

GROWTH OF AGRO-BASED FOOD INDUSTRY

Dr.A.Logu,
Assistant Professor in Economics,
Sethupathi Govt Arts College,
Ramanathapuram.
Tamil Nadu.

Introduction:

The growth of agro based food industry in India can be studied under five heads namely rice and flour mills, cashew processing industry, vegetable and fruit processing industry, bread making and confectionaries and vegetable oil mills. Agro-based food industry is of enormous significance for India's development because of the vital linkages and synergies that it promotes between the two pillars of the economy namely Industry and Agriculture. Food processing covers a spectrum of products from sub sector comprising agriculture horticulture, plantation animal husbandry and fisheries. Agro based food industry involves the commercial movement of food from field to fork. Agro based food industry includes processing, packing and marketing of cereals, pulses, spices and masalas, noodles making, mini rice milling units, Indian sweet making, bee keeping, fruits and vegetables processing, edible oil industry, processing of maize and ragi, cashew processing, diary units, cattle feed., tea, coffee, animal feed and so on.

Agriculture

Agriculture is a term which refers to the work of converting the natural input into output, essential for the survival of human beings in this world. The farmers in our country are mostly uneducated. Due to lack of education and technological upgradation they are unable to get effective information about processing of agricultural produce. The selling of agricultural produce may be carried out directly by the farmers themselves or through some agents. Modernisation of agriculture alone can raise the consumption levels of agro food items and boost agriculture exports. Agro- based food industries are expected to play a major role in ensuring rural prosperity. But, they require a problem – free and highly modernised agricultural sector.

Food Industry

India's agro based food processing industry covers rice and flour mills, fruits and vegetables processing, meat and poultry, milk and milk products, alcoholic beverages, fishing, grain processing and other consumer product groups like confectionary, bread and sweet making, soy based products, protein foods, vegetable oil mills. The

agro food processing sectors in India are of the largest in terms of production, consumption, export and growth prospects. Agro food industries produce major processed products from minor agriculture produce. Most fruits and vegetables produced in India are still consumed fresh except for a very small quantity going for manufacture of jam, jelly, juice, confectionaries syrup, beverages, squash, wine, sauces, pickle, dehydration of aonla, karonda, custard apple, tamarind and canning of foods. Cottage industries are owned and run by rural households with very little capital investment and a high level of manual labour. Pickles, papad, banana and potato chips come under this category. Small Scale Industries are characterized by medium investment and semi- automation. Edible oil, rice mills, baking units and confectionaries come under this category. Large Scale Industries involves large investment and a high level of automation. Sugar mills, noodle making and dairy products fall in this category.

Concept of Agro-Based Food Industry:

The perishable nature of food grains need condensing, canning preserving, dehydrating, drying, smoking, pickling and similar other processes to make them available throughout the year. To name a few, hulling of paddy into rice; grinding of wheat and other grains to atta; pulse into dals; sugarcane after conversion into gut; khandsari and sugar; oilseeds into oil; bottling of fruit juices; preparation of pickles, achar, chutneys, juices, jams and jellies, dehydration of pea, pineapple processing and citrus oil. These could be developed in feed from the processing of citrus fruits areas of production of specialized crops, vegetables and fruits. Besides, in the rice producing areas of East and South, there is further possibility of setting up of industries for rice milling and rice bran oil. Likewise the sugarcane producing areas may be developed into manufacturing units for molasses, alcohol, methylated spirit.

Need of Agro-Based Food Industry:

Large scale disguised unemployment is one of the main characteristics of most of the densely populated under developed economy. These economies suffer from the problem of rural over-population, mainly dependent on agriculture as a means of livelihood. With unchanged techniques of production a large part of the population engaged in agriculture and allied activities may be removed without reducing the output. This disguised rural unemployment is the main obstacle to economic development. A solution for the problem lies in industrialisation of rural areas by starting more number of agro-based food industries. These industries provide productive employment for the rural population. The concentration of industries in urban areas increases the disparities between the rural and urban income levels. Starting of more agro-based food industries serves as an

effective means of reducing rural-urban disparities. It stops migration of people from rural to urban areas and accelerates the process of rural development. In brief, agro-based food industries play an effective role in rural transformation, generation of balanced socioeconomic development through an increase in gainful employment and a rise in income levels of rural people engaged in agriculture. Agro-based food industries need a special attention since their importance in the Indian context gets further enhancement.

Special Features of Agro-Based Industry:

Agro-based food industry is primarily based on the utilization of locally available raw-material and skill with little capital outlay. India has been a land of villages and agriculture is going to remain for years to come, the mainstay of its population. Therefore, the agro-based food industries have the following features.

- ❖ These industries should be such as can be conveniently taken up by the people in the rural areas without any encroachment on their main occupation.
- ❖ They should be simple so that they could be taken up by them with their own labour and that of the labour of their families.
- ❖ They should, as far as possible, involve small capital, and this should be available from the financial institutions available locally.
- ❖ They should be based on the regional facilities and comparative advantages of particular district in regard to the supply of raw-materials, availability of nearby market and the facilities of power.
- ❖ These industries can be conveniently developed in different parts of the country.
- ❖ There is diverse nature of markets ranging from local and regional to national and international.
- ❖ There are serious infrastructure constraints in the rural areas for the development of agro-based food industries.

Significance of Agro-Based Industry:

The significance of agro-based food industries in our economy is stressed on the basis of four arguments-employment, decentralisation, equality and latent resources. Agro food industries are labour-intensive and are capable of generating more employment per unit of capital employed. These industries have been the instrument in attaining self sufficiency by narrowing the gulf between demand and supply. These industries have helped in increasing the national income and also in its equal distribution. Befitting the national genius and temperament and requiring less investment, it has fulfilled the wants of the lower class people. Another note-worthy importance of this sector is that it takes the benefit of industrialization to the interior areas and this

helps in arresting the lopsided development of different parts of the country⁵. The agro based food industries have tremendous export potential. These industries produce eatables of common man. Growing agri-business is one of the feasible means of injecting purchasing power into the rural sector. Above all agro based food industries operate as catalytic agents for development of infrastructure.

Rice and Flour Mills:

Starting with a small number of processing facilities in 1950 – 51, a fairly well spread network of processing facilities has developed in the country. Various estimates suggest the number of processing units in 2009 – 2010 as small hammer mills – 2, 70,000, rice hullers – 90,000, rice sellers – 11, 000, huller cum – sellers – 12, 000, and modern rice mills – 30,000. Recent trends in rice and flow mills processing technologies include fully automatic rice mills, partially cooked and cooking rice, breakfast cereals and value added products, attractive packaged and branded flours, fully automatic roller flour mills, whole bran wheat flour, fortified wheat flour, large number of baked products, automatic chapatti making, corn flour, corn flake snacks, starch material corn flour with specific consumer desired attributes, baby corn, automatic corn processing plants, automatic processing units for pulses with driers, colour sorters, full fat soy flour for bakery and fortified foods. Starting with 20.6 Mt of rice production during 1950- 51 the country has come a long way to produce about 89.48 Mt of rice in the year 1999 – 2010. Similarly, in processing sector the technology has undergone significant changes. Earlier hand pounding pedal operated system and Engle berg huller units were common for milling of paddy. By the year 1998 – 99, there were nearly 30,000 modern rice mills using rubber rolls for paddy de-husking. Of these, more than 5,000 are large rice mills with parboiling facility and nearly 100 have colour sorters for removal of discolored rice for export market.

Vegetables and Fruit Processing Industry:

Joint effort of Research and development institutions, farmers, government agencies India emerging as a major producer of fruits and vegetables in the world. In the year 2000 – 2001, the country produced about 45 millions tones of fruits and 80 million tonnes of vegetables. It was next to China in production of vegetables and topped in production of fruits. However, the growth in post harvest sector has not kept pace with the production. Even during the year 2000 – 2001, there were only 6,000 fruits and vegetables units in the country that had grown from a figure of about 1,000 during 1950 – 55. Less than one per cent of the total produce was processed though the installed capacity of the processing industry has grown steadily from 0.27 Mt in 2000 to about 3 Mt in 2011-2018. Significant developments in technology include better understanding of the process of ripening

of fruits, optimum harvesting time, pre-cooling of freshly harvested produce, cold storing of the raw fruits and vegetables sorting cleaning, waxing, packing technology for fruits.

Most significant work has been recorded in the technology for ripening of the fruits under controlled conditions. Production of juices and value-added products including jams, jellies, pickles, canned products and so on has become a commercial success. The industry using indigenous technology includes units engaged in juice extraction, concentration of juice, canning and production of several of the products like jams, jellies, canned fruits, derived vegetables etc. Technology is still being imported for establishment of large scale export-oriented units for production of items like banana paste, concentrates of various fruit juices, sorting, cleaning, washing, waxing and packaging of raw fruits and vegetables. By the year 1998-99 share of different products in the total processed fruits and vegetables was; pulp and juice 27 percent, jams and jellies 10 percent, pickles 12 percent, ready to serve beverage 13 percent, syrups 8 percent, squashes 4 percent, tomato products 4 percent, canned vegetables 4 percent and other products 18 percent. The industry has been facing problems of low capacity utilization, technological obsolescence and marketing. It has to work under the constraints of high fluctuations in raw material quality and fluctuating market price, poor technology for handling and storage, inadequate Research and Development support for product development, high cost of energy and uncertainty in availability of adequate quantity of processing purposes, inadequate and expensive cold chain facilities and varying requirements of processing conditions from one material to another. Future Research and Development has focus on the issues of economically producing value-added products and product diversification besides the issues mentioned above. The world vegetable and fruit juice industry has rapidly developed and has undergone significant change both in the technical and in marketing aspects. At the same time several developing countries have gone into fruit juice export business.

Cashew Industry:

As the growth of the cashew industry mainly depends on the supply of raw cashew-nuts, efforts are made to estimate the production of raw nuts from time to time. The Directorate of Cashew-nut Development estimates the raw nut production taking into account several factors such as, area under crop, quantity processed, local consumption, import of raw nuts and export of cashew kernels. The production of raw nuts in India in the year 1955-56 was estimated at 79,000 tonnes. It steadily increased to 1,44,000 in 1965-66 and to 1,83,000 tonnes in 1971-72. Thereafter, it fluctuated between 1,34,000 tonnes and 1,78,000 tonnes up to the year 1979-80. In 1980-81 the production went up to 1,85,000 tonnes and in the following year it increased to 1,96,000 tonnes.

But current figures are quite discouraging. In 2011, the total production of raw nuts came down to 1,40,000 tonnes. It further declined to 1, 20, 0000 tonnes in 2018.

Fruit Juice Industry:

The demand for pineapple for pineapple juice has increased and continues to offer interesting prospects to new suppliers of this juice from developing countries. Trade on this is dominated by countries like the Philippines, Thailand, and Brazil. World trade in other tropical fruit juices (mainly in the form of raw material) remains very small, probably in the range of 50,000-60,000 tonnes annually in single strength. However, from the survey it is observed there is a growing interest in the new tropical fruit juice on account of promotional activities by the beverage industry. In most of the major markets however, the taste for tropical fruit juices are fairly exclusive compared to citrus and other fruits like passion fruit, mango, guava, papaya.

Mango has traditionally been an important product in the Middle East and in various ethnic in Europe and North America. There is growing importance in other markets as well because of the certain price stability and the general interest in tropical fruit products. Guava is also increasingly used as raw material and trade sources expect a steady expansion in demand. The yellow and pink varieties are in demand in Europe and the United states. Papaya is found that papaya's taste and flavor normally do not appeal to consumers in the industrial markets. However, there is a demand for this product in yogurt and baby food and also as an adjunct in multi-food products. Other tropical fruit juices seem to have a very limited market due to a wide variation in taste and flavor.

Export of Agro-Based Foods:

Agricultural exports were 44 percent of total exports in financial year 1960; they decreased to 32 percent in financial year 1970 percent in financial year 1980, to 18.5 percent in financial year 1988, and to 15.3 percent in financial year 1993. This drop in share of agriculture in total exports was somewhat misleading because agricultural products, such as jute and cotton, which were exported in the raw form in the 1950s, have been exported as cotton yarn, fabrics, fabrics, ready-made garments, coir yarn, and jute manufactures since the 1960s. The composition of agricultural and allied products for export changed primarily due to the continuing increase of demand in the domestic market. This demand cut into the excess available for export in spite of a continuing desire, on the part of government, to shore up the invariant foreign-exchange shortage. In financial year 1960, tea was the major export by value. Oil cakes, cashew kernels, tobacco, raw cotton and spices were about equal in value but were only one eighth of the value of tea exports. By financial year 1980, tea was still; a

major export commodity, however rice, coffee, fish, and fish products came close, followed by oil cakes, cashew kernels, and cotton. In 1992- 93 fish and fish products became the main agricultural export, followed by oil meals, then cereals, and then tea.

The share of fish products rose steadily from less than 2 percent of all agricultural exports in financial year 1960, to 10 percent in financial year 1980, to around 15 percent for the 3year period ending in financial year 1990, and to 23 percent in financial year 1992. The contribution of tea in agricultural exports fell from 40 percent in financial year 1960 to around 20 percent in the financial year 1988 and to only 13 percent by financial year 1992. Table 2.8 shows a tremendous increase in the export of agro based food products from India both in quantity and in value. The dried and preserved vegetable export increased from rupees 383 crores in the year 2001-2002 to rupees 424 crores in the year 2009-10. The export of mango pulp increased from rupees 138 crores in the year 2001-02 to rupees 293.5 crores in the year 2009-10. The export of processed vegetables increased from rupees 108 crores to rupees 508 crores in the year 2009-10. The processed groundnuts export increased from rupees 139 crores in the year 2001-02 to rupees 798 crores in the year 2009-10. The export of jaggary and confectionaries increased from rupees 16 crores in the 2001-02 to rupees 873 crores in the year 2009-10. The export of total cereals in the year 2001-02 to rupees 7630 crores in the year 2011-18. This indicates that there are good prospects for starting of more number of agro based food industries in India.

Conclusion:

Industrialisation is as much as essential ingredient of rapid and self sustained development of rural areas as it is for the development of the entire country. Agro- based food industries are those which match the human and capital resources of the country and operate on the scale appropriate to the market to be served. It is a process of the improvement in industries, in the development of an area and also of the participation by area factors and agents in the growth of industries. The standard shift is found in the consumption pattern of fruits, vegetables, nuts, snack foods, oil foods, juices and beverages. It is clear that exports of these agro based foods have been growing at an impressive rate. Considering this factor seriously the government should come forward to implement all the various suggestions given and thereby many people can start more agro based food industrial units. India can definitely earn more amount of foreign exchange by exporting agro based food items to various countries.

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