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FOODSAVING — TOWARDS SOCIAL RESPONSIBILITY?

There are nearly seven and a half billion people in the world. For each person per day there is, on average, food containing over 2,000 kcal — that is, sufficient to satisfy the minimum energy requirement of the human body. Much more food is produced, however, and simultaneously over 780 million people suffer from chronic hunger. Most of them are living in rural areas and are dependent on the food produced on their farms. According to the United Nations this absurd paradox results, among others, from food waste. It is estimated that as much as one third of all food goes to food waste prematurely. According to the Food and Agriculture Organization of the United Nations (FAO), the size of world food production far exceeds the demand (see Figure 1). For example, in 2016 grain production was expected to reach 2,577 million tons, but 13 million remained in the fields after the market demand was met.

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¹ R. CHAINEY, "Which Countries Waste the Most Food?" *World Economic Forum*, August 13, 2015, accessed August 3, 2018, https://www.weforum.org/agenda/2015/08/which-countries-waste-the-most-food.

Fig. 1: Food waste at pre- and consumption stages

Which regions waste the most food? Per capita food losses and waste, kg/year Production to retailing ■ Consumer 50 100 150 250 300 Europe North America and Oceania Industrialised Asia Sub-Saharan Africa North Africa, West and Central Asia South and Southeast Asia Latin America

Source: The Food and Agriculture Organization of the United Nations (FAO)

What is the reason for this unique paradox? The main problem is that food is produced for profit rather than to meet the food requirements of the world population. Food waste takes place during the entire production process, from the moment it was created, during distribution, and then by intermediaries in stores, warehouses, and ultimately by consumers — in restaurants and homes. At every stage food can become waste. One way to reduce this ubiquitous waste is to recover surplus food that has not been used. According to FAO, recovering even 20% of wasted food would be enough to feed 870 million hungry people (see Figure 2).²

 $^{^2}$ B. LIPINSKI, "What's Food Loss and Waste Got to Do with Sustainable Development? A Lot, Actually," accessed August 3, 2018, http://www.wri.org/blog/2015/09/what-s-food-loss-and-waste-got-do-sustainable-development-lot-actually.

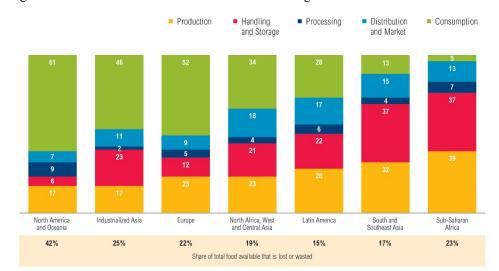


Fig. 2: FAO's data on food loss and waste in various regions

There are many market and technological solutions that can reduce the problem of food waste. These include searching for better cultivation techniques, reducing the factors that may pose a threat to them, or improving the quality of packaging and transport, which may reduce spoilage of food. However, these are technological solutions that do not contribute to changing the producers' and recipients' approach to food. They do not provide an answer to the question of why a farmer decides to leave food on the field instead of selling or distributing it in cases of production surpluses. As long as the goal of food production is profit only, and not, above all, satisfying the food needs of the human population, such situations will occur at almost every stage of food production. An additional problem is presented by crop failure, with which we deal with, for example, in Poland in fruit production this year. The collection price of fruit is so low that it is not profitable for producers to harvest it from the fields, as labour costs outweigh the price of the raw material. This contributes to the fact that a huge amount of fruit remains on trees, and fruit farmers, through social media, encourage free use of the leftover harvest.

The basic problem in food production is that today's system leads to overproduction of food, which is then not given to anyone. At the same time, nobody wants to point out those responsible for the fact that this surplus does not reach those who need it most. The answer to these problems may be an attempt to change human mentality, striving towards social responsibility.

The main question that will be posed here is whether the only solution to the problem of food waste is changing the human mentality. Does foodsaving equal social responsibility? In addition, we will look at the latest technologies that allow for better production and storage of food in countries with low cultivation culture and difficult natural conditions. The leader in these technologies is Israel.

SOCIAL RESPONSIBILITY AND ITS IMPORTANCE

Social responsibility is not a new concept in sociology. It was already known in modern societies of the twentieth century. It is an attitude characterized by voluntary and active action towards positive changes in the immediate social environment. It is the involvement of a single individual in creating a better social reality surrounding them.

This attitude was promoted especially in Western societies after the Second World War, contributing to the creation of a civil society characterized by the activity and the ability to self-organize and define and achieve the set goals without impulse from the state authorities. At the same time, it does not mean a rivalry between society and the authorities. The basic feature of such a society is the awareness of its members of the existence of the needs of the community and the desire to satisfy them. In short, it is the interest of citizens in the affairs of society and a sense of responsibility for its good.³ It is, therefore, a civic awareness of having not only rights but also obligations towards society and the community.

At the beginning of the 2000s, the attitude of social responsibility was also transferred to companies in the form of corporate social responsibility (CRS). This is related to the fact that in the modern world the economy is beginning to play an increasingly important role. It even partially took over culture-forming functions, defining aspirations and models of life of societies, thus becoming a creator of civilization values.⁴ At the same time, however, the view that many problems of the modern world — such as poverty, pathologies, polarization of societies and the degradation of nature — are caused by economic activity is becoming more and more popular in societies. Therefore, more and more started demanding that businesses bear social

³ P. S. ZAŁĘSKI, Neoliberalizm i społeczeństwo obywatelskie (Toruń: Wydawnictwo UMK, 2012): 7–24.

⁴ J. FILEK, Wprowadzenie do etyki biznesu (Kraków: Wydawnictwo AE w Krakowie, 2004), 118.

responsibility which is proportional to their status. The most important postulates include limiting and eliminating their negative impact on the environment and participation in counteracting civilizational threats.

According to Bolesław Rok, three paths led to the idea of corporate social responsibility in the late 1990s. Their intersection led to the creation of a new concept. They were the path of sustainable development, the path of civic pressure and the path of self-regulation of business.⁵ A similar situation, though over a decade later, arose in Poland. This shift was caused by the legacy of communism (which largely destroyed civic attitudes), the late birth of market economy in the early 1990s and our accession to the European Union in 2004.

Corporate social responsibility (CSR) was originally born in the United States, and only later in the European Union, in which it now exerts a lot of influence. The approach to CSR has evolved over the years, of course, as has business and its environment. This was mainly related to the ongoing globalization.

In Poland, the creation of the Responsible Business Forum (Forum Odpowiedzialnego Biznesu, FOB) in 2000 is considered to be the moment when CSR was born in Poland.⁶ It is the oldest and best known NGO addressing the CSR idea in a comprehensive manner. Initially, FOB was practically the only Polish source of knowledge about the new, widely disseminated concept and solutions developed in this area in Western societies. One of the first CSR definitions in Poland is "a management strategy that, through conducting social dialogue at the local level, contributes to the growth of competitiveness of a given enterprise on a global level and at the same time shapes favourable conditions for economic, social and environmentally friendly development." The main focus was put on the relationship between CSR and the concept of sustainable development (which was abandoned in subsequent years). Another important definition popularized by FOB was the one referring to the EU definition of the so-called Green Paper on CSR from 2001. According to it, "responsible business is a voluntary strategy that

⁵ More on this subject in: B. Rok, *Odpowiedzialny biznes w nieodpowiedzialnym świecie* (Warsaw: Akademia Rozwoju Filantropii w Polsce. Forum Odpowiedzialnego Biznesu, 2004), 7–11.

⁶ RESPONSIBLE BUSINESS FORUM, http://odpowiedzialnybiznes.pl.

⁷ RESPONSIBLE BUSINESS FORUM, *Raport. Odpowiedzialny Biznes w Polsce w 2002 roku* (Warsaw 2003), 5, accessed August 4, 2018, http://odpowiedzialnybiznes.pl/wp-content/uploads/2014/02/raport_2002.pdf.

⁸ COMMISSION OF THE EUROPEAN COMMUNITIES, *Corporate Social Responsibility: A business contribution to Sustainable Development*, Brussels, 2.07.2002, COM (2002) 347, 5.

takes into account social, ethical and ecological aspects in business and in contacts with stakeholders." In subsequent years, further evolution of this concept took place. This was connected, among others, to the crisis that began in 2007.

This terminological confusion and low effectiveness of the concept of corporate social responsibility prompted the publication of the ISO 26000 standard in 2010. It was in a way a consensus, among others on the issue of defining CSR. Social responsibility has been defined in it as "the responsibility of an organization for the impacts of its decisions and activities on society and the environment, through transparent and ethical behaviour that: contributes to sustainable development, including health and the welfare of society; takes into account the expectations of stakeholders (individuals or groups who are interested in decisions or activities of the organization); is in compliance with applicable law and consistent with international norms of behaviour; and is integrated throughout the organization and practised in its relationships." ¹⁰ Thus transparency, ethics, legality, implementation of sustainable development, satisfaction of stakeholders' expectations and reference to the entire organization and its supply chain has been taken into account. In addition, attention was drawn to the fact that social responsibility should be expected from every organization, not just business ones. This definition was also adopted in 2011 by the European Union¹¹ and Poland. As early as in 2011 about 30% of companies in Poland declared familiarity with the standard. 12

The creation of the concept of creating shared value (CSV) became a peculiar evolution of CSR. In 2011, *Harvard Business Review* published an article by Michael E. Porter and Mark R. Kramer, where this concept was presented.¹³

⁹ RESPONSIBLE BUSINESS FORUM, "Społeczna odpowiedzialność biznesu," accessed August 5, 2018, http://odpowiedzialnybiznes.pl/hasla-encyklopedii/społeczna-odpowiedzialnosc-biznesu.

¹⁰ POLSKI KOMITET NORMALIZACYJNY, Polska Norma PN-ISO 26000:2012. Wytyczne dotyczące społecznej odpowiedzialności (Warsaw: PKN, 2012), 16.

¹¹ This communication states that CSR is the responsibility of enterprises for their impact on society, thus giving up the long-term emphasis on the voluntariness of this concept, EUROPEAN COMMISSION, *A renewed EU strategy 2011–14 for Corporate Social Responsibility*, Brussels, 25.10.2011, COM (2011) 681 final, 7.

¹² Assessment of the implementation status of corporate social responsibility standards. A set of indicators of social responsibilities in micro, small, medium and large enterprises, see the report of the Polish Agency for Enterprise Development, *Ocena stanu wdrażania standardów społecznej odpowiedzialności biznesu. Raport*, 54, 57, accessed August 10, 2018, https://www.parp.gov.pl/index.php/component/publications/publication/583.

¹³ M. E. PORTER and M. R. KRAMER, "Tworzenie wartości dla biznesu i społeczeństwa," *Harvard Business Review Poland* 99 (May 2011), https://www.hbrp.pl/a/tworzenie-wartosci-dla-biznesu-i-spoleczenstwa/VOxyDLJV.

In Poland it was popularized thanks to Nestlé, which in 2012 presented a report on its new business strategy called *Creating Common Value*. ¹⁴

The last, at the current moment, stage of the evolution of the approach to corporate social responsibility is the concept of CSR 2.0 proposed by Wayne Visser. ¹⁵ It is a response to the internet and social media revolution, in which web communities are guided by new rules. According to this concept, enterprises are required to have a more interactive, bottom-up, stakeholder and co-creation and diversity-oriented approach. The result is social innovation.

Social responsibility, both in business, third sector organization, and that of individual citizens is of great importance in many areas of human life: education, business, trade, as well as in the production, distribution and disposal of food. The growing emphasis on the role of every human being in shaping social reality means that an increasing number of social movements, organizations and socially engaged social groups is emerging. That includes the area of foodsaving. Some of them will be presented later in the article.

TECHNOLOGICALLY RESPONSIBLE

Socially responsible business has for many years been outpacing itself in creating modern technologies for better production, preservation and, above all, less wastage of food. Responsibility leads to innovation. The largest number of such initiatives is created in highly developed countries, but at the same time located in very difficult natural conditions. It makes for the strongest motivation for creating modern, socially responsible solutions. Below we present some of the world's most interesting examples of preventing food waste at every stage of the chain.

A large part of food waste takes place in the delivery part of the food supply chain. Here, the creation of new technologies is particularly important. Many of these technologies are presented by the Foodtank non-profit organisation.¹⁶

¹⁴ NESTLE, Creating Nestlé's shared value in Poland. 2008–2011 Report, accessed August 10, 2018, www.nestle.pl/asset-library/documents/raport csv nestle 2008 2011.pdf.

¹⁵ W. VISSER, "CSR 2.0. Ewolucja i rewolucja społecznej odpowiedzialności biznesu," trans. Marcin Grzybek, *Forum Odpowiedzialnego Biznesu*, December 27, 2011, accessed August 10, 2018, http://odpowiedzialnybiznes.pl/artykuly/csr-2-0-ewolucja-i-rewolucja-społecznej-odpowiedzialnoscibiznesu.

¹⁶ A. WITTET, "12 Ways the Tech Industry is Hacking Food Waste," *Foodtank*, August 2017, accessed August 11, 2018, https://foodtank.com/news/2017/08/food-waste-technologies.

One of such technologies is Bluapple. It is a product that absorbs ethylene gas in refrigerators, allowing consumers to store fresh produce for longer. Bluapple works by activating a natural oxidation process, and it can be an effective ethylene absorber that is capable of extending produce shelf life to up to three times longer.

Another such technology is BluWrap. By using fuel cells to monitor and reduce oxygen in shipping containers, it can extend the shelf life of fresh fish and meat. Its built-in sensors work to create a consistent atmosphere throughout the products' shipping chain. Another real-time cold chain management system is BT9 XSENSE. It monitors the condition of perishable food products along the transit line during the whole process — from the producer to store shelf. The data allows users to identify and prevent problems along the cold chain and to maximize product quality along the entire supply chain.

Copia is the name of yet another distribution technology. It works by redistributing food surplus to feed people in need. It uses its extensive food waste reduction dashboard to connect businesses with food surplus with local shelters and other nonprofit organizations dealing with food. For-profit organizations, by paying a volume-based fee, can request pickups for their surplus food in real time. After that they can use Copia's analytic software to manage and track their food surplus. It is a way to save money and reduce their overall food waste.

To keep food fresh longer, Edipeel was invented. It is an invisible, edible, and tasteless innovation engineered by Apeel Sciences to protect food surfaces. It is made from all-natural plant extracts recycled from agricultural byproducts. Edipeel serves as a barrier-like skin to protect produce from transpiration, oxidation, and microbial activity, helping to keep produce fresh for longer.

An interesting system was created by Freight Farms. It is called the Leafy Green Machine, and when used with its control Farmhand Connect app, it can ensure consistent harvests all year long in various, different geographic locations. The system is installed within a shipping container features climate control technology, containing a closed-loop hydroponic system and efficient growing equipment. The app allows growers to remotely track their farm's climate conditions and control its conditions like temperature, humidity and carbon dioxide levels, as well as nutrient and pH levels to maximize its efficiency and production, thus minimizing waste.

Another example of smart food technology is Gebni. It is a food delivery app service working to reduce food waste by using an algorithm for price adjustment according to real-time demand. For example, by lowering prices during off-peak hours it can increase sales, while also increasing the accessibility of food delivery to low-income customers.

Storage of food presents a big problem in poorer countries. In order to help them the IRRI Super Bag was invented. This technology uses hermetic storage to increase the shelf life of stored grains and seeds. The bag reduces oxygen levels from 21% to 5%. As a result, it can significantly reduce the number of live insects without using insecticides. The bag also increases the germination life of stored seeds from 6 to 12 months and maintains consistent grain moisture within the bag. It enables potentially greater head rice recovery during the milling process.

Another very modern technology is being developed by VTT Technical Research Center in the form of wireless sensors which detect ethanol in the headspace of food packaging. They allow live data on the food's quality and freshness to be transmitted to retailers and customer via radio frequency identification (RFID) tag technologies. Such a method of packaging products can help to improve the shelf-life of packaged food. It can also help to better control and monitor food quality throughout the distribution chain, thus reducing the amount of food wasted during transportation and in retail.

To preserve food a solar-powered, standalone device called the Wakati system was created. Wakati uses hydration instead of a cooling system to preserve food, and presents a low-cost, low-energy alternative to conventional refrigeration. One liter of water per week and solar energy are sufficient to make the Wakati system keep fresh produce hydrated. It enables farmers in warm climates to store their harvests more effectively on-farm and increases their ability to bring crops to market during the transit.

Winnow System helps to monitor big kitchens. Its main goal is to help the hospitality industry reduce avoidable food waste by allowing kitchens to monitor their waste by tracking how and what food is being wasted. The Winnow System generates daily reports that can be used by chefs to identify key areas in which to cut waste.

There are many others smart technologies that help the world to preserve food, but one of the most important countries leading in the field is Israel. Below some of its technological "miracles" are described. Since the 1950s when the modern state of Israel was created, Israelis have been finding miraculous ways to make their own desert green and with the passage of time

they started to share their discoveries far and wide through channels including Israel's Agency for International Development Cooperation at the Ministry of Foreign Affairs (MASHAV).

For them, was most important aspect was drip irrigation. The concept of drip irrigation existed well before the state was born, but it was revolutionized by Israeli water engineer Simcha Blass. He discovered that a slow and balanced drip leads to remarkable growth. He invented tubing that slowly released water in the spots where it was most effective. In 1965, Kibbutz Hatzerim built a whole new industry Netafim based on his invention. Those new technologies of drip and micro-irrigation solutions rapidly spread worldwide. One of them is Tipa (Drop) — an Israeli-developed kit that has allowed 700 farming families in Senegal to reap crops three times a year instead of just once, even on infertile land. Similar systems were introduced in in Kenya, South Africa, Benin and Niger. 17

Another Israeli invention, GrainPro Cocoons, provide a surprisingly simple and cheap way for African and Asian farmers to keep their grain market fresh. They are huge bags that keep both water and air out. They are being used all over the developed world, including Africa and the Far East, and even in countries that have no diplomatic ties to Israel, such as Pakistan.

Israelis are also experimenting with improving the quality of food as such, by developing strains of potatoes that thrive in hot, dry climates, and can be irrigated by saltwater. Potatoes are one of the main sources of nutrition in the world, but never before could they grow well in hot, desert regions like the Middle East. Another food experiment is a commercial algae farm in China. Yet another interesting experiment is the one created by the Hebrew University agricultural scientists Ilan Sela and Haim D. Rabinowitch, called TraitUPTM. It enables the introduction of genetic material into seeds without modifying their DNA. This method immediately and efficiently improves plants before they're even sown.

There are plenty of other technologies that change the world of food, but technologies will not be sufficient for as long as people are not responsible with food waste. All over the world, including Poland, there are more and more non-profit organizations or self-organizing groups promoting foodsaving attitudes towards food. Some of them are described below.

¹⁷ A. K. LEICHMAN, "The top 12 ways Israel is feeding the world," *Israel21c*, May 21, 2019, accessed August 12, 2018, https://www.israel21c.org/the-top-12-ways-israel-feeds-the-world.

FOODSAVING IN POLAND

Poland is one of the countries that legally remained behind the other EU member states for quite a long time. It was only in October 2013, after a few years of struggle between entrepreneurs and food banks, that the unfavorable law has been changed. In its previous form it caused the waste of about 500,000 tons of excess food from stores, which could have been used to support those in need. This law is an amendment to the VAT Act, according to which food distributors will be exempt from the responsibility to pay the VAT if they donate the food to the needy for free. Before that, throwing food out into the trash was more profitable for traders, because for every product donated to a charity VAT had to be — and it could be 5.8% or even 23% of the product value, depending on the type of food.

Nowadays, producers, stores, retail chains and restaurants can donate food for free, when the product's expiry date is approaching. The recipients of food gifts can be public benefit organizations only, and the transfer of each kilogram must be properly documented. Another condition is that food cannot be resold — it must be passed on to the needy free of charge. The effect of this amendment was that many commerce networks signed agreements with charitable organizations. Among them there are, for example, Tesco and Auchan, which even before that cooperated with Food Banks at Christmas food collections. But ordinary citizens take social initiatives to recover food as well. Below are short descriptions of the most interesting ones.

Foodsharing is an extremely fascinating initiative, founded in 2012 in Germany by Raphael Fellmer.¹⁹ The rule of Foodsharing is simply to share food with others. We can give it to others in a situation where we prepared too much of it or have bought too much food and we are unable to eat before the expiration date. In 2016, the idea reached Poland and quickly spread among the largest Polish cities.²⁰

¹⁸ ŻET, "Przeciwko marnowaniu żywności. Nadwyżki z hipermarketu w Raciborzu trafią do TĘCZY," *Nowiny.pl*, September 7, 2016, accessed August 10, 2018 https://www.nowiny.pl/rudyszwald/120706-przeciwko-marnowaniu-zywnosci-nadwyzki-z-hipermarketu-w-raciborzu-tra fia-do-teczy.html.

¹⁹ M. KACZMARCZYK, "Foodsharing – pomysł z Niemiec rozwija się nad Wisłą," *Newsweek*, March 12, 2017, accessed August 13, 2018, http://www.newsweek.pl/polska/foodsharing,artykuly, 406657,1.html.

²⁰ M. GALEK, "Wyrzucasz jedzenie? Wybróbuj Foodsharing!" *Aleteia*, October 30, 2016, accessed August 13, 2018, https://pl.aleteia.org/2016/10/30/wyrzucasz-jedzenie-wyprobuj-foodsharing.

A similar, but completely new initiative (established in June 2018) is the first municipal "Jadłodzielnia" at Twarda 1 Street in Warsaw. 21 It is a place where everyone can share and receive food. It is the physical embodiment of the foodsharing idea, which also aims to prevent food waste. It is available to all residents and no one verifies their income. Anyone in need can help themselves to food. The rules of using the Jadłodzielnia are simple for those in need of food — just come and help yourself to the food waiting in the fridge. They are slightly more restrictive for those sharing their food. Because of the risk of food poisoning, leaving unprocessed products such as raw meat or eggs and unpasteurised milk is forbidden. Ideally, the products should be factory packed and not past their expiration date. The uniqueness of the project lies in the way it is implemented as well — the city's Jadłodzielnia is more than just a food exchange point. Its launch is a unique opportunity to draw residents' attention to the issue of rational food management. The city also launched a series of open lectures and workshops accompanying the project. Jadłodzielnia was established as a part of the 2018 participatory budget of the Capital City of Warsaw. It is managed by the Professor Andrzej Tymowski Social Welfare Centre of the Śródmieście District.

Another interesting project is called Feed Them Up.²² It was launched by Warsaw students from the Warsaw School of Economics. The idea of the project is to redistribute the food surplus, which many restaurants are getting rid of every day, and give it over to charity foundations. The process of transferring surplus food is very simple. Restaurants have to sign a donation contract under which they will provide their surplus food to Feed Them Up, and in the second stage, the surplus will be given to a public benefit organization in Warsaw. It was the first initiative of this kind in Poland.

Established in 2015, the nationwide Polish campaign "Let's share" is strictly time-bound.²³ It is a social project where everyone who has excess food at home can share it with the homeless. The campaign is being conducted around Easter, because it is the time when the largest amount of food

²¹ K. KLIMCZAK, "Śródmiejska Jadłodzielnia – stop marnowaniu żywności," *Miasto Stoleczne Warszawa*, June 15, 2018, accessed August 13, 2018, http://www.um.warszawa.pl/aktualnosci/rdmiejska-jad-odzielnia-stop-marnowaniu-ywno-ci.

²² Ł. KASPRZAK, "Feed Them Up. Warszawscy studenci przekazują nadwyżki żywności na cele charytatywne," *naszemiasto.pl*, March 10, 2016, accessed August 14, 2018, http://warszawa. naszemiasto.pl/artykul/feed-them-up-warszawscy-studenci-przekazuja-nadwyzki,3671332,artgal,t,i d,tm.html.

²³ M. Danielewicz and M. Woźniak, "Nie wyrzucaj jedzenia po Wielkanocy! Oddaj je do jadłodajni," *Głos Wielkopolski*, April 15, 2017, accessed August 14, 2018, https://plus.glos wielkopolski.pl/wiadomosci/a/nie-wyrzucaj-jedzenia-po-wielkanocy-oddaj-je-do-jadlodajni,11989303.

is being wasted in Poland. The project has been conducted in 17 Polish cities and its range is continuously increasing.

The bazaar on Namysłowska Street in Warsaw constitutes a peculiar distortion of the idea of foodsharing.²⁴ There, one can buy food products after their expiration date. Both sellers and customers know that products can cause food poisoning, but the business is doing very well. The offer is very wide, and products are offered at as low as half the store price. This is similar to the idea implemented by large retail chains, in which one can find baskets where employees place products with a short shelf life at lower prices. However, they are always kept in the right storage conditions and are never past the expiration date. On the other hand, in the bazaar, in 30°C heat, dairy products with swollen packaging lids and unpleasantly smelling meat are sold.

In Poland, as well as in many other countries, selling food past the expiration date is illegal and although the city carries out inspections, withdraws the products from the market and punishes food sellers with fines, neither they nor buyers are detracted. In addition, food sellers, relying on the 2013 law on the non-taxation of food distribution, claim to be giving the goods away instead of selling them in the case of an inspection. Is this still social responsibility? Although admittedly many products are still fit for consumption past the expiration date, selling them is morally dubious, because the buyer is solely responsible for potential food poisoning. To some extent, it is similar to the idea of freeganism, 25 an anti-consumerist lifestyle that primarily involves boycotting the current economic system and feeding on what one finds in the garbage bin. The term itself was created from the combination of two words: free and veganism. In reality, however, this does not mean that everyone who is a freegan is also a vegan. This new lifestyle was created in the second half of the 1990s in the United States, whence it spread to Western Europe, especially Germany, Spain and Portugal, where it began to take on a mass character. It has reached Poland as well, however, it has not spread on the same scale as in other European countries.²⁶

²⁴ M. Konieczek, "Salami za złotówkę, śmietana za 50 gr. Sprzedaż przeterminowanej żywności na jednym z bazarów w Warszawie," *naszemiasto.pl*, August 20, 2018, http://warszawa. naszemiasto.pl/artykul/salami-za-zlotowke-smietana-za-50-gr-sprzedaz,4762461,artgal,t,id,tm.html ?utm source=facebook.com&utm medium=dzieje-sie-warszawa&utm campaign=salami.

²⁵ A. ROSTEK and T. ZALEGA, "Freeganizm – trend czy styl życia?" *Handel Wewnętrzny* 5 (2015): 262–79.

²⁶ T. ZALEGA, "Freeganizm – nowy trend konsumencki w zachowaniach nabywczych miejskich gospodarstw domowych w Polsce w okresie kryzysu (wyniki badań)," *Zarządzanie Innowacyjne w Gospodarce i Biznesie* 16, no. 1 (2013): 101.

FORECASTING THE FUTURE

There are many good and bad socially responsible practices regarding preventing food waste in Poland. Our society, with a long delay caused by the long-term reign of the communist system compared to the countries of Western Europe, is slowly becoming a more responsible society. However, the problem of food waste concerns the entire world. And despite modern technologies and legal regulations, this problem, at the level of ordinary citizens, is still very current and unfortunately seems to be deepening. There are indeed many social initiatives in the world aimed at recovering surplus food, like the Italian Last Minute Market,²⁷ the French National Association for the Development of Solidarity Groceries (ANDES),²⁸ and the Rhône-Alpes Association of Social Solidarity Stores (GESRA); 29 however, the selfawareness of citizens is still low. The situation is also not improved by the deepening gap between the poorest countries, where there are huge food shortages, and rich or developing countries, where a lot of food is being wasted. It would seem that the only answer to these problems may be an attempt to change the human mentality, sensitize others to the value of food and teach rational buying, proper storage and use of food. The author of this text has put forward the thesis that foodsaving equals social responsibility; therefore, it is crucial to conduct global awareness campaigns around the world. The problem that remains very difficult to solve is that food is produced for profit, and much of it will still be wasted at the production stage. However, this issue remains to be resolved by governments and large organizations. Undoubtedly, further research should be dedicated to this problem.

²⁷ Foodsaving is an Italian project initiated in over 40 Italian cities, aiming at recovering food products and collecting its surplus from companies and food producers, including vegetables that have been collected and stored in the field.

²⁸ It was established to protest against food waste and the growing number of people that could use it.

²⁹ It is an innovative network of social and solidarity stores, based on the French law from 1901. Its business goal is to promote, create networks, support, accompany or conduct any activity that serves the management and development of social grocery stores in the Rhône-Alpes region.

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FOODSAVING — TOWARDS SOCIAL RESPONSIBILITY?

Summary

The main problem related to food production is that food is produced for profit rather than to meet the food needs of the population. Food waste takes place during the entire production process, from the moment it was created, in distribution, and then by intermediaries in stores, warehouses, and finally by the target recipients — in restaurants and homes. At each step, food can become waste. There are many market and technological solutions that can reduce the problem of food waste. However, these are technological solutions that do not contribute to changing the producers' and recipients' approach to food. They do not provide an answer to the question of why a farmer decides to leave food on the field instead of selling or distributing it in cases of production surpluses. The answer to these problems may be an attempt to change human mentality, striving towards social responsibility. The main question that will be posed here is whether the only solution to the problem of food waste is changing the human mentality. Does foodsaving equal social responsibility?

Key words: food; food safety; food security; social responsibility.

FOODSAVING - W STRONE SPOŁECZNEJ ODPOWIEDZIALNOŚCI?

Streszczenie

Głównym problemem związanym z produkcją żywności jest to, że żywność jest produkowana dla zysku, a nie dla zaspokojenia potrzeb żywieniowych ludności. Odpady żywnościowe mają miejsce podczas całego procesu produkcyjnego, od momentu powstania, podczas dystrybucji, a następnie przez pośredników w sklepach, magazynach, a wreszcie u odbiorców docelowych – w restauracjach i domach. Na każdym etapie żywność może stać się odpadem. Istnieje wiele rozwiązań rynkowych i technologicznych, które mogą zmniejszyć problem marnotrawstwa żywności. Są to jednak rozwiązania technologiczne, które nie przyczyniają się do zmiany podejścia producentów i odbiorców do żywności. Nie dają one odpowiedzi na pytanie, dlaczego rolnik decyduje się pozostawić żywność na polu, zamiast sprzedawać lub dystrybuować ją w przypadku nadwyżek produkcyjnych. Odpowiedzią na te problemy może być próba zmiany ludzkiej mentalności, dążenie do społecznej odpowiedzialności. Głównym pytaniem, która zostanie tu postawione, jest to, czy jedynym rozwiązaniem problemu marnotrawienia żywności jest zmiana ludzkiej mentalności? Czy foodsaving jest równoznaczne z odpowiedzialnością społeczną?

Slowa kluczowe: żywność; bezpieczeństwo żywności; bezpieczeństwo żywnościowe; odpowiedzialność społeczna.