016 by Prime Minister Narendra Modi is an insurance service for farmers for their yields. It was formulated in line with One Nation–One Scheme theme by replacing earlier two schemes National Agricultural Insurance Scheme (NAIS) and Modified National Agricultural Insurance Scheme (MNAIS) by incorporating their best features and removing their inherent drawbacks (shortcomings). It aims to reduce the premium burden on farmers and ensure early settlement of crop assurance claim for the full insured sum.

PMFBY aims to provide a comprehensive insurance cover against failure of the crop thus helping in stabilizing the income of the farmers. The Scheme covers all Food & Oilseeds crops and Annual Commercial/Horticultural Crops for which past yield data is available and for which requisite number of Crop Cutting Experiments (CCEs) are being conducted under General Crop Estimation Survey (GCES). The scheme is implemented by empaneled general insurance companies. Selection of Implementing Agency (IA) is done by the concerned State Government through bidding. The scheme is compulsory for loanee farmers availing Crop Loan /KCC account for notified crops and voluntary for other others. The scheme is being administered by Ministry of Agriculture.

The scheme has been beset by a number of problems for the farmers with unpaid dues in thousands of crores while insurance companies have pocketed the money.^{xxvii}

CONCLUSION

In the short term, the volatile prices can be decreased by price regulation and creation of larger cereal stocks to buffer the tight markets of food commodities and the subsequent risks of speculation. Safety nets need to be provided to alleviate impacts of rising prices and food shortage. Subsidies on agricultural commodities and inputs that are aggravating the food crisis

need to be reduced/removed and investments made to shift to sustainable food systems and food energy efficiency^{xxviii}.

In the middle term, efforts should be made to develop alternatives for feeds for animals and fish. Our ability to change the feed destined for livestock and aquaculture is probably greater than that of changing people's food choice habits, which are not as easily controlled. Finding alternative feed sources provides a huge potential for increasing the availability of cereal for human consumption. For other feed sources to become a sustainable alternative to the current use of cereals, their exploitation must not be resource-demanding. By using discards, waste and other post-harvest losses, the supply of animal and fish feed can be increased and be sustained without expanding current production, simply by increasing energy efficiency and conservation in the food supply chain^{xxix}.

Farmers need to be supported in developing diversified and resilient eco-agricultural systems. This includes management of extreme rainfall and use of inter-cropping to minimize dependency on external inputs like artificial fertilizers, pesticides and over irrigation. Increased trade and improved market access can be achieved by improving infrastructure and reducing barriers to trade. In the long term, awareness needs to be created about the pressures of increasing population growth and consumption patterns on sustainable functioning of the ecosystem. Alternative sources of food have to be explored and developed^{xxx}.

SUGGESTIONS

There are several things which are to be considered on our Food and Security department, and by the intense research it can be said that India needs to develop in the following manner:

1. The unstable prices of food products can be maintained by price regulation.
2. Agricultural commodities shall be subsidized and the inputs that are aggravating the food crisis need to be reduced and investments shall be shifted to sustainable food systems.
3. Alternative feeds for the animals and fish shall be developed, alternative feed sources provides a huge potential for increasing the availability of cereal for human consumption.

4. Farmers shall be supported in developing diversified and resilient eco-agricultural systems.
5. Awareness is required to be created about the pressures of increasing population growth and consumption patterns on sustainable functioning of the ecosystem.

ENDNOTES

ⁱ FOOD SECURITY, Available on the web, www.bbsrc.ukri.org/. Accessed on 16/08/2020

ⁱⁱ Official concepts of food security, United Nations. 1975. *Report of the World Food Conference, Rome 5-16 November 1974*. New York. Available on the web <http://www.fao.org/3/y4671e/y4671e06.htm>, Accessed on 16/08/2020

ⁱⁱⁱ FAO. 1983. *World Food Security: a Reappraisal of the Concepts and Approaches*. Director General's Report. Rome. Available on the web, <http://www.fao.org/3/y4671e/y4671e06.htm> Accessed on 16/08/2020

^{iv} Changing policy concepts of Food Security, World Bank. 1986. *Poverty and Hunger: Issues and Options for Food Security in Developing Countries*. Washington DC. Available on the web, http://www.fao.org/fileadmin/templates/faoitally/documents/pdf/pdf_Food_Security_Concept_Note.pdf Accessed on 16/08/2020.

^v The list of threats to human security is long, but most can be considered under seven main headings: economic security, food security, health security, environmental security, personal security, community security, and political security. (UNDP. 1994. *Human Development Report 1994*. Oxford and New York: Oxford University Press).

^{vi} Drèze, J. & Sen, A. 1989. *Hunger and Public Action*. Oxford: Clarendon Press.

^{vii} FAO. 1996. Rome Declaration on World Food Security and World Food Summit Plan of Action. World Food Summit 13-17 November 1996. Rome.

^{viii} FAO. 2002. *The State of Food Insecurity in the World 2001*. Rome.

^{ix} Sen, A. 1981. *Poverty and Famines*. Oxford: Clarendon Press.

^x Food security: concepts and measurement Available on the web, www.fao.org/. Accessed on 17/08/2020

^{xi} Food Security: Definition & General Information, Available on the web, www.disabled-world.com, Accessed on 17/08/2020/

^{xii} CACP, Ministry of Agriculture (2009).

^{xiii} Main Causes of Low Productivity in Indian Agriculture, Available on www.economicdiscussion.net/agriculture/low-productivity. Accessed on 17/08/2020.

^{xiv} High Yielding Varieties Seeds are undoubtedly land substituting, water economizing, more labour using, and employment generating innovation; nevertheless, they are very delicate and sensitive and therefore require a great deal of care if a successful harvest is to be obtained.

^{xv} Union budget missed opportunity to undertake reforms in grain management system and food security act.

^{xvi} (GOI, 2000).

^{xvii} Food Security in India: Performance, Challenges and Policies (Oxfam India). Available on <http://re.indiaenvironmentportal.org.in/files/food%20security%20in%20india.pdf> Accessed on 17/08/2020

^{xviii} Food Security in India: Performance, Challenges and Policies (Oxfam India). Available on <http://re.indiaenvironmentportal.org.in/files/food%20security%20in%20india.pdf> Accessed on 17/08/2020

^{xix} *Ibid*.

^{xx}Per capita nutrition supply in India among the lowest in the world. **Available on** <https://www.livemint.com/Opinion/GzUIDPQXzktVDBEiE2ZPfl/Per-capita-nutrition-supply-in-India-among-the-lowest-in-the.html> Accessed on 18/08/2020.

^{xxi} Said Biswajit Dhar, professor at the Centre for Economic Studies and Planning School of Social Sciences at Jawaharlal Nehru University in Delhi.

^{xxii} Nutrition and Food Security Available on the web, <https://in.one.un.org/> accessed on 18/08/2020.

^{xxiii} National Food Security Mission. Available on the web, <https://nfsm.gov.in/>. Accessed on 18/08/2020.

^{xxiv} *Ibid.*

^{xxv} Integrated Scheme of Oilseeds, Pulses, Oilpalm and Maize. Available on the web, <http://dpd.dacnet.nic.in/>. Accessed on 18/08/2020.

^{xxvi} Rashtriya Krishi Vikas Yojana, Available on the web, <http://agricoop.nic.in/> Accessed on 18/08/2020.

^{xxvii} Pradhan Mantri Fasal Bima Yojana(PMFBY) Available on the web, <https://financialservices.gov.in/> Accessed on 18/08/2020.

^{xxviii} Food Security, D.K. Sinha, Available on the web, www.yourarticlelibrary.com, Accessed on 18/08/2020

^{xxix} UNITED STATES FOOD AND DRUG ADMINISTRATION CENTER FOR BIOLOGICS EVALUATION AND RESEARCH, Available on the web, www.fda.gov Accessed on 18/08/2020.

^{xxx} Food Security, D.K. Sinha Available on the web, www.yourarticlelibrary.com. Accessed on 18/08/2020.