

Evaluation of Agricultural Production and Food Industry Waste

Mithat Direk¹, Mehmet Musa Özcan²

¹Department of Agricultural Economy, Faculty of Agriculture, Selçuk University, 42031 Konya, Turkey.

²Department of Food Engineering, Faculty of Agriculture, Selçuk University, 42031 Konya, Turkey

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Abstract

As is known, people needs the food, which is beginning from birth the human and on going throughout all of their life can't be avoided or neglected is a necessity. Because of the growing, developing, living, fulfill their physiological functions of humans depends on consume food in sufficient quantity and quality. Result of malnutrition and/or imbalanced nutrition infection will be, developments and the resistance will decrease especially in children. World population of about 1/5 the necessary food purchasing able lack, and this negative situation worse towards the undoubtedly "hunger" problem today, of all people or countries facing the problems of the principal and most vital thing is made to order.

Keywords: quality, safety, food products, by-products

1. Introduction

Solution of a great and vital importance of nutrition problems for human life so; providing adequate quality and quantity of food depends on assessment of agricultural products in food industry. Food industry's desire to respond to the quality and quantity of production constantly and consistently to achieve primarily agricultural products to enhance agricultural production techniques improved so agricultural structure rearrangement basic principles and purposes of the coherent and comprehensive "agricultural policy" and that this policy sub-sectors to create elements in agricultural products should be identified and their importance should be given. Agricultural production and food production, especially in agricultural productivity and the quality of the products of cultural activities greatly affect the timely and reasonable price with the entry of people by providing basic nutrition will be provided continuity of production. Be based on the agricultural sector and food industry of growers to produce raw materials, food industry and growers

(farmers) have led to more interest. Some of the processed food is being offered to consumers, an important part refined half full or converted to processed products are released. In Today, the total of processed foods and frozen foods prepared in the ratio increases, and consumers who will increasingly be lost are largely directed. The rise of consumer incomes, all increase the demand for processed food and food production at the end of the service request is greater. Continuation of this trend is based on agriculture, a sector which has increased the importance of the food industry. Food sector is most significant part of industry in Turkey.

Food processing and technologies convert relatively bulky, perishable and typically inedible raw materials into more useful shelf-stable and palatable foods or potable beverages. Processing contributes to food security by minimizing waste and losses in the food chain and by increasing food availability and marketability. Food is also processed in order to improve its quality and safety.

* Corresponding author: e-mail: mozcan@selcuk.edu.tr; Tlf:+90.332.2232933; Fax:+90.332.2410108

Food safety is a scientific discipline that provides assurance that food will not cause harm to the consumer when it is prepared and/or eaten according to its intended use [1].

Food consumption and nutritional status different between communities, as families varies too. Consumption of food determined by family income level, food prices and the price relationships, and obtains supplies of food availability, education level, habits and social structures [2]. Nutritional public health protection, economy and development in the basic functions, one of which, this function allows agents nutrients, nutrient containing, processed and natural state of the animal, vegetable or synthetic origin, edible and drinkable character substance in food is described [3]. Location due to seasonal variability of agricultural production and food requirements for the continuity, perishable agricultural products tend to require a specific implementation of processing and preservation methods and the food industry is fulfilling this function [4].

In other words, the food industry buys raw materials from the agricultural sector. Therefore the agricultural sector and food industry in each country are interacted with each other and are parallel to each other. Degree of interaction, depending on the level of development increases, and / or decreases [5]. Labor-intensive system, requiring the food industry, agricultural products, evaluation of industrial raw materials, the employment contribution and the people's well-balanced nutrition is directly related, and in the world in all countries, socio-economic aspects of strategic importance. Moreover, agricultural production is consumed fresh direct that whereas raw materials and processed food industries are being transformed into different foods. A processed food product of agricultural production ratio is different from the product.

2. Food Quality and Safety

At present several fruits such as citrus are processed to produce juice jam or marmalade and the wastes of this industry such as peels, seeds and pulps represent about 50% of the raw processed fruit. This not only wastes a potentially valuable resource, but also aggravates already serious disposal problems. So, expansion in the Citrus industry in recent years attracts attention to the further use of the Citrus seeds as a potential source for other nutrients. [6].

International trade development, consumer awareness, food products purchased in the variety and diversity of requests as well as health and environmental concerns increase producers and decision makers about more sensitive and conscious approach has allowed. Public and private sector activities have widespread in this area. Public administration is becoming, when ready to necessary regulations and legislation, private organizations by a voluntary basis and applied with the system's success proved the standards adopted ensuring and certification is based on the consumer side also sought guarantees properties. Until recent years, from the producer to the consumer until the last process, the product of superior protection of the quality control in place, before the overall quality, then the Hazard Analysis and Critical Control Points (HACCP-Hazard Analysis Critical Control Point), Good Manufacturing Practices (GMP-Good Manufacturing Practice) as system has received [7]. This documents, one of the most variable thing, and if obtained provides a significant competitive advantage to exporters [8].

3. Innovation of Food Industry

Basic research is inadequate, not in the desired level of agricultural research and the resources allocated to R & D levels are very small because of the very widespread use of technology in the agricultural sector [8,9]. However, in contrast to this situation common in agriculture, developments in food technology are provided in recent years. In this context, the food reaches has been the final consumer of innovations developed to improve the competitiveness of the sector. Technological innovations are distributed according to the types. Food and beverage industry, the technological innovations of the most important part of not only the production process of looking at is made, general industry and manufacturing industry, the technological innovations of the largest slice of the product. For example, for food preservation all along the main methods applied, drying, cooling, freezing, pasteurization, sterilization, irradiation and chemical agents is to participate. In this area has experienced rapid change and new technologies are taking their place. Like this, or reverse osmosis in food processing, extrusion, supercritical extractions, ultrafiltration, selective hydrogenation, interesterification and elektroplazmoliz new technologies, such as the food industry is finding applications in various fields [10,20].

4. Evaluation of Food Industry's By-Product

Food manufacturing industry, during the preparation and consumption of large amounts of by-products are formed. Types of waste arising from food businesses the same kind in other countries are similar to those enterprises [11,12]. Some food industry and its by-products were evaluated following the way the economy has gained.

5. Sugar Industry

The main by-products or waste from these industries in molasses, meal, diffusion, filter sludge, soil and waste water comes from beet. Certainly in terms of quantity and use of molasses comes from their head. Whether from sugar beets or sugar cane, or from sugar crops grown using conventional, biotech or organic methods, sugar is pure and natural and has identical nutritional value, composition and wholesomeness. The sugar is the same no matter its original plant source or growing practice (www.sugarindustrybiotechcouncil.org/).

6. Fruit and Vegetable Industry

Due to progress in technology, trade of food has resulted that today's agri-foodstuffs sector must respect ever stricter standards and increasingly rigorous quality control and monitoring procedures. Product quality is a prime criterion in gaining access to competitive markets. Most marketers will agree that, apart from everything else, commercial markets require a stable supply and consistent quality [13].

Fruit and vegetable industry is the kind of direct assessment is not possible anymore. Today, studies these products how can be recycled. Fruit and vegetable industry is possible to evaluate with biotechnological way. Surface culture fermentation can be converted into valuable products. These products are ethanol, lactic acid, surfactance, fungi, enzymes, food ingredients and flavorings [14].

7. Fermentation Industry

Industrial waste of fermentation, including types and amounts of organic matter in terms of the nature of pollutants are considered strong. Brewery part of the wastewater made by soaking in water, and single cell protein production experiment mushroom caps at a rate of 20-40% reduction in the pollution load can be concluded [15,21].

8. Olive Oil Industry

During the production of olive oil is the most important waste is black water. Liquid waste, and coastal waters are known as sugars, organic acids, polyalcohol, pectin ach, colloids, contains tannins and lipids [14]. Of these wastes in the production of antibiotics such as penicillin can be used as a substrate, and finally as the assessment of the degree of pollution black water can help disarm has been reported [16]. Also, the olive cake *Moniliella suaveolens*, *Trichoderma harzianum*, *Pityrosporum ovale* and the δ -and γ -decalakton can be product *Ceratocytis moniliformis* [17].

9. Cereal Industry

Grain industry has an important place in the food industry. Wastes from these industries are usually waste starch content. From this waste with biotechnological way produced ethanol, and lactic acid and single cell protein. *Lb. fermentum*, *Lb. amylophilus*, *Lb. amylovorus* or bacteria containing the enzyme amylase, gelatinized starch, they are capable of producing lactic acid [18,19].

10. Milk Industry

Dairy industry waste contains protein, salt, fat and lactose. This solid content of waste was between 400-2000 mg / L [14]. The most important waste is whey in dairy sector. Whey includes protein, lactose, and salt in a large amount. The *Lb. delbrueckii* spp. *bulgaricus* strains of lactic acid can be produced from whey in large quantities [18]. For the transition to industrial-scale production, as a result of this step will constitute the continuation of research and economic, as well as obtaining valuable products is very important.

In recent years, food production increased rapidly in parallel with the industrial waste has increased largely amount. This increase occurred as a result of environmental pollution and economic loss, evaluation of food waste has led to the development of biotechnological methods. Recycling of waste, biotransform and valuable items such as use of methods of processing and treated is important.

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