

Informal Food Production in Turkey and Its Possible Consequences*

Türkiye’de Kayıt Dışı Gıda Üretimi ve Olası Sonuçları

Aslıhan TÜĞEN¹

Abstract

Informal food production is one of the most important problems that threaten food security. While the law puts the main responsibility to ensure food safety to the producer, the state is responsible for conducting inspections in this area and applying criminal sanctions if food safety is not observed. However, the low purchasing power of the people and increasing food prices increase the informal food production. Informal food production without regard to food safety threatens public health. In this review study, the issue of food safety and the issue of informal food production, which is a food safety problem, are examined. As a result of the study, it has been suggested that awareness should be raised so that people do not shop from the companies that produce informal food, that purchasing power should be increased and that the food prices should be lowered.

Keywords: Food, food production, food safety, informal food production

Jel Codes: A12, Q10, Q14, Q18, Q38

Öz

Kayıt dışı gıda üretimi, gıda güvenliğini tehdit eden en önemli problemlerin başında gelmektedir. Yasalar gıda güvenliğinin sağlanabilmesi için asıl sorumluluğu üreticiye yüklerken, devlet de bu alanda denetimler yapmak ve gıda güvenliğine uyulmaması durumunda cezai yaptırımlar uygulamakla görevlidir. Ancak halkın alım gücünün düşmesi ve artan gıda fiyatları, kayıt dışı gıda üretimini artırmaktadır. Gıda güvenliğine önem vermeden kayıt dışı olarak yapılan gıda üretimi, halk sağlığını tehdit etmektedir. Bu derleme çalışmasında gıda güvenliği konusu ve bir gıda güvenliği problemi olan kayıt dışı gıda üretimi konusu incelenmiştir. Çalışma sonucunda halkın kayıt dışı gıda üretimi yapan işletmelerden alışveriş yapmaması için bilinçlendirilmesi, alım gücünün artırılması ve gıda fiyatlarının düşmesini sağlayacak önlemlerin alınması gerektiği önerilmiştir.

Anahtar Sözcükler: Gıda, gıda üretimi, gıda güvenliği, kayıt dışı gıda üretimi

Jel Kodları: A12, Q10, Q14, Q18, Q38

1. INTRODUCTION

The food is substances that people eat and drink, which have a physiological effect on their body, that are digestible and have functions in the digestive mechanism. Food is the general name of the substances required for people to survive, develop and propagation. They are solid and liquid substances that are used in nutrition and are of vital importance in meeting people's basic needs. In short, foods are substances that people need to consume and nourish to survive (Erdoğan, 2014: 13).

When foods are consumed by humans, they are converted into the energy required for vital systems to continue their activities. Therefore, when foods are consumed, substances are taken from the body. At this point, necessary measures must be taken to prevent the foods taken into the body from causing negative effects on the person. These measures are referred to as food safety. Food safety is all of the precautions taken to prevent the dangers that may arise from the contact or consumption of the food from causing negative effects on the consumers (Şanlıer, Artık, & Sezgin, 2019: 16).

* Bu makalede bilimsel araştırma ve yayın etiği ilkelerine uyulmuştur. / In this article, the principles of scientific research and publication ethics were followed.

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Geliş Tarihi/Received : 11.03.2020

Kabul Tarihi/Accepted : 06.04.2020

Çevrimiçi Yayın/Published : 06.04.2020

Makale Atıf Önerisi /Citation (APA):

Tüğən, A. (2020). Informal Food Production in Turkey and Its Possible Consequences. *İzmir Sosyal Bilimler Dergisi*, 2 (1), 24-29.

Foods are vital in terms of providing energy and resistance in the life process and strengthening and protecting the body. It is possible to classify foods as "fresh foods", "preserved or canned foods" or "dried foods". While *fresh foods* are taken daily or seasonal, *preservatives or canned foods* are preservatives added foods for their longevity. *Dried foods*, on the other hand, are foods that have been reduced to a level to prevent deterioration by means of industrial drying systems or traditional sunshine (Gündoğdu, 2019: 17).

It is also possible to classify foods as healthy or unhealthy foods. *Healthy foods* are foods that power the body with the necessary nutrients, protect human health, have physiological effects on the body, have a vital quality for human beings, and are not harmful to consume. *Unhealthy foods*, on the other hand, are foods that are negatively affected by eating or contacting, causing harm and causing various ailments. A healthy food can turn into unhealthy food if it is produced under unsanitary conditions (Bozyiğit & Kılınç, 2019: 204-205). At this point, the issue of food safety comes to the fore to indicate unsanitary conditions.

2. FOOD SAFETY

It is possible for people to get the maximum benefit from the food they consume and not to be exposed to any adverse effects, by paying maximum attention to food safety since the production of the food. The key to a healthy diet is hygienic food production and consumption. Therefore, it is necessary to consume qualified foods produced at the highest standards in every step of the food chain.

Preventing contamination of foods with factors harmful or undesirable to health, removing them from these factors, stopping the reproduction and spreading of pests and neutralizing these pests by appropriate methods constitute food safety efforts (Kıymaz & Şahinöz, 2010: 3).

Food safety refers to the efforts made to make a food "safe food". *Safe food*, on the other hand, refers to food that does not have any problem in consuming it as a result of efforts towards food safety. Therefore, *food safety* represents the process, while *safe food* represents the result. (Erkmen, 2010: 231).

All hazards affecting food safety are caused by biological, chemical physical contamination and some erroneous applications during production. The risk of food safety can occur at any stage of the food chain, so it is important to carry out effective control throughout the food chain. Therefore, food safety is a phenomenon provided by the contribution of all units in the food chain (Carvalho, 2017:

52).

In order for a food to become safe food, it is necessary to comply with the health and hygiene rules at every stage from production to consumption. Hygienic foods produced in hygienic conditions are the key to a healthy diet. For a healthy diet, it is necessary to consider food as a chain in the process from production to consumption. The understanding of the food chain shares the responsibility of delivering food to the consumer in a healthy and safe manner with high nutritional values, to all those who produce, process, trade and control (Yaralı, 2018: 109-110). Food safety is a legal issue and there can be no compromise on food safety. It is the responsibility of the manufacturer and the final product seller to ensure food safety. The responsibility of the food producer is huge and shares this responsibility with its suppliers (Trevena, Reeve, Bero, & Thow, 2020: 101).

Ensuring food safety is possible by paying utmost attention to pathogens, toxins and factors that can be controlled, such as chemical contaminants. Food safety is a global public health problem. The risk of food safety increases with the increase of consumption of food produced outside the home and under poor hygiene conditions (Madenci, Türker, Bayramoğlu, & Eyiz, 2019: 52).

The first law on food safety in Turkey was enacted in 1952. Turkish Food Codex (2020) and Food Production, Consumption and Inspection Regulation (1998) are the product of Turkey's efforts to create legal infrastructure on food safety area. However, Turkey lags behind international efforts made in this regard. For example, Turkey implemented the HACCP system which the United States implements since 1972, in 2002. With the 2010s, the Food Hygiene Regulation (2011) and the Regulation on the Registration and Approval Procedures of the Food Businesses (2011) entered into force (Başaran, 2016: 13). The final legislation about food safety, Turkish Food Codex, was enter into force in February 2020.

In the world, there are HACCP and ISO 22000: Food Safety Management System to ensure food safety. HACCP (Hazard Analysis and Critical Control Points) System is a system "starting from the supply of raw materials in a food chain, determines critical control points at every stage and point of the food chain, such as food preparation, processing, production, packaging, storage and transportation, and determines critical control points where necessary. It is a food safety system that can be applied to organizations of all sizes, enabling the protection of the system that prevents any problems following the points before they occur and by ensuring the production of reliable foods in accordance with certain norms."

ISO 22000 Standard, on the other hand, is a preventive system that is developed to prevent the consumer from exposure to foodborne diseases and controls all processes in the food chain together with all its influences such as infrastructure, personnel and equipment, and it is implemented in organizations (Panghal, Chhikara, Sindhu, & Jaglan, 2018: 3). Food Safety Management System applications in organizations covers production control, product control, equipment control; maintenance and general hygiene practices, personnel and visitor hygiene; transportation, storage, product information; training, supplier selection and evaluation; education, communication and similar topics (Başaran, 2016: 14).

As can be seen, efforts are being made both nationally and internationally to ensure food safety. However, the issue of food safety is not a unilateral issue. Enterprises and governments are responsible for food safety. For this reason, government agencies and private organizations must act jointly to identify potential hazards and analyze risk and control foodborne outbreaks worldwide. Therefore, food safety is a serious issue that cannot be left to the responsibility of only one side.

2.1 Responsibilities of Enterprises in Food Safety

The main responsible for ensuring food safety are undoubtedly the producers. Food producing establishments must produce in line with the legislation in all steps from raw material supply to market release. Issues such as the air of the production place, the hygiene of the personnel involved in the production, storage, packaging and transportation conditions, waste removal, cleaning and disinfection are the main responsibilities of the food producers (Karabasil et al., 2017: 3).

In addition, businesses engaged in food trade also have responsibilities regarding food safety in accordance with the Law No. 5179 on the Amendment of the Decree Law on Production, Consumption and Control of Foods. Enterprises engaged in food production, processing, distribution and sales, are jointly responsible for ensuring the reliability of all foodstuffs and materials directly in contact with food. Food operators are obliged to withdraw their products from the market, inform the authorities on this issue and contribute to the traceability of the food if the food they trade does not comply with the food safety conditions. In addition, food establishments have to assist the authorities during control and inspection and ensure the accuracy of the information and documents they provide.

2.2 Responsibilities of the State in Food Safety

In addition to the responsibility of the producers, the

public also has the responsibility of inspection in ensuring food safety. In order for foodstuffs not to harm the health of individuals both individually and the economy in macro terms, it is necessary to control every stage of its production and consumption. It is the government's responsibility to control food manufacturers to prevent food-borne diseases and protect public health

The state has the authority and responsibilities of control, inspection, taking criminal actions, confiscation and destruction of food in order to ensure food safety. Food and materials that contact with food must comply food legislation. Besides, substances that will contact food cannot be harmful, and no harmful substance can be added. It cannot contain the residue of a harmful substance. No action can be taken to cause food contact materials to turn into harmful materials (Gupta, Dudeja, & Minhas, 2017: 243).

Food safety inspections are carried out by the food controller and food controller assistants within a program, at appropriate frequency and in proportion to the risks carried by the foodstuffs. In addition, inspections can be made on suspicion and complaint. Furthermore, controls and inspections are made in import and export, and it is prevented that produced, stored and transported in unhealthy conditions foods to enter to Turkey or to export from Turkey. The state reserves the right that taking criminal actions, confiscation, and destruction, regarding the issues identified in food safety inspections.

The responsibility of control, inspection, and tracking of the food chain whether this chain has a healthy way or not, is under Ministry of Agriculture and Forestry, according to the legislations. Laws have given the main responsibility for food safety to the producer, and it has delegated the responsibility of supervision to take measures for food safety and to provide healthy food to consumers to the Ministry.

Food production will become widespread in unsanitary conditions if the state cannot fulfill its responsibilities regarding food safety. This raises the problem of informal food production.

3. INFORMAL FOOD PRODUCTION, PRECAUTIONS AGAINST INFORMAL FOOD PRODUCTION AND SOLUTION SUGGESTIONS

Informal food production is an important public health problem that threatens human health. Since foodstuffs are non-perishable products that can be spoiled easily, they carry important health risks if they are not produced and stored in healthy conditions. In fact, this situation has

reached a serious level to be called "food terror". The fraudulent products produced by informal food companies have reached a threat to the food market and human health. For example, applications such as horse / donkey meat instead of beef, honey mixed with glucose, "toast cheeses" made from old and molded cheeses, using margarine instead of milk fat, blackening olives with chemical paint and minced meat from dyed fats have become very common (Tokalar, 2014: 59).

One of the most important issues that trigger informal food production is the increase in food prices and the decrease in purchasing power. Increasing agricultural input prices, decreasing agricultural lands and increasing competition caused food prices to increase, while increasing food prices decreased the purchasing power and decreased both the amount and quality of the food consumed. Low-quality foods cause increased risks that can lead to serious health problems. (Koç & Uzmay, 2013: 42).

Informal food production is one of the biggest obstacles to food safety. It prevents the development of the food sector and affects public health negatively. Consumers play a decisive role in the production of informal food, as the demand for unregistered food will also be in production. Consumers should not purchase undetermined, unregistered and uncontrolled products in food shopping. In addition, In order not to risk the health of themselves and their loved ones, they should not consume foods other than packaged products that have been approved by the Ministry (2nd Food Safety Congress Final Declaration, 2011).

On the other hand, market shopping, which has an important place in Turkish culture, is one of the factors that threatens food safety and causes an increase in informal food production. TMMOB Chamber of Food Engineers also addressed this issue in its statement and emphasized informal production and sales in the marketplaces. The statement was said as follows (BirGün, 2020, March 1st): *"Producer marketplaces are places that should be supported in order to lift the intermediaries and meet the people directly with the producer. However, if a producer marketplace is opened, its infrastructure must be established. The municipality must create an environment suitable for producers and ensure that these products are inspected by a food engineer before meeting the consumer. In addition, hygienic conditions should be provided, as in the neighborhood marketplaces, and cold counter opportunities should be provided for storing food. In order to create a hygienic environment, some arrangements should be made, and measures should be taken. For example, unregistered sales that its producers*

are not known, that are unpackaged, exposed, in contact with powdered soil, should be prevented, and products such as tomato paste, and olive oil should not be allowed to be sold in a pet bottle. Cold cabinets should be provided for products such as milk and dairy products. (BirGün, 2020, March 1st)."

The dimensions of informal food production in Turkey has reached enormous proportions, due to increased food prices and decreased purchasing power. In 2002, according to the statement of Minister of Agriculture of that days, only 6 thousand of 26 thousand food production enterprises had production permits (Hürriyet, 2002, July 2nd). As seen from Table 1, today, there are 588.282 enterprises engaged in informal production and sales in comparison to 73.990 registered food producers (Ministry of Agriculture and Forestry, 2019: 51). These informal food establishments are tried to be audited with about 5 thousand auditors.

Table 1: Food Companies

Food Companies	N	%
Food Producers	73.990	11,17
Food Sale Companies	318.379	48,07
Mass Consumption Companies	269.903	40,75
Total	662.272	100,00

In order to ensure food safety, the companies producing and selling fraudulent food are displayed every month by the Ministry of Agriculture and Forestry. Food terrorism has become so widespread that companies exhibited by the Ministry continue their production by changing their company and brand names. Especially the companies that are exhibited due to fraudulent production in olive oil, milk and dairy products and meat products continue their fraudulent production under different brand names. As a result of the disclosures made by the Ministry of Agriculture and Forestry since 2012, it was determined that fraudulent production was made in 3202 batch products of 1443 companies (Ministry of Agriculture and Forestry, 2020).

There are factors that triggers the informal food production such as being quite large of Turkey's population and surface area, taking place in a hot climate, very high number of small businesses engaged in the production as unregistered despite being outnumbered low number of audit teams, being risky of the traditional food consumption habits, so called street flavors of the society, the scarcity of the population who can access quality food, social and economic structure, and the desire to earn high income in an easy way. For this reason, it is necessary to carry out food production in our country in accordance with the laws, to produce in accordance with the HACCP quality assurance system and to produce in accordance with the Turkish Food

Codex. In addition, food production establishments should be constantly monitored. On the other hand, training should be given to consumers based on the results of scientific research, information about food safety should be provided to consumers, and they should be taught how to take action against potential hazards and risks. In order to prevent informal food production, consumers should be informed and how risky to buy from such places should be explained. Thus, the preference of informal food transmissions should be reduced (Erkmen, 2010: 223; Koç & Uzmay, 2013: 43; Tosun & Demirbaş, 2012: 98).

In order to prevent informal food production, first of all, measures should be taken to record informal production and consumers should be made conscious of making purchases from businesses or people producing informal food. The number of food controllers and frequency of inspection should be increased. Sanctions used to punish those who produce informal food should be strengthened and deterrence should be provided by law. In macro terms, input costs of food production must be decreased and purchasing power must be increased in order to ensure food safety.

CONCLUSION

Foods are digestible substances that people eat and drink, which have a physiological effect on their bodies. Foods turn into the energy required for the body activities to continue. Foods must be reliable in order not to cause harmful effects on the body. In order for people to benefit from the food they consume, it is necessary to pay attention to its reliability in the chain starting from the production of the food. Foods that comply with health and hygiene rules during the process from production to consumption help people to live their lives in a healthy way.

The issue of food safety is an issue that is emphasized both nationally and internationally and tried to be regulated by the law as it directly affects human health. For this purpose, standards and food safety systems such as HACCP and ISO-22000 were put into operation. However, food safety is not a unilateral issue. Responsibility for food safety is in the state in terms of supervision as well as in businesses. Therefore, food safety has three pillars, both producers, consumers and the state. Food businesses are responsible for many issues, from production to storage, from packaging to transportation, from waste removal to cleaning. The state is obliged to supervise them. Consumers, on the other hand, should take their own precautions about food safety by not shopping from businesses that do not comply with food safety.

Undoubtedly, informal production is the most important

issue that threatens food safety. Businesses engaged in informal and fraudulent production have been regularly disclosed by the Ministry of Agriculture and Forestry every month since 2012. Despite this, these enterprises continue their production. Decreasing the purchasing power of the people and increasing food prices cause the enterprises producing poor quality and informal production to be popular. Therefore, in order to cope with informal production, the purchasing power of the public should be increased as well as the controls should be increased.

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