



# FOOD PROCESSING

## ADDING VALUE AND INCOME







**A**gricultural commodities form the base of the agriculture production. A year's worth of effort by the farmers combined with monsoon factors yield results that lay the foundation of the farmers' well-being and welfare. Most often, a bumper yield alone does not guarantee a concomitant increment in farmers' income. The profit from farm output is hugely determined by the market forces and infrastructure for handling the excess production. Food processing which often can enhance the shelf life of otherwise perishable farm commodity is fairly at a nascent stage in India. Although there have been concerted efforts by the government to expand the reach of food processing, at a pan India level, the idea is still at its infancy. Food processing can change the fortunes of agriculture. With a plan in place to strategically initiate food processing as a natural progression of harvest of commodities in different phases can organically transform the mindset of farmers. India needs a national food processing plan, if we are serious about raising farmers' income.

### The Rising Agriculture Production

The Department of Agriculture, Cooperation & Farmers Welfare (DAC & FW) has estimated the

production of foodgrains in the country during Kharif 2018 at 141.59 million tonnes (1st Advance Estimates) against 140.73 million tonnes (4th Advance Estimates) during kharif 2017, which is higher by 0.86 million tonnes. Further, kharif foodgrain production is 11.94 million tonnes more than the average production of five years (2012-13 to 2016-17) of 129.65 million tonnes.

Total production of Kharif rice is estimated at 99.24 million tonnes. This is higher by 1.74 million tonnes than the last year's production of 97.50 million tonnes. Further, it is higher by 6.64 million tonnes over the average production of Kharif rice during the last five years.

The total production of Nutri / coarse cereals in the country has decreased to 33.13 million tonnes

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as compared to 33.89 million tonnes during 2017-18. Production of Maize is expected to be 21.47 million tonnes which is higher by 1.23 million tonnes than that of last year's production of 20.24 million tonnes. Further, this is more than 4.40 million tonnes than the average production of maize during the last five years.

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The total production of Kharif oilseeds in the country is estimated at 22.19 million tonnes as compared to 21.00 million tonnes during 2017-18, i.e., an increase of 1.19 million tonnes. Also, it is higher by 2.02 million tonnes than the average production of last five years.

Production of Sugarcane is estimated at 383.89 million tonnes which is higher by 6.99 million tonnes than the last year's production of



376.90 million tonnes. Further, it is higher by 41.85 million tonnes than the average production of last five years.

Estimated production of Cotton is 32.48 million bales (of 170 kg each) and Production of Jute & Mesta estimated at 10.17 million bales (of 180 kg each).

India's horticulture production is estimated to rise by 1 per cent to record 314.67 million tonnes in 2018-19. Onion production in the current year is likely to be around 23.62 million tonnes (MT) as against 23.26 MT in 2017-18, while potato output is estimated at 52.58 MT compared to 51.31 MT. Tomato production is estimated to rise 2 per cent to 20.51 MT as against 19.76

MT in 2017-18. The production of fruits is estimated at 97.35 MT, while that of vegetables at about 187.5 MT.

The final production in 2017-18 was 3.7 per cent higher in the previous year. Among vegetable crops, even though there was a drop in the area under potato and onion crops, the quantum of their production went up.

On the other hand, the production of tomatoes dropped by almost 1 mt, even though there wasn't much of a drop in area. The production of major fruits, on the contrary, rose significantly in 2017-18 as compared to the previous year, the estimates showed. Among fruits, citrus fruits output is expected to rise strongly to 9.6 per cent at 12.51 mt (11.42 mt). The production of mangoes is projected to grow 9 per cent to 21.25 mt. As is the case with banana production, which is expected to go up to 31 mt from 30.5 mt in 2016-17.

Spices production in 2017-18 remained almost unchanged at 8.12 mt even though there was a marginal increase in the acreage to



3.88 mh from 3.67 mh in 2016-17. Among plantation crops, arecanut and cashewnut recorded impressive growth in production. While the production of arecanut went up to 8.33 lakh tonnes in 2017-18 from 7.23 lakh tonnes in 2016-17, production of cashewnut in 2017-18 was 8.17 lakh tonnes as against 7.45 lakh tonnes in the previous year.

India's coffee production is likely to drop by 20 per cent in the new marketing year starting October 2018 to around 2,53,000 tonnes because of severe floods in parts of Karnataka and Kerala. The country is estimated to have harvested 3,16,000 tonnes of coffee in the 2017-18 marketing year (October-September). The industry is estimating coffee production in 2018-19 to fall by at least one-fifth due to floods. Karnataka and Kerala account for 90 per cent of the country's coffee production. As per the government's assessment, coffee crop has been damaged in 2.26 lakh hectare due to heavy rains, and losses are estimated to have been to the tune of Rs 654 crore. The heavy rains that lashed during August had triggered flash floods and landslides in multiple locations in coffee-growing districts of



Kodagu and Hassan, as well as in Kerala. In the current 2017-18 marketing year, Karnataka is estimated to have harvested 2,22,300 tonnes of coffee and Kerala 65,735 tonnes.

Rubber also suffered a backlash owing to the floods in Kerala. From the expected 700,000 tonnes of rubber production during the 2018-19 financial year, the production is likely to come down to 600,000 tonnes in the current fiscal due to the floods. Spices have also borne the brunt of Kerala floods. The state suffered a production loss of more than 25,000 tonnes of spices, valued at Rs. 1,254 crore

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in the devastating floods that wiped out 58,379 hectares of agricultural land, according to a study carried out by the Indian Institute of Spices Research (IISR). The State cultivates 1,62,660 hectares of spices with an annual production of 1,40,000 tonnes.

Milk production on the other end has witnessed an uptrend. Milk production was reported at 165.4 million tonnes during 2016-17 and is estimated to be 176.35 million tonnes during 2017-18. The trend is expected to continue as the projected milk production by 2021-22 is 254.5 million tonnes as per the vision 2022 document. The meat production is expected at 7.4 million tonnes. India has emerged as one of the fastest growing poultry producer over the last decade and is currently the fourth largest in volume terms.

### Promising Agriculture Trade

India is among the 15 leading exporters of agricultural products in the world. The country has emerged as a significant exporter in certain agriculture items like

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rice, meat, spices, raw cotton and sugar. India has developed export competitiveness in certain specialized agriculture products like basmati rice, non-basmati rice, spices, cotton, coffee, cashew, guar gum, marine products, buffalo meat and castor oil.

Total agricultural exports from India grew at a CAGR of 16.45 per cent over FY10-18 to reach US\$ 38.21 billion in FY18. Between Apr-Oct 2018 agriculture exports were US\$ 21.61 billion. India is also the largest producer, consumer and exporter of spices and spice

products. Spice exports from India reached US\$ 3.1 billion in 2017-18. Tea exports from India reached a 36 year high of 240.68 million kgs in CY 2017 while coffee exports reached record 395,000 tonnes in 2017-18. Food & Grocery retail market in India was worth US\$ 380 billion in 2017.

Considering the potential of agricultural products in global market and the abundance of farm production in India, together with the impact the same could have on the farmers' income status, the government introduced a new agriculture export policy. The Agriculture Export Policy was approved by Government of India in December 2018. The new policy aims to increase India's agricultural exports to US\$ 60 billion by 2022 and US\$ 100 billion in the next few years with a stable trade policy regime.

The Department of Commerce also has several schemes to promote exports, including exports of agricultural products: Trade Infrastructure for Export Scheme



(TIES), Market Access Initiatives (MAI) Scheme and Merchandise Exports from India Scheme (MEIS). In addition, assistance to the exporters of agricultural products is also available under the Export Promotion Schemes of Agricultural & Processed Food Products Export Development Authority (APEDA), Marine Products Export Development Authority (MPEDA), Tobacco Board, Tea Board, Coffee Board, Rubber Board and Spices Board. These organisations also seek to promote exports through participation in international fairs & exhibitions, taking initiatives to gain market access for different products in different markets, dissemination of market intelligence and taking steps to ensure quality of exported products.

The exports of agricultural products depend on several factors such as international and domestic demand and supply situation, international and domestic prices, concerns of food security, diplomatic and humanitarian considerations.

Agriculture imports are constantly monitored and appropriate decisions are taken as per the prevailing situation. India's agricultural imports decreased from Rs. 1,64,726 crores in 2016-17 to Rs 1,52,061 crore in 2017-18 registering a decline of

nearly 7.66%. Decrease in value of agricultural imports during this period was primarily on account of imports of wheat, pulses and sugar. Share of agricultural imports in the total imports is 5.08% in 2017-18.

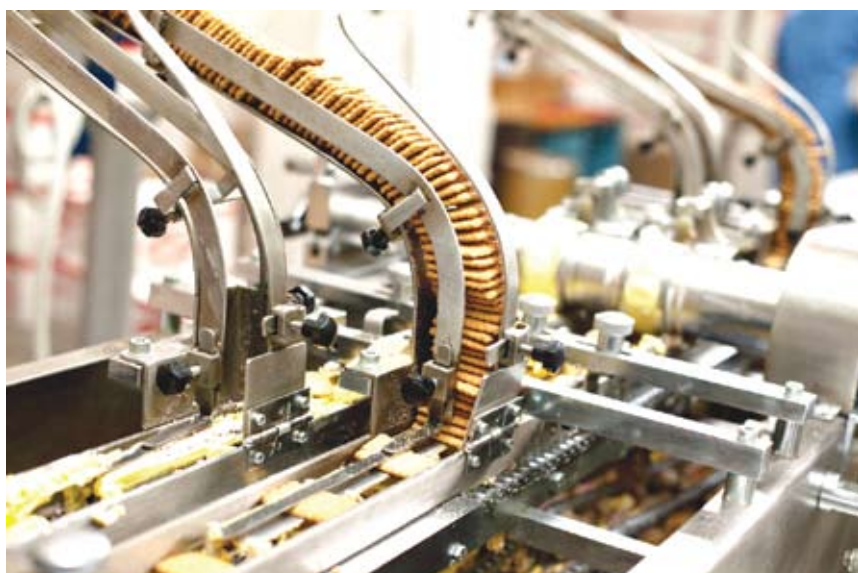
### Food Processing – The Rising Star

India holds immense potential in the segment of food processing. The abundance of agricultural produce, skilled man power, ambient environmental conditions and geographical location raises the chance of India to gain from food processing. Besides, in India, the food sector has emerged as a high-growth and high-profit sector due to its immense potential for value addition, particularly within the food processing industry.



The industry engages approximately 1.77 mn people in around 39,319 registered units with fixed capital of \$ 29.2 bn and aggregate output of around \$ 144.6 bn. Major industries constituting the Food processing industry are grains, sugar, edible oils, beverages and dairy products. The key sub-segments of the Food Processing industry in India are: Dairy, Fruits & Vegetables, Poultry & Meat processing, Fisheries, Food retail etc.

The Indian food and grocery market is the world's sixth largest, with retail contributing 70 per cent of the sales. The Indian food processing industry accounts for 32 per cent of the country's total food market, one of the largest industries in India and is ranked fifth in terms of production, consumption, export and expected growth. It contributes around 8.80 and 8.39 per cent of Gross Value Added (GVA) in Manufacturing and Agriculture respectively, 13 per cent of India's exports and six per cent of total industrial investment. The Indian gourmet food market is currently valued at US\$ 1.3 billion and is growing at a Compound Annual Growth Rate (CAGR) of 20 per cent. India's organic food market is expected to increase by three times by 2020.





According to the data provided by the Department of Industrial Policies and Promotion (DIPP), the food processing sector in India has received around US\$ 7.54 billion worth of Foreign Direct Investment (FDI) during the period April 2000-March 2017. The Confederation of Indian Industry (CII) estimates that the food processing sectors have the potential to attract as much as US\$ 33 billion of investment over the next 10 years and also to generate employment of nine million person-days.

Indian government has been keenly promoting the food processing sector and that has started to yield results considering the interest evinced by many players. "At the first edition of World Food India last year, we had investment proposals of more than \$14 billion, of which ground has been broken for projects worth \$11 billion. So, next year, we are targeting to at least double the figure, as investments," said Ms. Harsimrat Kaur Badal, Union Food Processing Minister. The minister is expecting more than \$28 billion worth of foreign direct investments (FDI) in the food processing sector in 2019.

The Government of India aims to boost growth in the food processing sector by leveraging reforms such as 100 per cent Foreign direct investment (FDI) in marketing of food products and various incentives at central and state government level along with a strong focus on



supply chain infrastructure. The Government of India has relaxed foreign direct investment (FDI) norms for the sector, allowing up to 100 per cent FDI in food product e-commerce through automatic route.

The Food Safety and Standards Authority of India (FSSAI) plans to invest around Rs 482 crore (US\$ 72.3 million) to strengthen the food testing infrastructure in India, by upgrading 59 existing food testing laboratories and setting up 62 new mobile testing labs across the country.

The government has sanctioned 42 Mega Food Parks (MFPs) to be set up in the country under the Mega Food Park Scheme. Currently, 17 Mega Food Parks have become functional.



### The Uncharted Territory

Opportunities galore in the food processing segment especially beyond the conventional food processing activities. Indians are driving the demand for processed food in India. A space has also been opened up for healthy, safe and hygienic food. This space can be used up and in the process a stable market can be created for traditional healthy snacks. A large number of companies are coming up with offerings in healthy snacking category including roasted makhanas in numerous flavours, dry fruits / nuts with a twist, vacuum fried vegetable based snacks (palak, okra, kale snacks), freeze dried fruits, smoothies, juices etc. The key to create and sustain interest in this category among younger consumers is through attractive and user friendly packaging and innovative taste.

Another lesser explored area is the one of ready to eat food category. A few players have ventured into this segment. However, this category can absorb more. With more and more Indians living in different cities, dependent on themselves to meet their food requirements, options such as these will surely receive wider acceptance.

Newer requirements will be

demanding and may create space for more technologies in packaging, and creation of innovative products. Packaging especially is a lesser explored area demanding new age solutions capitalizing on the need of easy handling, longer shelf life, better dispensing quality etc. Presenting conventional /traditional food in a variant with higher shelf and better taste also requires the aid of technology. Ventures thus concentrating on automation based technologies and robotics will have immense scope.

Food safety will emerge as an important challenge in the event of enhanced food processing demands. Inadequate knowledge about food hygiene and the standards and certification will be a major handicap. The tiny, small- and medium-scale industries—find it difficult to identify relevant procedural and compliance changes and they lack the capacity to track regulatory changes. The unawareness is also prevalent among the producers, consumers, food handlers, and even officials. The awareness among Indian consumers regarding food safety has been heightened in the recent years. Rural consumers also deserve safe, high-quality food, and the government can reach them through mass-media campaigns. When consumers demand safe

foods, industry, producers, and food handlers will comply. The Food Safety and Standards Act (FSSA) of 2006 was designed to improve the overall food safety of the population and the food trade within and outside the country. The FSSA consolidated responsibility for food safety in the hands of the Food Safety and Standards Authority of India (FSSAI). In spite of the decade-old transition from the previous food safety laws into the FSSA's integrated standards and regulations, there remain overlapping and residual/pre-existing standards maintained by other regulatory bodies. Clarity is needed if all stakeholders are to conform to FSSA regulations.

Temperature controlled warehouses for the perishables, cold storage, appropriate logistics will also emerge as a prerequisite for the development of the sector. This area requires intensive efforts from the government and the corporates as it is investment intensive. The only way of revolutionizing the food processing segment is by channelizing the capital to this niche area. The government has taken up this massive responsibility and has committed to spend Rs6,000 crore over the next three years to create the infrastructure which will leverage investments worth Rs.31,000 crore. Considering the seasonality in the procurement of the raw materials, infrastructure can play a significant role.

Food processing has to be integrated as a significant component of agriculture. It is a stated fact that a massive amount of agricultural produce is wasted due to the peculiar situation of abundance against the lack of adequate storage facilities. This calls for an intervention that can convert the abundance into products with longer shelf life. The value addition not only addresses the surplus but also conserves the value of agricultural commodities in the market.

