

Transforming Indian Agriculture: Farming to Agri-Business

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Abstract

India with its rich agricultural heritage and diverse climate holds immense potential in the food processing sector for ensuring food security, reducing wastages, enhancing farmers' incomes and providing immense employment opportunity. Food Processing involves transforming raw material products into consumable food items, adding value and extension of shelf life. Smart food processing aimed at reducing the cost of staple food preparation while creating the nutritional foundation for healthy lives. India needs critical transformation in agricultural sector to absorb more people, enhance skill formation, increase and stabilize farmers' income, to help export promotion, etc. Thus this sector promises to offer immense export potentialities having significant opportunities for growth and economic diversifications. The Government of India diligently works towards establishing a strong, transparent, predictable and risk-based regulatory framework for ensuring safe food for consumers. However, chronic climate change and its impacts affect the agricultural output at large. Climate change has made agriculture in India an uncertain and risky proposition. Therefore, India must adopt a holistic approach that makes crops resilient to climate change. Discussions and research on the impacts of climate change provide some valuable suggestions. This year Union Budget allots Rs. 4000 crore for such research and development. Now, the issue of climate change and its impact is no more a problem of agriculture sector and farmers only but the problem of the whole nation. Economists, political thinkers, social scientists should join hands to resist the impact of climate change as well as the challenges faced by the newly 'geared up' food processing units.

Keywords: Food Processing, Agri-business, transformation, economic diversification, climate change, resilient variety

Introduction

Agriculture is the core of Indian culture and tradition besides being the backbone of the economy. India with its rich agricultural heritage and diverse climate holds immense potential in the food processing sector for ensuring food security, reducing wastages, enhancing farmers' incomes and providing immense employment opportunity. Food Processing involves transforming raw material products into consumable food items, adding value and extension of shelf life. This can lead to agricultural transformation pathway. It is the process of transforming agriculture to agri-business. Thus, Food Processing is one of the most promising sectors of the Indian economy based on agricultural output. Increasing part of the world adopts more sophisticated eating habits, poverty in developing countries remain the main driver of malnutrition.

Merits: Food processing leads to low risk spoilage, better palatability, easy digestion, help in destroying spoilage microorganisms, food poisoning bacteria and substances that can cause diseases, low-cost storage, ease of marketing, distribution and increasing food safety; resulting huge employment opportunities, especially, in rural areas. Smart food processing aimed at reducing the cost of staple food preparation while creating the nutritional foundation for healthy lives. India needs critical transformation in

agricultural sector to absorb more people, enhance skill formation, increase and stabilize farmers' income, to help export promotion, etc.

Within 50 years of independence, India has become a food surplus country from a deficient one, through green revolution. Ranking first in milk and pulses, second in vegetables, fruits, wheat and rice, third in eggs and cereals in world agriculture, but is processing less than 10% of its products leaving aside immense investment and job potentialities. During last five years (2020-21), Food Processing sector had grown at an average annual growth rate of around 8.38% as compared 4.87% in agriculture and allied sector. This sector is contributing to GDP, employment and investment besides increased value addition to manufacturing and agriculture sectors respectively. High demand for ready to eat food, Gross Value Addition is 1.88%. According to NSSO 73rd round data-(2015-16), total number of person engaged in food processing is 20.32 lakhs registered and 51.11 lakh unregistered; constituted 14.18% of total employment. In today's fast moving world, with ever changing taste buds processed food is the only option for quick meal. They are convenient, ready to consume and a time saving option. Food processing market size reached \$28,027.5 billion in 2023. In is expected that the sector will grow at 8.8% within 2024-32. Meat, poultry processing, milling (grain and oil seeds),

beverages (tea and coffee), ready to eat and ready to cook products, soya processing and spices would be expected to become around 13.4 lakh within 2021-30. Food and agricultural output constitute approximately 11% of our total export. Production link policy of Food Processing is becoming a promising sector in Indian economy. Besides, this sector also involves a large number of SMEs and is a substantial contributor of additional employment generation as well as ensuring higher income for our farmers.

Export promotion is a strong incentive for agricultural sector. India's share in merchandise export is around 1.8% making it 18th largest exporter of the world. Export sector in India contributes around 23% of the GDP. In case of USA it is 12%; Japan 19%; China 21%, despite India is not an export centric economy. At present, India is the second largest agriculture producer of the world. Whereas, in case processed food production it ranks much below. Thus this sector promises to offer immense export potentialities having significant opportunities for growth and economic diversifications. FSSAI continues to drive the nation, etc are in charge of n's progress towards a healthier food system that aligns with global standard. Food safety is a shared responsibility. Various government agencies, ministries, state governments' research and academic institutions are involved in processed food production to consumption process.

Government Initiatives: Mention must be made that India has undergone a transformative journey in its food regulatory landscape with the enactment of the food safety and Standard Act (FSSA), 2006, that replaced age-old Food Safety and Standard Authority of India (FSSAI). The Government of India diligently works towards establishing a strong, transparent, predictable and risk-based regulatory framework for ensuring safe food for consumers. Processed food is globally competitive. Processed fruits and veggies, fish and sea food, meat and dairy products, poultry and eggs, etc. are high in global demand. In order to fulfill the gap of fund as well as of skilled man power Government of India has undertaken several skill development initiatives to ensure availability of technically qualified and trained staff in the public sector. The Union Budget, 2024-25 lists nine priorities and the foremost important one is Productivity and Resilience in agriculture and the second one is Employment and Skill formation. The Budget on 23rd July, announced package for agriculture and bio-diversity conservation, research on climate resilient crops, which is 0.6% hike than the previous year estimates. There is also announcement of funding for private sector research. For a 5 year period, 2020-25, 10,000 crore rupees is allotted for enhancing the competitiveness of individual micro enterprises, particularly in the unorganized segment of the food processing industries and to promote formalization of the sector. Again, credit link subsidies will be provided to 2 lakh Self Help Group run enterprises. However, there will be a huge demand for skilled man power to run those production units. To meet the need of skilled human resources in 11 specific food processing industries like, bread and bakery products, cold chain, dairy products, fish and sea food processing, etc. special provisions are made. Targeting a growth rate of 10.4% by 2047 in the export sector, Gross Value Addition has been increased from Rs, 1.34 lakh to Rs.2.08 lakh. Besides, NABARD has been at the forefront as an important stakeholder in this sector. Vital role in creating infrastructure creation it has created two funds, viz, Financial Assistance Fund and the Ware House Infrastructure development for scientific storage of food grain support. During 2014-15, Government of India had allotted

Rs. 2000 crore for providing affordable credit to both private and public parties as food processing fund. Opportunities are given to tie up with the state Governments for food parks and food processing units. During 2013-14, Rs.5000 Crore was allotted to support the state government agencies for developing scientific Ware House infrastructure. Food processing market size reached Rs. 28,027.5 lakh billion globally in 2023. There is also an exemption from licensing under the Industries Development and Regulation Act, 1951. Provision is also made for 100% Foreign Direct Investment through an automatic route lowering GST.

Challenges: However, chronic climate change and its impacts affect the agricultural output at large. Climate change has made agriculture in India an uncertain and risky proposition. Therefore, India must adopt a holistic approach that make crops resilient to climate change, should provide income support and safety net to the farmers against their losses. Already, 1 in 69 people, or 1.5% of global population is forcibly displaced mostly due to climate change and unsustainable agricultural practices. Due to deficit rainfall farmers in many places stop farm activities, unseasonal hailstorms, draught, repeated floods, etc harms farm outputs grossly. In 2023 alone, due to hailstorms 40% of wheat production in Punjab impacted. In Assam, tea production also had a declining rate by in the same period. Sudden rise in temperature, unprecedented pest attacks destroy cotton production, large scale production of crops losses due to extreme climatic conditions. The latest Global Climate Risk Index, prepared by a non-profit organization head quartered in Bonn, Germany identifies that India faces extreme weather conditions. In India, agriculture employs 42.3% of total population and has a share of 18.2% in India's GDP according to Economic Survey of India, 2023-24. Almost 70% of our rural households are primarily dependent on agriculture for their livelihood. 86% of our farmers are small and marginal farmers owing land less than 2 hectares. Every extreme weather condition brings them to the edge. 55% of net sown farm land in India is rain fed and this area supplies 44% of total food requirements and 60% of livestock support. These data reveal that majority of our farm land still dependent upon weather. Hence, climate change affects their basic livelihood.

Steps to Tackle the Challenges: Discussions and research on the impacts of climate change provide some valuable suggestions. Mono-cropping pattern should be replaced by multiple cropping. Climate change resilient variety of seeds and plants to be developed. Climate change mostly affects production of wheat, irrigated rice, maize, millets, pigeon pea, chick pea, mustard, soybean, groundnut, potato, cotton, etc. as a result, more focus should be on climate resilient agriculture. This year Union Budget allots Rs. 4000 crore for such research and development. Moreover, organic and natural farming offer holistic benefit, help to build climate resiliency besides their health benefits, environmental sustainability related to soil, water, energy, bio-diversity, carbon sequestration, mitigation and adaptation to climate change. Both Union and state governments have their schemes to promote organic and natural farming. Progress is slow because of lack of level playing fields, overall support system and negligible budget allotment, poor availability of quality inputs, labour intensive and time consuming technique of the organic nature of farming. In addition, inadequate insurance coverage is another factor for which risk of agricultural practices increases rapidly. Only 30% of gross cropped area in India is under insurance coverage. Direct access to market is crucial to improve farmers' income and thereby their resilience. Sustainable agriculture enhances resilience of both the farmers and farming. Farmer-Producer Organization can be a solution to this. The marginal and small farmers in India produce 70% of vegetables and 50% of fruits as well as cereals but they face challenges in marketing due to long supply chains, poor value addition and lack of economies of scale. In order to eradicate those, establishment of FP units can be a solution. Thus, to promote and develop FPOs up to 10,000 by the end of 2027-28, a budget allotment of Rs.6,6865 crore has been made. Another attempt to establish 'Bharat Organics' which promises 50% profit to farmers and will be run in co-operative basis. To face the challenges of climate change and organic farming governments must bridge the gap between production and marketing. States like Karnataka, Odisha, Uttarakhand already procure organic produce and link in with the PDS and Integrated Child Development Schemes. Establishing MSP for all crops under a legal framework is also required. Accurate estimation of crop loss and timely disbursement of insurance amount is very urgent. Till today, no insurance scheme covers seasonal variations, heat wave, sudden change of temperature, etc. s. Another problem related to crop insurance is relief amounts vary from time to time and state to state. In the meantime, Union Government has decided to establish weather forecast based agro-advisories in large numbers to forecast weather variation from area to area.

Although, in the long run, "organic and natural farming system are more productive and profitable, if one considers holistic accounting of all costs (environment, health, etc.) and benefits", yet, majority of the farmers are reluctant to adopt this sustainable way of cultivation. Gradually, health concerns from excessive use of chemical pesticides and fertilizers make farmers grow organic crops at least for personal consumption. Increasing number of commercial farmers shifting their chemical based agricultural practices to organic one especially for vegetables. However, net yield in organic practice is erratic and lower yield deters several farmers from going fully organic. Growing demand for processed organic food in export market may through some light of hope to those confuse farmers.

Conclusion

Government of India is announcing several schemes for developing food processing sector as an alternative to age old agricultural practices. Yet, the diverse problems face by Indian farmers can be arrested only by some farmers centric policy prescriptions with intent government effort. Besides, timely and better financial support during crises will help the new-generation farmers to shift towards agro-based business. Now, the issue of climate change and its impact is no more a problem of agriculture sector and farmers only but the problem of the whole nation. Economists, political thinkers, social scientists should join hands to resist the impact of climate change as well as the challenges faced by the newly 'geared up' food processing units.

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