

AGRO-INDUSTRIES TO INCREASE FARMER'S INCOME

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The agro-industries are getting even more important in view of very impressive growth in high value commodities alongside rising incomes in recent years. It has larger scope for acceleration in future given the thrust on doubling farmer's income. With the corporate sector keen on investing in agribusiness to harness the emerging opportunities in domestic and global markets, time is opportune for reforms that would provide healthy business environment for this sector.

The 68th Round of NSSO survey on employment estimated about 48.9 per cent workers' major livelihood support coming from agriculture. Added to that ~70 per cent of our population lives in rural areas (Census 2011) whose income augmentation should be the number one priority. While price led growth of agriculture, the major rural employer, as a means of enhancing income is not sustainable; the only way is to infuse agro-industrialization in the urban-rural continuum following the cluster approach. It will also address the call of the day of income dimension in agriculture that has taken the driver seat in all agricultural policies and priorities after Prime Minister's call for doubling farmers' income by 2022. Fortunately, the country is miles ahead on the agenda of zero hunger and food security to all from 2.78 to 47.57 times increase in various food items over 1950-51. This is an added feature in Indian Agriculture as the marketed surplus of the commodities has been increasing, demanding more post harvest management and processing to provide adequate shelf life to the produce for negotiating the market on an appropriate time and for fetching good, if not the best, price. Remarkably, our high value commodities production growth is much faster than the staples food items. This is most satisfying for nutritional security point of view, but opens up the challenges for agro-based industries to absorb the additional production that cannot be consumed afresh/raw. Now time is ripe to change our vision and approach of the past which traditionally viewed agriculture and industry as two separate sectors in characteristics and role in the economy and growth was taken as a gradual shift from agriculture to industries with agriculture owning the financing at first stage. Perhaps this needs larger debate as it is easy to distinguish between production and first stage of processing but becomes rather complex afterward. Development of agro processing

Table 1: Changing Scenario of agricultural Production in India

Item	1950-51 Production	2018-19 Production (IV Adv. Estimate)	Times Increase (X)
Food grains	50.83	284.95	5.61
Pulses	8.41	23.40	2.78
Oilseeds	5.16	32.26	6.25
Cotton	0.52	4.88	9.38
Sugarcane	57.05	400.15	7.01
Horticulture	96.56 (1991- 92 level)	314.67 [@]	3.26
Milk	17.00	165.40	9.73
Fish [#]	0.75	11.41	15.21
Egg [#]	1830	87050	47.57
Meat [#]	1.9 (1998-99 level)	7.37	3.88

industries should be viewed as industrialization of agriculture and a joint process leading to a new industrial sector. While it is really difficult to clearly demarcate between the industry and agro-based industry, the definition given by Famine Enquiry Commission (India), 1944 holds pretty appropriate. The Commission defined agro-based industry as "those industries which are involved in supplying the farm with agricultural inputs besides handling the product of the farm may be termed as agro-based industry." The International Standard Industrial Classification (ISIC) included agro-industrial production under manufacture of food, beverages and tobacco, textiles, wearing apparels, leather industries, manufacturing of wood and wood products, manufacturing of paper and paper products, printing and publishing, manufacturing of rubber products.

Income and Employment Opportunities

With such a classification, it shows that the agro and agro-based industries (agro processing, textile, sugar, and other allied activities), which have been the major employer close to hinterlands, have to play a much larger role in present context and priority setting for diversification of the source of income in the rural India as the contribution of cropping and animal husbandry in total income of the farm households is only 35 per cent (Table 2) while wages and service contribute more than 50 per cent in the average monthly income of the agri-households.

Table 2: Share of various sources in average monthly household income (per cent)

Source of Income	Per cent income to the average monthly		
	Agri-households	Non-agri households	All households
Cultivation	35	NA	19
Livestock Rearing	8	NA	4
Other enterprise	6	12	8
Govt/Pvt Service	34	54	43
Wage labour	16	32	24
Other sources	1	2	2

Source: NABARD All India Financial Inclusion Survey (NAFIS), 2016-17

Table 3: Characteristics of Agro-Industry Sector in India during 2016-17

Features	No of factories	Total persons engaged (%)
All industries	234865 (100.00)	100.00
Agro-based Industries	96685 (41.16)	34.73
Agro-based food industries	40178 (17.10)	11.36
Agro-based non-food industries	56507 (24.06)	23.37
Non-Agro industries	138180(59.84)	65.27

Figures in parentheses indicate per cent share of the industry sector

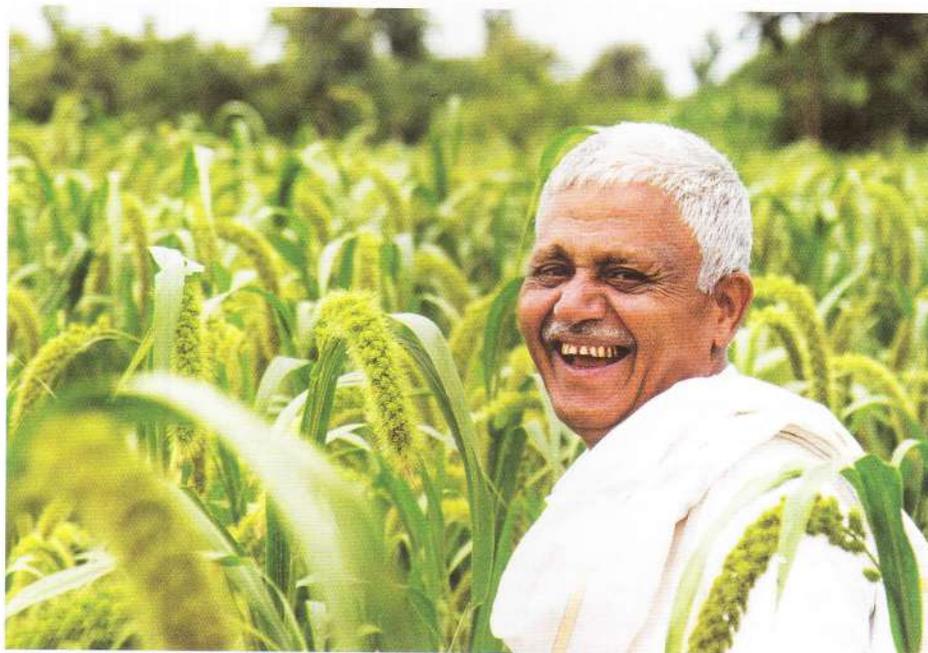
Source: Annual Survey of Industries 2016-17

The Economic Survey 2014–15 emphasized a deeper shift in the agricultural sector to address the risk of high level of food inflation, seasonal and short-term price spikes in some commodities like onions, tomatoes, and potatoes, which have become more severe and long lasting causing economic instability in the system. The Survey recommended bringing a new paradigm in the approach towards agriculture for getting more from less. One of the critical areas that can enhance the income of the rural households is to provide higher opportunity in agro-based food and non-food activities. The Annual Industrial Survey, 2016–17 shows that the agro-industries contribute about 36 per cent of the industrial employment (Table 3). Additionally, the substantial employment is generated in production agriculture and the supply chain. These features indicate that these agribusinesses still largely deserve the priority given to them in the national strategy for development and employment.

From 2016–17 onwards, significant emphasis on agriculture through reorientation of Government interventions in the farm and non-farm sectors was laid so as to double the income of the farmers by 2022 by creation of new infrastructure for irrigation and providing value addition and connectivity from farm to markets.

Agro-food processing industries have the potential to generate directly significant employment in production activities and also indirect employment through its forward and backward linkages. This employment will be in rural areas where these industries have to be located near the source of raw materials, especially perishable agricultural products. These industries would help in reducing post-harvest losses and wastes as well as in using by-products more efficiently. This can increase rural income by fetching better prices to producers and also consumer welfare by increasing the availability of agricultural consumer goods. The available vast potential in our country could be sufficiently exploited through: (i) selection of appropriate scale and technology of production; (ii) up gradation of technology of existing units; (iii) establishment of suitable linkages between products and consumers at home and abroad; and (iv) establishment of suitable institutional arrangements.

Small scale has been a major constraint on the growth of this industry and hence on



by-products of main agro-based industries. Due to this wide range of activities, there is a lot of diversity in the nature of problems and issues relating to different agro-food processing industries. It is, therefore, difficult to envisage an overall technology policy framework covering the various agro-food processing industries. They have the potential of creating a substantial impact on the rural economy and improving the income of the rural population.

the diversification by the vast majority of India farmers into high value agriculture. Investment in infrastructure comprising roads, electricity, and communication would reduce agribusiness costs and induce the private sector to invest in agro-processing, cold storage facilities, refrigerated transportation, and retail chains. Institutional arrangements such as contract farming, producers' organizations, and cooperatives that provide farmers easy access to markets, distribute price risks, and reduce marketing and transaction costs can go a long way in pushing high value agriculture.

Food Processing Industry is one of the major employment intensive segments contributing 11.69 per cent of employment generated in all Registered Factory sector in 2012–13. Food is the biggest expense for an urban and rural Indian household constituting near about 39 per cent and 49 per cent of the total consumption expenditure of households, respectively. The food processing industries covers a wide range of activities utilizing farm, animal and forestry based products as raw materials. There are certain traditional agro-based industries such as rice and flour mills, sugar, khandasari and gur, manufacture of edible oils and the processing of plantation crops like tea, coffee and cashew nuts. There are also some relatively modern food processing industries such as dairy products, confectionery, marine products, horticultural and vegetable products as well as meat and poultry products. In addition, there is also a limited extent of processing of agro-wastes and

Though processing necessarily changes the basic characteristics of the raw produce, but policies relating to food processing activities apply differently in the case of different activities depending on the purpose of processing. Some processing refers to necessary processing that must be done before consumption. Cereals sector belongs to this category of processing. While such processing is already being done in the country, introduction of modern technology in this sector is considered to be beneficial in two ways. Firstly, it would improve the efficiency of processing in terms of higher recovery of desired products. Secondly, it would create a number of potentially useful by-products, some of which are not being fully utilized at present or not utilized in optimum way for producing higher value added products. Although most of the technology is readily available in the country, it is not being extensively adopted because economic incentives are often missing, or institutional arrangements for collection, processing and marketing of the by products may be lacking. Since the processing of by products in the cereals sector constitutes introduction of new manufacturing activities, or the expansion of existing ones, such activities would generate additional employment. India's food processing industry employs more than 64 lakh people directly and indirectly.

The next category of agro-based food processing is concerned with processing and packaging in order to provide easy transportability and marketability of some food products. The processing of milk and milk products falls in this category. This would increase the income of farmers, especially small farmers and landless agricultural labourers in the rural areas. It would also promote consumer welfare. The third category relates to processing activities which would help in extending the storage life of seasonal food products. Fruits and vegetables belong to this category. Processing of fruits and vegetables would help in reducing post-harvest losses and would also provide stable income to the growers by eliminating the seasonal fluctuations in income.

The challenges and complexities arise from these constraints on the one hand, and the need for their continued growth with multiple objectives including profitability and contribution to rural and small farmer development on the other, raises the need for innovative approaches and institutional models for the organization of this agribusiness activity in India. Fortunately, several models—individual and cooperatives—have emerged and provide adequate learning to be scaled out. These include the meaningful learning for technology and innovation in production, procurement, quality and efficiency and the ability to invest in the state-of-the-art modern processing technology to produce quality products, also meeting its high fixed capital need.

Food Processing Policy of India

The Ministry of Food Processing Industries brought out Food Processing Policy of India in 2018. The policy, *inter alia*, has also included the best practices across states and the world. The Government has also emphasized to make India Global Food Factory and Global Food Market and thus opened up immense opportunities for food processing sector. Several initiatives have also been announced for ushering into zero post-harvest wastage by creating a national food grid and national cold chain grid. These policies and programmes must be implemented at the earnest to ensure appropriate growth of agro-food industry and provide adequate opportunity for the rural employment. The reforms like allowing 100 per cent FDI in multi-brand retail will have a long lasting impact. Similarly the initiatives for attractive incentives including capital subsidies, tax rebates, and reduced custom and excise duties,

etc., will help attracting more investment in this sector. Increasing focus is also being given to supply-chain related infrastructure, such as cold chains, abattoirs and food parks. The whole idea is to spur greater growth in the food processing sector as well as connect farmers with the value chain to increase their returns. The States need to create an ecosystem to allow single window clearances and other statutory clearances along with showcasing our raw produce and processed food. The Ministry of Food Processing Industries (MoFPI) has been in the process of collating and addressing issues related to the sector, with an aim to facilitate investors and help build their confidence to boost engagement of foreign investors.

Conclusion:

The agro-industries are getting even more important in view of very impressive growth in high value commodities alongside rising incomes in recent years. It has larger scope for acceleration in future given the thrust on doubling farmer's income. While it would be a welcome move, it also demands for a vibrant and robust response from agro-based food and agro-based non-food industries and other stakeholders involved in the cold chain management. The demand for cold storage and quality storage for non-perishables will go up. The recent studies put a gap of 3.28 million tons. The cold storage facilities need to be developed in the major production catchments so that the farmer has the option to store the produce and may hold it back when the market is saturated and sell it when shortages occur. Above all, policies that facilitate the development of agro-processing industry will go a long way towards creating demand at lucrative prices for high value commodities and other non-food agro-produce. Turning agro and food-processing industry into a major export industry can also create vast employment opportunities for workers since it is a labour-intensive industry. With the corporate sector keen on investing in agribusiness to harness the emerging opportunities in domestic and global markets, time is opportune for reforms that would provide healthy business environment for this sector.

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