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Dimensions of India's Food Security: Opportunity and Challenges

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ABSTRACT

Ensuring food security in India requires a multi-pronged approach that addresses production, distribution, and sustainability. Food security in India has been a significant policy concern for many years. Food security must be protected from climate change. This paper promotes the drought-resistant crops, millets, pulses, water-efficient irrigation, soil health management, climate advisories and crop insurance. This paper focuses the basic concept of food security is to ensure that all people, at all times, and should get access to basic food. Food security in India means every person gets enough safe and nutritious food at all times. India ensure. India's food security challenge is not just about grain production but about access, affordability, nutrition, and sustainability.

Keywords: Food, security, system, production, distribution, management and sustainability

INTRODUCTION

Food security means the availability, accessibility and affordability of food to all people at all times. In pre-independence India, a rumble of dark clouds in the monsoon sky would enthuse the farmer with hope a hope that his children will not have to sleep empty stomach for long in a chained nation. As the tryst with destiny began and the chains of oppression were shackled, the golden sparrow spread its' wings for a liberating flight. Dream of independence was studded with hopes hope of emancipation from clutches of evils, hope of inclusive development and hope for a better quality of life for every individual. Though the grains of sand flowed down the glass hour, the Indian farmer still waits with bated breath for the rumbling of monsoon clouds. He waits patiently for timely downpour as clouds sail past the fields behind the shining nation's high-rises in close proximity to the fields. His children will still sleep hungry stomachs. Food security in India remains hostage to a number of factors. The promise of "food security" for all segments of Indian society still finds presence in the election manifestos of political parties. Food security and nutrition in India are complex issues influenced by various factors including socio-economic status, geographical location.

Food-the most elementary need of any human being, has always been promised to the segment at the bottom of societal pyramid. Yet food security remains a distant dream in our nation. The visionaries paint a picture of a society where every individual enjoys guaranteed two meals per day of nourishing diet irrespective of his financial status. In such a society, the dreaded poverty line must have significance in terms of variations experienced in food grain availability. The vision is painted by a brush of hopes and hues of fruitful efforts. Somewhere the efforts to make this vision happen have lacked a vigor and direction. This path correction would pave way for attaining food security in our nation. It underscores the need to shift from calorie-centric food security to nutrition- and diversity-centric policies. "A lack of access to affordable and healthy foods is widespread throughout India. With over 60% of India's population depending on agriculture for their livelihoods, the agricultural sector is critical for both India's economy and food security levels across the country" (India 2023)

The roots of the problem can be traced to inability of food production to keep pace with the rate of increase in mouths to be fed. As limitation of horizontal spread of agricultural areas was felt in a nation were urbanization and industrialization is swallowing fields, the emphasis on enhancing vertical productivity and diversification to other food avenues was not carried out in a holistic manner. "Green revolution struck fantasy of this newly independent nation as a miraculous effort to obviate the agricultural woes. The combination of inputs in form of a package approach yielded unexpected results" (Mukherjee, Amitava, 55) High Yielding Variety (HYV) of seeds, irrigation facilities, fertilizers, pesticides and entrepreneurial spirit of a segment of nation's farmers demonstrated the result of collaborated efforts. However, the

positivity was lost over time. Neither could the success be replicated in other crops and regions, nor could the region of focus deliver at the same levels of productivity. The surge in food production could not carry on indefinitely and soon stagnation in food production became a big question mark staring at the policy framers of this nation.

For the vision of food security to materialize, land reforms must find their place of priority. The ceiling laws were never applied legally on ground level. The powerful and influential continued their hold on large chunk of lands in names of different family members, resulting in depravation of land and associated oppression of lakhs of landless laborers. Even with a small landholding, the person would have managed to carry out sustenance agriculture for him and the family. This lot has thus been robbed of an opportunity of being food secure by improper compliance of ceiling laws. "India's agricultural sector faces a growing number of challenges, including lower agricultural productivity due to climate volatility and reduced available farmland partially due to India's rapidly increasing population outpacing economic growth that strains India's natural resources and land availability" (USDA ERS ,2023)

Along with application of ceiling limits on land, its consolidation will also play a critical role in improving the net productivity compared to the same set as scattered landholdings. The economy of scale works in favour of consolidated landholdings as mechanization and expenditure on inputs would become a gainful venture in such scenario. No political party displays will to take onus of bringing about land consolidation and thereby contribute in direction of food security. The litigations at ground level and conflicting interests of appeasement prevent any such step from seeing light of the day. The fear of disputes regarding location of consolidated land and ownership issues vitiating the village harmony prevents any proactive effort in this domain. This hampers the mechanization of farming in major agricultural belts dominated by small and marginal landholdings.

The vision of food security demands concerted planning of agriculture in accordance with the agro-climatic zones of the nation. Each zone must cater to its strength and make the best use of its resources. Each zone would require a dedicated team comprising of motley of experts-from agro scientists, geologists, geographers, crop scientists, economists, soil scientists, to policy framers, implementers and the farmer to plan in a holistic and sustainable manner for the region. The planning must also take into account the effect of global warming and climate changes on that particular zone and should be periodically revised to that effect. Each zonal plan must reflect the sensitivities about the weather, nature of soil, nature of suitable inputs, average size of landholdings and the financial condition of landowners of the region.

Unavailability of sufficient and timely credit is a big roadblock in getting the farmers their due. Deeper percolation of credit delivery system would ensure that farmers prevent the clutches of high interest rate charging local moneylenders of the region. Farm suicides in Vidarbha is testimony to the extreme steps that destructs families once the farmer is caught in the vicious debt trap in absence of a strong and reliable credit delivery system.

Soil testing and guidance forms another critical domain to promote food security in the nation. Soil scientists and laboratories must play a proactive role in reaching out to the farmers of their zone with inputs and crop related advice. Nature of soil is the guiding factor in deciding the type of suitable crop, number of crop rotations required and the choice of fertilizers and pesticides. The post harvest measures also demand heightened attention as these losses cause huge economical damage to a farmer, who has taken all right steps from seed to crop. Better approach roads, cold storage facilities, knowledge of market rates and a suitable Minimum Support Price (MSP) will guarantee farmers of a just amount for their farm products.

Another crucial input to improve productivity of crops is the timely and sufficient availability of water for the crops. Different crops require different dose of water and influence the choice of crops in the region. Irrigation means must make each drop of water count and contribute to the cause of improving food security of the nation. The use of dip and sprinkler irrigation techniques, highlighting the economy of each water drop, have enormously increased crop productivity in several regions of the nation. Regulating the use of pumps which damage the ground water levels and making positive efforts for recharging the water table are essential to introduce sustainability in our efforts. Creating small reservoirs or "a pond in each farm" concept must be promoted as an effective strategy for water conservation. De-silting of canals must be done regularly to ensure smooth flow of sufficient water in these lifelines for crops. Insulating crop productivity from uncertainty in monsoonal rainfall, saving "each drop as it falls" for judicious and effective use is indispensable. "Nearly the whole of the Indian population has rice at least once a day which allows them to have carbohydrates in their system. Since India is most commonly known for producing and exporting rice to other countries, their lifestyle will be mainly dominated by rice" (Swaminathan, M.S, 263)

Sustainability must also find reflection in our efforts by calibrating use of synthetic fertilizers and pesticides along with the green alternatives. Active adoption of Integrated Pest Management (IPM) and Integrated Water Management (IWM)

methodologies will yield holistic results and ensure sustainability of resources. This guarding of depletion of resources by measuring each action of our generation with an eye on future is paramount. Integration of biological and traditional means along with the suitable nutrient enriched fertilizer for the soil would ascertain richer dividends for many generations to come.

The concept of food security for every individual nation will materialize only when diversification of food occurs beyond the agricultural products. Each region will have to focus on its specific food basket. The ingredients must be sourced from horticulture, pisciculture, poultry and dairy farming. Coastal regions and stretches of inland fishing must incentivize the fishing communities. Use of environment friendly mechanized means would increase the yield of catch for the fishermen, get them more money and improve chances of food security of them and their families. Also the food from these varied fields would substitute the conventional demand and reduce pressure on production from land based sources.

Introduction of region specific cash crop as part of rotating crops in field will boost the net economic returns from same field. With little credit support from the banking system, poultry or dairy activity can be pursued by entrepreneurial farmers to supplement their field incomes. Such initiatives must be encouraged in every region to recreate the magic of "white revolution", which brought prosperity and food security to a large segment. Development of community owned orchards on the Gram Sabha lands can contribute to additional income of farmers of the village. Apart from providing additional income to the farmers, such diversification ventures would also contribute to the nutritional requirements of citizens. The sordid tale of malnutrition in several pockets of our nation being worse than sub-Saharan Africa is no longer a hidden secret. To fight such alarming levels of nutritional deficiency, immediate steps to promote diversification of agriculture must be taken up on mission mode urgency.

Developing each agro-climatic zone in a wholesome manner is essential for ensuring food security of the nation. Coarse grains have been left on the margins of attention by researchers. The vision of food security will translate into reality once the over reliance on rain fed agriculture culminates and each zone develops self sufficiency in food basket. Dry land regions must lead the drive and diminish their dependence on rain fed agricultural tracts. Research to improve productivity and discover better strains of maize, sorghum, jowar, ragi, pulses and millets would boost their production and benefit large tracts of the nation where the major crop. With a high nutritional content, sustained focus and assistance to farmers of these crops can deliver an "evergreen revolution" for the dry zones of the nation.

"India ranks 74 out of 113 major countries in terms of food security index. Though the available nutritional standard is 100% of the requirement, India lags far behind in terms of quality protein intake at 20% which needs to be tackled by making available protein-rich food products such as eggs, meat, fish, chicken, etc. at affordable prices" (Bhatt, M.S, 304)

The technique of crop rotation must be judiciously employed in each region in consultation with the soil scientists and agricultural universities of the region. More field visits and interactive modules for the agricultural students and intensive "lab to land" approach would benefit the productivity by transfer of knowledge. With the preparedness for climatic changes in each agricultural zone intensifying, the need for research and introduction of genetically modified crops would be vital in improving productivity. Climate change is a reality and we are standing on the brink of a catastrophe. The erratic cycle of rainfall, extremes of temperatures, storms, cyclones and submerging coastlines would alter the growth and maturity cycles of several crops and this poses a climatic threat to the concern about food security. Resistant and fast maturing strains will have to be developed in response to survive the onslaught of climatic change.

It is ironical that the vision for food security in a primarily agricultural nation seems farfetched and distant from reality. It demands concerted effort from all the stakeholders. But food security could still elude millions till the access to food grains is simplified and freed from the clutches of a corrupt and creaking distribution system. Even with better economic returns from their fields, a farmer may not be able to afford the prevailing market prices of food products. Thus, despite increasing productivity and diversification of agriculture, the vision of food security may still be blurred. How do we then cleanse the debilitated distribution machinery to make this increased production reach the right beneficiaries at an affordable price?

The ills of the Public Distribution System in our nation are too many to be enumerated. The system has almost lost its purpose and utility for the deserving and has collapsed in face of vested interests, weak monitoring and abundant leakages. Right from selection of beneficiaries to the movement of grains, transparency and accountability is found wanting. The alternative approach of Direct Benefit Transfer whereby the bank accounts of the beneficiaries are linked for transfer of subsidy offers a glimmer of hope. The biometric backdrop of this initiative might prove to be a game changer in reducing the stronghold of powerful and influential in beneficiary selection at the village level. Though a lot of groundwork still needs to be done, transfer of subsidy amount straight away to accounts of beneficiaries will help them gain access to the food available in the market.

For a nation claiming the mantle of global leadership, the vision for food security must be translated into reality at the earliest. It is also linked strongly with the livelihood security of the citizens, which when realized would capacitate them with financial strength to approach the market. Better schemes for generating self and wage employments would empower individuals financially. The norms for deciding the levels of subsidy will have to be re-thought and linked to the index of inflation. This would address the gap between an individual's income and the level required to ensure food security in market. Agricultural production is critical for achieving food security, since close to 99 per cent of food consumed is supplied by agriculture.

All efforts to contain the galloping food inflation will have to be put in place. Strict monitoring and regulation of spot trading, hoarding and cartelization must be carried out by authorities with vigilance and transparency. These and several other measures proposed have been floating in domains of discussion forums, political promises and implementation manuals for too long a time now. It is time they are drawn out and their potential realized. Their cumulative application would result in enhanced food productivity, better economic returns and easier access to food grains in market for one and all. Only after putting the worry of sustenance behind, would the efforts for greater growth and quality of life crystallize.

CONCLUSION

Recently, the world has celebrated as World Food Day, 2023 has highlighted that the importance of Food System. The security cover is comforting, rejuvenating and motivating for any individual. With the assurance of his family getting sufficient nutritional food, his performance in his endeavors would multiply. Such efforts would bring positive developments and prosperity for one and all. A significant amount of food is wasted in India at various stages of the food supply chain, from production to consumption. India has become independent in food grains during the last 30 years due to various crops grown throughout the country. Food security in India depends on availability, accessibility, and affordability of food.

REFERENCES

1. Bhatt, M.S. (Ed.), Poverty and Food Security in India: Problems and Policies, New Delhi: Aakar Books, 2005.
2. "India", The World Factbook, Central Intelligence Agency, 5 September 2023,
3. "USDA ERS (2023) India Continues to Grapple with Food Insecurity". www.ers.usda.gov. Archived from the original on 7 September 2023.
4. Mukherjee, Amitava, Food Security in Asia, Sage India, 2012
5. Swaminathan, M.S.; Bhavani, R.V. (2013). "Food production & availability - Essential prerequisites for sustainable food security". The Indian Journal of Medical Research. 138 (3):