

A PROBING ON FOOD PROCESSING INDUSTRY TO IMPROVE RURAL INCOME IN INDIA

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ABSTRACT

A well-developed food processing industry is expected to increase agricultural prices, reduce waste, secure added value, promote crop diversification, create employment opportunities, and generate export income. Growth in the food processing industry will lead to an increase in demand for agricultural products, vegetables, fruits, etc., leading to an increase in agricultural income. The food industry is closely tied to the rural economy, as all raw materials are produced by rural people. Therefore, the growth of the food industry, whether positive or negative, will have a direct impact on India's rural economy. The food processing industry helps reduce inequalities between rural and urban areas and ensures household food and nutritional security at an affordable price for all. The development of agro-based industries is easy to establish and has the potential to provide stable additional income to rural populations without large initial investments. Therefore, the development of the agricultural industry plays an important role in the process of economic development of the country as a whole. We have attempted to review the literature related to the study of the food processing industry in India and other countries. For the healthy development of the food industry, various government committees, experts, researchers, agricultural universities, universities, and research institutions have published reports and results after studying the problems and various aspects of the food industry. is being announced. We contributed by making recommendations.

Keywords: food, processing, industry, opportunities, development, economy, rural

INTRODUCTIONS

The food processing industry has emerged as an important option to address the growing challenges increasing employment opportunities in India. The food industry increases the workforce in rural areas and helps support household livelihoods. The most important aspect of this type of industry is that a significant portion of the raw materials are processed and usually come from the countryside. It has very high employment potential with significantly less investment. The origins of food processing date back to prehistoric times. At that time, raw processing included butchering, fermentation, sun-drying, salt preservation, and various types of cooking (roasting, smoking, steaming, baking, etc.). Before the introduction of canning, salt preservation was primarily used in the diet of warriors and sailors. Evidence for the existence of these methods can be found in the texts of ancient Greek, Chaldean, Egyptian, and Roman civilizations, as well as in archaeological evidence from Europe, the Americas, and Asia. These proven processing techniques remained essentially unchanged until the advent of the Industrial Revolution. There are also examples of pre-industrial prepared foods such as Cornish pasty and haggis. It was and still is considered a processed food. Food processing has also helped prepare quick and nutritious meals for busy families. Modern food processing techniques from the 19th century to the 20th century were developed primarily for military purposes. In 1809, Nicolas Appert¹ invented a vacuum bottling technique designed to feed the French army, which contributed to his development of canning in 1810, and later Peter He to the development of canning by Durand². Contributed. Canned food was initially expensive and somewhat dangerous due to the lead in the cans, but later became a staple food around the world. Pasteurization, discovered by Louis Pasteur in 1862, was a major advance in ensuring the microbiological safety of food. In the 20th century, World War II, the Space Race, and the rise of a consumer society in developed countries (including the United States) led to the growth of food processing through advances such as spray drying, fruit juice concentrates, freeze drying, and food processing. contributed to. Introduction of artificial sweeteners, colors and preservatives such as sodium benzoate. The late 20th century saw the development of home-prepared meals such as dried instant soups, products such as reconstituted fruits and juices, and MRE food rations. In Western Europe and North America, the pursuit of convenience increased in the second half of the 20th century. Food processing companies marketed their products to middle-class working wives and mothers in particular. Frozen foods (often credited to Clarence Birdseye) found success with the sale of concentrated juices and "TV dinners." Processors used time values to appeal to postwar populations, and this same appeal contributes to the success of today's ready-to-eat foods. The food industry plays an important role in meeting community needs for food availability, distribution, and quality. To meet the needs of different consumers, manufacturers need to customize their products and services to suit their needs. Food processing industry has the typical characteristic³

MEANING OF FOOD PROCESSING INDUSTRIES

"Food processing" mainly refers to the work of adding value to agricultural and horticultural crops using various methods such as sorting, sorting, and packaging. In other words, it is a technology for effectively producing and preserving food materials with the aim of extending their shelf life. Improve quality and make it more functionally convenient. It covers a wide range of products from agriculture, horticulture, plantation, livestock and fisheries sub-sectors. According to the United Nations Industrial Development Organization (UNIDO), the term "agricultural industry" refers to industries that use agricultural raw materials as the main input for manufacturing industrial products on a commercial scale. Agriculture, including agricultural products. Therefore, agriculture-based industries can be broadly defined as industries that depend on agriculture for raw materials and other basic inputs. Agro-processing industry refers to activities that transform agricultural raw materials into various forms that add value to products. Agriculture-based industries are those that are directly or indirectly linked to agriculture (Bhattacharya 1980). Agro-processing industries, especially food manufacturing, tobacco, and textile processing, dominate the commercial industry sector. Agrifood is a subgroup of the agricultural industry, and is an industry that deals exclusively with the production, processing, and management of food products from agricultural raw materials. It spans a variety of industries and represents an aggregation of many commodity subsectors, such as grains, dairy, coffee, fruits, vegetables, and cotton (Jaffee et al., 2003). Food processing is a set of operations in which raw food is processed into food to extend its shelf life. H. Extends shelf life, allows storage and reduces the time and effort required for the required cooking process. Carlos A. Monteiro (2012). Food processing is any method of converting fresh produce into food.⁴

This may involve one or a combination of various processes, including washing, grinding, pasteurization, freezing, fermentation, packaging, cooking, etc. According to FAO (1997), "Agro-processing is a sub-sector of manufacturing that processes raw materials and intermediate products from the agricultural sector." Agro-processing therefore means the transformation of products obtained from agriculture. Masu.

The Standard Industrial Classification also classifies 11 sectors: food, beverages, paper and paper products, wood and wood products, textiles, clothing, furniture, tobacco, rubber products, footwear, and other agro-processing industries. leather and leather goods.

SIGNIFICANCE OF THE STUDY

India's agro-processing industry plays an important role in national economic development and has the potential to meet local needs and export requirements. The infrastructure supporting this industry is well established, including electricity supply through government-funded rural electrification programs, roads, and communications networks. Training programs in manufacturing skills (tool making, welding) for local artisans and users have also been established. However, the field currently faces many challenges arising from the downturn in the national economy, uncertainty regarding access to domestic and international funding, limited research, limited technical advice, limited marketing information, and lack of reliable markets. are facing challenges. The development of agro-based industries is easy to establish and has the

potential to provide stable additional income to rural populations without large initial investments. Therefore, the development of agriculture-based industries plays an important role in the process of economic development of the country as a whole.

CLASSIFICATION OF INDUSTRIAL AGRICULTURE

Industrial agriculture can generally be classified into four categories:

- (1) Agricultural industries that process agricultural products;
- (2) Agricultural industries that produce agricultural machinery and equipment;
- (3) Agriculture. inputs (fertilizers, pesticides) in the agricultural industry, herbicides, etc.) and
- (4) agricultural sector, services in the agricultural industry (support services). The agricultural industry of agro-processing is the part of the agricultural industry that processes raw materials obtained from plants, animals, and fish. Such processing includes conversion and preservation processes by physical or chemical changes, storage, packaging and distribution processes. Processing ranges from simple processing such as cleaning, sorting (sorting), and packaging to advanced processing such as crushing, crushing, extraction/refining, frying (roasting), spinning, and manufacturing processes such as canning. The food industry is part of the agricultural processing industry.

OBJECTIVES OF THE STUDY

The main objectives of this research are as follows.

1. To understand the current situation of the food processing sector in India.
2. Evaluate the role of the processed food sector in creating employment opportunities, increasing production, incomes and improving living standards.
3. Find out the opportunities and challenges of the Indian food industry.
4. Review of government policies for development of the food processing industry in India. Find appropriate suggestions and conclusions.

Explore opportunities for the food processing industry in India Explore the impact of the food processing industry in eradicating rural poverty and creating employment opportunities Identifying various opportunities and employment opportunities Food industry challenges Find this industry Finding appropriate solutions, suggestions and conclusions for.

RESEARCH METHODOLOGY

This study is descriptive in nature and draws on various sources such as national and international journals, magazines, books, websites, government reports, NSSO surveys and newspapers, and annual reports of the government agency APEDA. Based on secondary sources collected from. NIN, MFPI, MPEDA, newsletters, food magazines, management books etc.

The proposed study is based on a descriptive research design. Relevant questions were considered based on information collected from secondary sources.

To improve the food processing industry, researchers interact with different people and groups working in these fields. Various issues were analyzed using statistical or analytical tools and techniques, as appropriate. Food processing methods¹⁹ Food processing includes traditional methods (heat treatment, fermentation, pickling, smoking, drying, salting) and modern methods

(pasteurization, ultraheat treatment, high pressure treatment or packaging in a modified atmosphere). Some common methods are described below.

Canned Food Food is heated to high temperatures. This process is called pasteurization. The food is then packaged and stored in airtight containers.

Fermentation The breakdown of sugars by bacteria, yeast, or other microorganisms under anaerobic conditions. This means that no oxygen (other than the oxygen present in the sugar) is required for this process. Fermentation is used, among other things, to make alcoholic beverages such as wine, beer, and cider, and to preserve foods such as sauerkraut, dried sausages, and yogurt, but it is also used to leaven dough in bread making.

Freezing Reduces the temperature of food below 0°C to reduce the activity of harmful bacteria. This process can be used to preserve most foods, including fruits, vegetables, meat, fish, and prepared meals.

Modified Atmosphere Packaging The air in the packaging is replaced by an inert gas mixture containing oxygen, carbon dioxide, and nitrogen. These Gasses are also present in the air we breathe. They help extend the shelf life of fresh foods (usually fruits, vegetables, meat and meat products, seafood, etc.).

LITERATURE REVIEW

This has attempted to review the literature related to the study of the food processing industry in India and other countries. For the healthy development of the food processing industry, various government committees, experts, researchers, agricultural universities, universities and research institutions have conducted reports after studying and considering the problems and various aspects of the food processing industry. He has contributed by publishing books, findings, and recommendations. Alastair Hicks (2001):⁵ Rural economies can be developed not only through increased agricultural productivity, but also through rural industries, particularly food processing industries, which are important in the rapid transformation of rural economies. The rural food processing industry is important in linking agriculture and industry, creating employment opportunities and improving the economic well-being of rural India. Rural food processing industries can play an important role in rural poverty alleviation and sustainable development in many countries in the Asia-Pacific region. Farm incomes can be increased by providing free markets for agricultural products, creating non-farm jobs, and reducing rural-to-urban migration. Local food processing factories are primarily made up of small and medium-sized enterprises (SMEs), which suffer from poor infrastructure, lack of entrepreneurial talent and skilled labor, limited access to appropriate technology, fluctuations in demand, and profit margins. It faces constraints such as Allan N. Rae (1999):⁶ In some countries, food consumption patterns change significantly as the economy develops. The most influential factors extracted from this study are household expenditure and women's education level. The data collected for this study comes from a household survey to quantify the importance of various socio-economic variables. Bishnu Bhattacharyya (2013)⁷ - Food processing is the process of converting raw materials into food or converting food into other forms of consumption based on local raw materials and the indigenous knowledge and skills of the people. The methods and techniques used. One of the most important

areas of food processing is the processing of fruits and vegetables. FAO (2011)⁸ has published a report on global food loss and waste. This report focuses on losses occurring throughout the food chain, identifying the causes of food waste and possible ways to prevent them. In this study, the Swedish Institute for Food Biotechnology (SIK) takes advantage of the large flow of food from production to consumption and uses existing data to measure food loss and waste.

FICCI Survey (2010)⁹ - India's food processing industry is increasingly being looked at as a potential source of boosting the rural economy as it creates synergies between consumers, industry and agriculture. A well-developed food processing industry is expected to increase farm prices, reduce waste, secure added value, promote crop diversification, create employment opportunities and generate export income. James Seale, Jr Anita Regmi et al. (2003):¹⁰ The most promising factor for change in food retailing is rising incomes in both developing and developed countries. Increasing caloric intake and population growth in developing countries is increasing the demand for grains and oilseeds. Globalization, transportation options, and increased purchasing power have increased demand for higher quality foods such as fruits, vegetables, meat, and processed foods. The research uses needs analysis and comparative project data. Josef Schmidhuber, Prakash Shetty (2005):¹¹ Agricultural productivity, increased income, and improved nutritional status are equally important for overall economic development. Modern times are known for urbanization, which has meant an increase in the participation of women in the country's workforce, shifting from traditional time-consuming meal preparation to ready-to-eat meals, ready-to-eat meals, fast foods and snacks. tastes are changing toward other processed foods. Kachuru R.P. (2009)¹² Agro-processing is defined as a set of techno-economic activities applied to all products originating from farms, livestock, aquaculture sources and forests, preserving, processing and adding value to them for use as food. Add. Feed, fiber, fuel or industrial raw materials. The agro-processing sector began with a small number of businesses operating primarily at the household/household level and has continued to expand over the past 50 years. Manjari Desai (2014)¹³ - The food processing industry plays an important role in establishing formal linkages in the agricultural sector that lead to high incomes and job creation while minimizing waste. Mehta G. S. (2012)¹⁴ - Over the years, agricultural transformation by creating forward and backward linkages with the agricultural industry has become a major challenge to address the growing challenge of creating employment opportunities to augment the workforce and sustain livelihoods. has emerged as an important option. . The most important thing about agro-processing is that a significant proportion of the raw materials processed there are located in the countryside, offering very high employment potential with significantly lower investments. Agribusiness is creating new demand in the agricultural sector for a greater variety of agricultural products suitable for processing. Nisha Harchekar (2008)¹⁵ - India's food industry is poised for explosive growth due to demographic changes, population growth, rapid urbanization, and increased government support. These factors will increase the demand for value-added products, thereby improving the outlook for the Indian food industry. The government's focus on the food industry as a priority sector will ensure that steps are taken to promote investment in this sector and attract more foreign direct investment. With vast natural

resources and growing technological knowledge base, India enjoys strong comparative advantages compared to other countries.

Nupur Chakraborty, Zainab Morbiwala (2008)¹⁶ states that Indian consumer demand remains dominated by the consumption of 'fresh' products. Packaged and processed foods are often not accepted by consumers in some peripheral regions of the country for a variety of reasons. Pankaj Gupta (2009)¹⁷ states that the growth rate of the processed food industry in India is huge. Rapid increase in disposable income and changing attitudes towards health and hygiene are the driving forces behind processed food products in India. At the same time, India needs to address supply and demand balance and food processes during times of inflation. Nevertheless, this industry has a bright future as consumers are willing to pay for a variety of needs arising from modern lifestyles. However, future growth is likely to be primarily driven by the domestic market, and there are doubts as to whether India will be able to achieve its goals in the global food trade market. Sudershan R. V., Partita Rao and et al. (2009):¹⁸ point out that food safety has emerged as an important global issue with implications for international trade and the public health sector. Many food safety programs are becoming increasingly important due to technological advances in the food and agriculture sector, as well as social changes resulting in new eating habits and customer demands. The methodology used in the study includes data published in academic journals and websites, as well as published data from universities that appear in various doctoral theses and graduate level theses. The data were mainly from various literatures from his 1995 to his 2005 and were reviewed for analysis.

CONCLUSION ON LITERATURE REVIEW

In relation to the food industry, many scholars have given more importance to the field of organizational practices. The food processing industry in India has made dynamic progress over its planned five-decades development period, both in terms of number of units and combination with total food production. With the development of the food industry, a series of problems have arisen from time to time, mainly related to management and government policies, labor and by-products, etc. In the food processing industry, much work has been done on management practices to increase and exploit efficiency. Although everyone seems to accept this fact, there is equality in the study of these practices and policies.

FINDINGS

The food industry faces challenges such as non-availability of adequate infrastructure facilities, lack of proper quality control and testing infrastructure, inefficient supply chains, seasonality of raw materials, high storage costs, high taxes, high packaging costs, affordability, and perishables. facing constraints such as cultural preferences. The development of the food processing industry is expected to increase farm prices, reduce waste, secure added value, promote crop diversification, create employment opportunities, and generate export income. Growth in the food processing industry will lead to increased demand for agricultural products, vegetables, fruits, and other vegetables, leading to increased agricultural income. The food industry is closely connected to the rural economy, as all raw materials are produced by the rural population. Therefore, the growth of the food industry, whether positive or negative, will have a direct

impact on India's rural economy. The food processing industry helps reduce inequalities between rural and urban areas and ensures household food and nutritional security at affordable prices for all.

SUGGESTIONS

Timely supply of raw materials in the required quantities should be ensured through the establishment of raw material banks specialized in product groups of specific industries in regions with a high concentration of raw materials. Processed foods must be provided to consumers in hygienic and attractive packaging and at low additional costs. Establishment of modern facilities with advanced technology will help reduce crop losses due to seasonal flooding and crop spoilage. An integrated cold chain and storage infrastructure can be established by individuals or groups of entrepreneurs with a business interest in cold chain solutions, and by companies that manage supply chains. Promoting research and development in food processing for product and process development and packaging improvements. The challenges facing food preservation, distribution, and processing are diverse and demanding and must be addressed on multiple fronts to achieve maximum market advantage. Governments and industry should focus on market needs and strive to meet demand, rather than bringing their products to market with little adoption. State governments should introduce guidelines for providing subsidized financial incentives in the form of capital grants and loans for commissioning of equipment, especially in industrially backward areas.

CONCLUSIONS

The food processing sector is crucial for India's development in the era of globalization, not only to succeed at the international level but also to achieve domestic self-reliance. It provides an important link between agriculture and consumers, thereby ensuring diversified growth of the economy. India is the world's second largest food producer after China and has the potential to achieve Numero Uno status with continued efforts. Recently, the government has encouraged investment in the food processing sector to ensure an increase of India's share in global agricultural trade, create employment for many people and increase income of farmers and agricultural workers. I correctly recognized the importance. Contribute to the overall economy of the country. Meanwhile, the government has initiated certain reforms to remove legal obstacles and introduce facilitation measures to encourage private sector activity in the food and agriculture sector. The food processing industry reduces pressure on rural areas, established agricultural-industrial linkages, increases employment opportunities, improves the economic well-being of rural populations through increased incomes, and reduces migration of rural populations to cities. Contributing to prevention. Slums are increasing. Although there are many promising drivers supporting the good growth of the industry, there are still some significant limitations that may hinder the growth prospects of the Indian food processing industry if not addressed sooner. One of the biggest obstacles is that the industry is capital intensive. This creates strong entry barriers and allows a limited number of players to enter the market. Players mean competition and less effort to improve quality standards. The main challenges facing the food processing industry in India include educating consumers about the higher nutritional value

of processed foods and addressing the low price elasticity of processed foods. The need for a distribution network. Development of marketing channels. Rationalization of food laws. Improve food quality standards and strengthen food inspection networks. Strengthen institutional frameworks for workforce development to improve research and development capacity to address global challenges. These challenges need to be addressed to realize the full potential of India's food processing industry.

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1 Nicolas Appert, born on November 17, 1749 in Chalons-sur-Marne, France, was a chef who is best remembered for the invention of airtight food preservation. This was the time of the French Revolution and many wars would frequently break out. Appert worked as a distiller, confectioner and chef at that time. The French armies at that time were spread all over Europe, and the problem of carrying food with them was one that had the government stumped, as it would spoil over long distances and over time.

2 Peter Durand (21 October 1766- 23 July 1822) was an English merchant who is widely credited with

receiving the first patent for the idea of preserving food using tin cans

3 https://www.researchgate.net/publication/324006313_Production_System_in_Food_Industry_A_Literature_Study

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