



Current Food Processing and Value Addition of agricultural products status in India

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Introduction

Today India is moving from *food security* to *nutritional security*. Due to the development of agricultural research and technology, at present our country has become self-sufficient in the production of food grains. As a result the country has also been able to export food crops. To promote food and nutrition security in the future, there is a need to develop and adopt efficient and integrated systems of food processing, value addition and distribution to meet the changing food needs of the country.

As a result of the research and innovation of agricultural scientists, the country is continuously progressing in the field of food grains, fruits and vegetable production and milk and milk products, which can be attributed to the hard work and dedication of the country's scientists, policy makers and farmers. Today India is transformation from an importing country to an exporting country. **India is producing world's 12 percent fruits and vegetable** which is targeted to be increased to 20 percent. For this we need to

adopt the world's best technologies and practices by creating balance in farming and increasing the income of farmers, increasing the quality of produce, using new technologies and also attracting small and marginal farmers towards food processing and value addition.

Current level of food processing in India is 10 percent. There is an urgent need to increase it so that the income of farmers can be increased. In the changing environment, food processing industry can be called the engine of growth of the Indian economy. India's food processing sector is one of the largest in the world. Its market is expected to reach \$535 billion by 2025-26.

India is the second largest producer of wheat, rice, fruits and vegetables, sugarcane, cotton and oilseeds. Despite adequate production of grains, fruits and vegetables and milk in the country, storage and maintenance of these food items is a matter of serious concern because all these food items are perishable. According to the Food and Agriculture Organization, 40 percent of the food grains in India are wasted by small

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farmers because these people do not have the facilities of cold storage and cold chain. This food wastage is affecting our country's resources mainly land, water and energy. In such circumstances, food processing and pricing can help in creating employment opportunities in rural areas, increasing export of agricultural products, increasing farmers' income, and preventing wastage of food grains.

According to an estimate, this wastage in fruits amounts to about 50 percent of the total production. This causes huge loss to the farmers and consumers as well as the country. Apart from this, approximately 40 percent of the food grains in the country are wasted at the production stage itself, mainly due to technical problems like bad roads, non-availability of packaging and storage.

There is a lack of technical knowledge and efficiency in food processing in our country. India is the second largest producer of fruits and vegetables in the world. But we are able to process only three percent. In our country, the diet of the population, mainly women and children, is still not balanced and nutritious. For this reason many people suffer from diseases caused by malnutrition. In this way, vegetables and fruits are very helpful in reducing wasting and also in eliminating poverty by increasing income.

Government Initiatives and Schemes

In the Union Budget 2002-23, emphasis has been given on value addition of crops. If this happens, the income of farmers will increase. To promote agriculture related startups, financial support will be provided from **NABARD**. The government is continuously promoting the small scale industries to the world markets through various steps like easy loans and technical support so that they become strong partners in the Self-reliant India campaign

PLI Scheme in Food Processing

The government has launched the Production Linked Incentive Scheme for the food processing industry. The Union Cabinet has decided to provide a subsidy of Rs 10,900 crore for the production based incentive scheme for this industry. This scheme will continue for 6 years from the financial year 2021-22 to 2026-27. Under this, 12-13 sectors are going to get PLI. With this, farmers will get fair and profitable prices for their crops and their income will increase. This is a suitable incentive for farmers increasing production during the Corona crisis. It is noteworthy that under PLI, an incentive of Rs 2.4 lakh crore will be given in five years to boost production in key sectors

Pradhan Mantri Kisan Sampada Yojana

To reduce wastage of agricultural produce, Government of India allocated Rs

6000 crore for the Pradhan Mantri Kisan Sampada Yojana for the period of 14th Finance Commission cycle 2016-20. The objective of the scheme is to create modern infrastructure with efficient supply chain management from farm to retail outlet. Under this, increasing food processing, modernizing food processing, increasing export of processed foods, adding value to agricultural products like dairy and fish, creating employment opportunities in rural areas, providing safe and convenient processed food to consumers at reasonable prices. Important initiatives are being taken to ensure food availability etc. About 20 lakh farmers will benefit under this scheme. Also, 5 to 6 lakh direct or indirect employment opportunities are likely to be created in rural areas. The government is providing loans on easy terms and affordable interest rates under the Pradhan Mantri Kisan Sampada Yojana, government grants, NABARD and Mudra Yojana.

Establishment of Megha Food Pass

The government has decided to set up a network of Mega Food Parks across the country to increase support to farmers and prevent wastage of food items. The objective of this effort is to provide an opportunity to the farmer to sell his crop in the nearby food park and get a better price for it. These passes will have facilities for storage as well as processing of food items. This will help in preventing the

possibility of crops getting spoiled quickly. At present, crops worth about Rs 50 thousand crores get destroyed in the country. These contain the highest amount of fruits and vegetables. Also, this will provide direct and indirect employment to thousands of people and benefit thousands of farmers. Till now 23 such food parks have been established. 20 more such parks will be established. In future, these will be further expanded according to Nang. The government wants that the farmer should get full price for his produce and not a single grain of the crop should be spoiled. Such parks will also help in increasing the export of agricultural products from the country.

Apart from this, 22 perishable crops mainly fruits and vegetables have been included in the Operation Green Scheme for the benefit of farmers in the Union Budget 2021-22. Under Operation Green, 50 percent subsidy is being given on transportation of fruits and vegetables. At present the country has agricultural storage and cold storage capacity of 162 million tonnes.

The importance of these grains has been increasing over the years. Efforts are being made to process coarse grain products like Kodo-Kutki and Ragi and make them popular at national and international level. For this, the help of Indian Institute of Millet Research, Hyderabad is being taken for

technical information and help in setting up high quality seeds and seed bank. Along with providing assistance in procurement and exchange of coarse grains, processing and marketing initiatives, processing units for millet processing and value addition and quality improvement are being established. This will provide employment to farmers, women groups and unemployed youth.

Food Processing and Agricultural Products

When production is high, the prices of grains, fruits and vegetables reduce in the market. In such a situation, value added products should be prepared from grains, fruits and vegetables. Many value added products can be prepared from food grains, fruits and vegetables. These value added products have good demand in the market. Besides, their price is also high and they can be enjoyed to the fullest in off-season. Even today, farmers' income from agriculture is not satisfactory. For this, post-harvest technology will have to be developed and processing and value addition of agricultural products will be promoted. Processing and value addition can bring a big change in the economic condition of farmers.

Food processing is an industrial process in which the value of agricultural products is added through chemical, physical and biological processes, thereby increasing their storage period and minimizing damage during transportation. Additionally, they are

made ready to eat immediately. About 20 percent of food grains can be saved through processing and value addition. Also, by increasing the packaging and grading of farmers' produce can get more profits.

Benefits of food processing and value addition

- Processed food and value added food items can be used in off season.
- To increase the storage period of food items and the income of farmers.
- Food items can be sent to remote and rare places where they are not produced.
- During natural disasters, processed and value-added food items can be sent packed in boxes.
- Wastage of food items can be saved.
- Employment opportunities are created in rural areas.
- Delicious foods are available throughout the year.
- Boosting export earnings.

Processing and value addition of agricultural products

It is often seen that except for those crops whose support price is fixed by the government, the prices of other crops remain completely uncertain. In years when the crop is large, prices fall. When prices fall, farmers grow less of that crop the next year, and then

prices rise due to less production in the market. This cycle is completed every two-four years. In this context, the food provider of the country should be protected from fluctuations in the prices of crops. In this situation, the food processing sector can play an important role in helping farmers get better prices for their labor through value addition. A brief description of processing and value addition of some major agricultural products is as follows-

1. Processing of pulse products
2. Processing of **soybean** products **and its value addition**

Vegetable processing and value addition

Income can be increased by making many expensive food items made from some vegetables like pickles, jam, chutney, paste, powder, sweets etc. More profits can be obtained by processing vegetables. Many sweets are made from carrot, petha, gourd and parwal. Today many small industries are running on it in many parts of the country. Many types of products like ketchup, sauce, chutney, puree, paste etc. are made from tomato. Pickles can be made from cauliflower, bitter gourd, parwal, chilli and kundru etc. Vegetables like garlic, onion, ginger, bitter gourd, mint and amaranth are not only nutritious but also have medicinal properties. Farmers can increase their income by making various types of food items from these. Onion and fenugreek can be cut into small pieces and

dried and sold as spices. Apart from making many sweets, the seeds of melon and cucumber are also used in cold drinks. Many vegetables like bitter gourd, pumpkin, watermelon and Edible oil is also extracted from Chapankadu seeds. Processing and value addition of vegetables not only increases the storage capacity of food items but also increases the income of farmers.

Due to variation in climate in our country, many types of spices are also produced. Spices grown in our area like ginger, turmeric and coriander can be sold in the market by growing them in larger areas, refining them using scientific methods and packaging them well.

Fruit processing

Orange, apple, mango, guava, pear, lemon, litchi etc. are such fruits which are produced in sufficient quantity during the season but they cannot be preserved for long. If such products are processed and value added after getting proper training, then it can be developed as an employment. Due to lack of technical knowledge and proper storage, most of the seasonal fruits get spoiled by rotting. Enzymes are found in large quantities in fruits due to which the color of the fruits changes. They become brown in color due to which their smell, taste and appearance also change. In such a situation, the work of fruit processing like making pickles, jams, chutneys, gels etc.

can be done efficiently with a little training. Watermelon and cantaloupe juice can be used as beverages. Apart from this, value addition can be done by making sherbet, jam, jelly and squash from fruits, making chips from banana, making wine and alcohol from grapes etc. and more profit can be obtained by investing less capital. Watermelon and cantaloupe juice can be used as beverages. Apart from this, value addition can be done by making sherbet, jam, jelly and squash from fruits, making chips from banana, making wine and alcohol from grapes etc. and more profit can be obtained by investing less capital.

Food processing possibilities in India

In comparison to other countries, only 3 percent processing of fruits and vegetables is done in our country. Whereas in many countries, 80-90 percent of fruits and vegetables are processed products. While there is value addition to fruits and vegetables through processing, local youth also get employment. Demand for many types of imported food items has increased among consumers in the country. To meet this demand, food can be produced in the country itself.

Processing and value addition industry should be promoted so that import of processed foods can be minimized. Today, youth are migrating from rural areas to cities

on a large scale. Also, employment opportunities are decreasing in rural areas due to lack of cultivable land and low income. In such a situation, food processing and value addition industry can be adopted as employment. To solve the milk problem in future, we will also have to emphasize on milk processing. Undoubtedly, there is immense potential in our country for processing food grains, pulses, oilseeds, milk, fruits and vegetables.

Information: For setting up a food processing unit,

one should choose a place which is well connected to the means of transport like road, rail etc., where clean water is available, artisans and laborers can be found easily and at cheap rates. To obtain financial assistance for setting up a processing unit, the Ministry of Processing Industries, Panchsheel Bhawan, New Delhi, and National Horticulture Board, Gurugram can be contacted. Apart from this, advice can also be taken from the horticulture department of your state. Krishi Vigyan Kendras in the country are working for the welfare of farmers. At these Krishi Vigyan Kendras, training is given regarding processing and value addition of agricultural products, which can often be obtained without paying any fee. It is also clarified here that before launching any food product in the market, it is mandatory to obtain registration or license from the Food Protection and

Standards Authority of India, Government of India. Farmers can successfully process and value adds with a little knowledge and training. By doing this the expenses incurred in farming can also be reduced. Also, educated youth can increase their income by adopting processing and value addition as a business.

