

Food Waste in households – diagnosis and recommendations

Wytwórnia Inicjatyw Twórczych

E-book:
Food Waste in Households of Young Adults
– Diagnosis and Recommendations

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FOOD
DESERVES
RESPECT

Every action counts!
Join us in our fight agains food waste!

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1. Introduction

Global context of the food waste problem

In a world where millions of people go to bed hungry every day, it remains shocking that nearly one-third of produced food never reaches our plates. According to the Food and Agriculture Organization of the United Nations (FAO), approximately 1.3 billion tons of food is wasted annually. This is not only a loss of precious resources - it's also an untapped potential that could solve the problem of malnutrition affecting 820 million people worldwide.

The problem of food waste permeates all stages of the supply chain - from production, through processing, distribution, to consumption. However, it is the last link, represented by our daily decisions in households, that generates the largest portion of losses in developed countries. By throwing away bread that has dried out after a few days, fruits that have been sitting too long in the basket, or leftovers from yesterday's lunch, we are not only wasting food - we are also wasting the work, energy, water, and other resources used to produce it.

The scale of the problem is particularly alarming considering that if food waste were a country, it would be the third largest emitter of greenhouse gases after the United States and China. Moreover, wasting food also means wasting land, water, energy, and human labor. It is estimated that to produce food that ultimately goes to waste, an area of about 1.4 billion hectares is used - almost 30% of the world's agricultural land.

Scale of the phenomenon in Europe

In the European Union, the problem of food waste is particularly acute. Every year, around 88 million tons of food is wasted here, which corresponds to about 173 kg per person. The value of this wasted food is estimated at a staggering 143 billion euros. Moreover, households are responsible for 53% of these losses, amounting to about 47 million tons annually.

For the average European family, these numbers translate into tangible financial losses. A four-person household can lose as much as 1000-1600 euros annually on discarded food. That's the equivalent of a vacation, new household appliances, or several months of housing costs. In the face of rising food prices and overall living costs, this inefficiency is becoming increasingly painful.

It is worth noting, however, that the phenomenon of food waste is not evenly distributed throughout Europe. Cultural, economic, and social differences between individual countries lead to different patterns of consumer behavior. These differences - and the accompanying similarities - are the subject of the study that formed the basis of this publication.

Research aim and scope

This publication is based on comprehensive research conducted among young adults (aged 18-30) from three European countries: Poland, Italy, and Greece. This selection was not accidental - these three countries represent different regions of Europe, culinary traditions, and cultural contexts, allowing for a multidimensional analysis of the food waste problem.

The main aim of the study was to diagnose the scale of food waste in the households of young adults and to identify key factors influencing this phenomenon. The study focused on:

- Analyzing the scale and nature of food waste in households
- Identifying the main causes of food waste
- Determining the most frequently wasted products
- Examining the impact of education on reducing food loss
- Analyzing sustainable food behaviors and their relationship with environmental awareness
- Identifying cross-cultural differences and similarities in approaches to the food waste problem

The study was conducted on a representative sample of 599 respondents, including 201 from Poland, 198 from Italy, and 200 from Greece. A questionnaire containing both closed and open-ended questions was used, allowing for the collection of both quantitative and qualitative data.

The choice of the 18-30 age group as the research population had particular justification. Young adults are at the stage of forming long-term consumer habits that they will cultivate for most of their lives. At the same time, they are future decision-makers who will influence food production and distribution systems in the coming decades. Additionally, young people often show greater flexibility and willingness to adopt new behavior patterns, making them potentially more receptive to educational interventions.

This publication not only presents the results of this research but also proposes specific recommendations for consumers, educators, and policy makers aimed at reducing food waste. In the following chapters, we will take a closer look at the scale and causes of food waste, the role of education in reducing this phenomenon, the relationship between environmental awareness and food behaviors, and present practical advice for different social groups.

We hope that this publication will become not only a source of knowledge but also an inspiration for action - both at the individual and systemic levels. Because although the problem of food waste is complex, each of us can contribute to its solution, starting from our own kitchen.



2. Food Waste – Scale and Causes

In the trash instead of on the plate – problem diagnosis

What does it actually mean that we waste food? For each of us, it might mean something slightly different. For one person, it will be half a loaf of bread that has begun to mold; for another – uneaten leftovers that end up in the trash; for yet another – expired yogurts forgotten in the depths of the refrigerator. Regardless of the form, food waste is a problem that affects everyone – though not everyone to the same extent.

Our study conducted among young adults (18-30 years old) from Poland, Italy, and Greece revealed a fascinating picture of this phenomenon, showing both similarities and differences between countries with different culinary traditions and cultural contexts.

The first step was to determine how the respondents themselves assess the scale of food waste in their households. It turns out that the vast majority – as much as 85% of respondents – admit that food waste occurs at some level in their homes. This is consistent with European statistics, which indicate that households are responsible for the largest portion of wasted food in developed countries.

Interestingly, clear differences can be observed between individual countries. Italian respondents most frequently declared that they "never waste food" or "generally do not waste food" (49.7% of respondents), while in Poland this percentage was only 38.0%. Greece ranked in between, with a result of 44.7%. At the same time, Polish respondents most often admitted to "significant" or "very serious" food waste (16.8%), compared to 11.7% in Italy and 13.3% in Greece.

These differences are statistically significant and may reflect different culinary traditions, approaches to food, and economic contexts in these countries. In Italy, a country famous for its culinary heritage and respect for food, awareness of the food waste problem seems to be highest, and the declared scale of waste – the lowest.

Which products most often end up in the trash?

When we look at which products most often end up in the trash instead of on the plate, a consistent picture emerges across all surveyed countries. Three categories of products dominate the list of most frequently wasted:

1. Bread – indicated by 72.3% of respondents. In Poland, this percentage was highest (76.8%), slightly lower in Italy (68.5%) and Greece (71.6%).
2. Fruits and vegetables – indicated by 68.7% of respondents. Most often thrown away in Poland (71.2%) and Italy (70.1%), somewhat less frequently in Greece (64.8%).
3. Leftovers from prepared meals – indicated by 54.6% of respondents. Most often wasted in Poland (59.3%), less often in Italy (50.3%) and Greece (53.7%).

Further down the list were: dairy products (42.8%), meat and meat products (27.5%), cereal products (22.3%), cold cuts (19.8%), snacks and sweets (15.6%), beverages (12.3%), and fish and seafood (11.5%).

Interestingly, despite the general similarities, some characteristic differences between countries can be observed. In Poland, bread and dairy products are particularly often wasted; in Italy – cereal products (rice,

pasta); and in Greece - specific products of local cuisine, such as olives or feta cheese.

These differences reflect local culinary traditions - in Italian cuisine, pasta and rice form the basis of many dishes, while in Greek cuisine, olives and feta are everyday products. In Poland, bread traditionally plays an important role in the diet, which may explain its high position on the list of wasted products.

Main reasons for throwing away food

Understanding the causes of food waste is crucial for developing effective strategies to counter this problem. Our study identified several main causes that recur across all three countries, albeit with varying intensity.

The three most frequently indicated causes of food waste are:

1. **Spoilage of stored food** - average rating of 3.52 on a 1-5 scale. Rated highest in Poland (3.64), slightly lower in Italy (3.42) and Greece (3.50).
2. **Buying too much food in reserve** - average 3.49. Rated highest in Poland (3.58), slightly lower in Greece (3.48) and Italy (3.40).
3. **Unplanned/thoughtless food purchases** - average 3.38. Rated highest in Poland (3.47), followed by Greece (3.38) and lowest in Italy (3.28).

Following these were: preparing too large portions of meals (3.31), overlooking the expiration date (3.16), buying food in too large packages (3.15), lack of ideas for using products (3.05), improper storage (2.97), purchasing low-quality products (2.89), throwing away leftovers from plates (2.75), and reluctance to prepare meals (2.68).

Interestingly, correlation analysis showed that the strongest relationships with the declared scale of food waste are: unplanned purchases (r = 0.42), cooking too large quantities (r = 0.40), and buying in reserve (r = 0.39). These results indicate that the main mechanisms leading to food waste are related to planning - both purchases and meals.



There is also a characteristic differentiation between countries. In Poland, preparing too large portions of meals is particularly significant (average 3.41, the highest among the surveyed countries); in Italy, the key problem is unplanned purchases; and in Greece, the purchase of low-quality products stands out (average 3.07, the highest among the surveyed countries).

These differences reflect different cultural and economic patterns. In Poland, abundant meals are traditionally prepared, often with several days in mind. In Italy, where daily purchases of fresh products are more common, the problem lies in unconsidered, impulsive purchasing decisions. In Greece, a country struggling with a more difficult economic situation, access to high-quality products at affordable prices is a bigger issue.

Impact of food prices on inventory management

In the face of rising food prices across Europe, it was important to examine whether the economic aspect affects how food is managed. It turns out that the vast majority of respondents (80.1%) agree with the statement that rising food prices may lead to better food management and reduced waste.

This agreement was visible across all three countries, without statistically significant differences: in Poland, the average rating was 4.15 (on a 1-5 scale), in Italy 4.12, and in Greece 4.02. High values across all countries suggest that economic motivations are an important factor that can influence changes in behaviors related to food waste.

Interestingly, correlation analysis yielded an unexpected result: people who rated their economic situation better reported slightly less food waste ($r = -0.11$). This may result from better organization of purchases, greater awareness and access to education, or from the fact that people in a better financial situation can afford to buy smaller quantities of high-quality food, which is less often wasted.

This observation has important implications for education and public policies - it indicates that the rise in food prices alone may not be a sufficient incentive to reduce waste, especially among people with lower incomes, who may need additional support in the form of knowledge, skills, and access to appropriate tools.

Attitude towards expired products

An important aspect of food management is the approach to expiration dates. Respondents were asked about their attitude toward consuming food after the expiration date.

It turned out that the approach varies depending on the type of product. Respondents show the highest inclination to consume products with a long shelf life, such as pasta, groats, or cereals, after their expiration date (average 3.34 on a 1-5 scale). A slightly lower inclination - towards food that can be heated (average 2.94), and the lowest - towards any food regardless of its type (average 2.28).

Interesting differences occurred between countries regarding products with a long shelf life. Polish respondents show the greatest inclination to consume them after their expiration date (average 3.48), while respondents from Greece - the lowest (average 3.25). This difference is statistically significant and may reflect different approaches to risk or different experiences related to product quality.

At the same time, the correlation between the declared scale of food waste and agreement with the statement "I do not consume products after their expiration date" was $r = 0.23$. This suggests that a rigid approach to expiration dates may contribute to greater food waste.

What to do about it? General conclusions

Analysis of the scale and causes of food waste among young adults in Poland, Italy, and Greece leads to several key conclusions:

1. The problem is widespread but varied.
Food waste affects all the surveyed countries, but its scale and nature differ depending on the cultural and economic context.

2. Planning is key.
The strongest correlations with the scale of food waste are shown by factors related to planning - both purchases and meals.

3. There are universal categories of wasted products.
Bread, fruits and vegetables, and meal leftovers are most frequently wasted in all countries, albeit with varying intensity.

4. Cultural factors matter.
Culinary traditions and cultural attitudes toward food influence waste patterns. In Italy, where there is traditionally a strong emphasis on food quality and culinary culture, the declared scale of waste is the lowest.

5. Economic factors play a role.
Rising food prices may encourage better resource management, but economic pressure alone may not be enough - education and appropriate tools are also needed.

6. Approach to expiration dates affects waste.
Adhering too rigidly to expiration dates can lead to unnecessarily throwing away still edible food.

These conclusions form the basis for developing effective educational and policy strategies aimed at reducing the phenomenon of food waste. In subsequent chapters, we will look at the role of education in this process and the links between environmental awareness and food behaviors.

3. The Role of Education in Reducing Food Waste

Know to not waste

Education forms the foundation of social change - this is a truism, but in the context of the food waste problem, it takes on special significance. Is knowledge alone enough to change our daily habits? How can we effectively reach young adults with this message? Which educational methods will be most effective? And finally - are young people even open to such education?

These questions became the starting point for analyzing the role of education in reducing food waste among young adults from Poland, Italy, and Greece. The results of the study shed new light on how to shape effective educational interventions and to what extent they can influence behavioral change.

Do educational campaigns reach their audience?

The first step was to examine whether young adults are even aware of the existence of educational campaigns and initiatives related to reducing food waste. The results turned out to be ambiguous.

Only 38.6% of respondents declared they had heard about training sessions, social campaigns, or other events related to this topic. This means that over 60% of young adults may not be aware of educational activities conducted in their environment. Moreover, there are significant differences between countries: in Italy, 45.7% of respondents are aware of such campaigns, in Poland 40.1%, and in Greece only 29.6%. These differences are statistically significant and suggest varying levels of intensity or effectiveness of educational activities in individual countries.

Even more concerning is the fact that awareness of the existence of campaigns does not directly translate into participation in them. Only 17.1% of all respondents declared that they had participated in training sessions or social campaigns on reducing food waste. Again, the highest level of participation was recorded in Italy (22.3%), followed by Poland (16.9%), and the lowest in Greece (11.8%).

The situation looks somewhat better when it comes to practical initiatives, such as donating uneaten food to food banks or other food-sharing points. 23.0% of respondents participated in such activities - 30.4% in Italy, 22.9% in Poland, and 15.4% in Greece.

These results indicate a significant gap between awareness and action. Even among people who are aware of the existence of educational campaigns, less than half actually participate in them. This may result from various barriers, such as time constraints, lack of availability of initiatives near their place of residence, or simply a lack of motivation for active engagement.

Do educational campaigns influence behavioral change?

The key question is: does knowledge and participation in educational campaigns translate into actual reduction in food waste? Correlation analysis provides some clues.

There is a negative correlation between awareness of educational campaigns and the declared scale of food waste ($r = -0.23$). This means that people who are aware of the existence of campaigns report slightly less

food waste. Similarly, participation in campaigns (r = -0.19) and in practical initiatives (r = -0.26) shows a negative correlation with the scale of food waste.

Although these correlations are not very strong, they suggest a link between education and behaviors. People who are aware of the problem and actively engage in initiatives aimed at solving it are more likely to take actions to reduce food waste in their own households.

It is also interesting that participation in practical initiatives, such as donating food to food banks, shows the strongest correlation with the scale of food waste. This may suggest that practical actions have a greater impact on changing behaviors than theoretical knowledge alone.

Young adults' willingness to acquire knowledge

Despite limited participation in existing educational campaigns, young adults show significant willingness to undertake education to reduce food waste. As many as 73.0% of all respondents declared that they agree or strongly agree with the willingness to undertake such education.

Interestingly, the level of this willingness differs between countries. Respondents from Italy show the highest willingness (average 3.99 on a 1-5 scale), followed by Poland (3.93), and the lowest from Greece (3.78). These differences are statistically significant and may reflect different levels of general awareness of the problem in individual countries.
Correlation analysis reveals interesting relationships. Willingness to undertake education shows a positive correlation with:

- Age (r = 0.17) - older respondents are more inclined toward education
- Gender (r = -0.21) - women show greater willingness than men
- Level of education (r = 0.18) - people with higher education are more open to education
- Economic situation (r = 0.13) - people in a better economic situation are more likely to undertake education

However, the strongest correlations occur between willingness to undertake education and pro-environmental attitudes (r from 0.35 to 0.41). This means that people who already show concern for the environment are most open to education on reducing food waste.

These results suggest that there is significant potential for educational activities, especially among people who already show some environmental awareness. However, reaching less aware and less motivated groups may require different strategies.

Which educational methods are most effective?

For education on reducing food waste to be effective, it must be tailored to the preferences and needs of the audience. Our study brought fascinating insights into which educational methods young adults consider most attractive and potentially effective.

Based on average ratings on a 1-5 scale, a ranking of preferred educational methods can be created:

1. Interactive campaigns on social media (Facebook, YouTube, Instagram, TikTok) - average 4.11. This method definitely leads the ranking and is highly rated in all three countries (Poland: 4.08; Italy: 4.19; Greece: 4.06).

2. Social campaigns - average 3.82. This method also enjoys great recognition in all countries (Poland: 3.75; Italy: 3.91; Greece: 3.79).

3. Mobile applications - average 3.72. The third most popular method, also with similar ratings across countries (Poland: 3.68; Italy: 3.82; Greece: 3.67).

4. Educational workshops (e.g., in schools, community clubs) - average 3.62 (Poland: 3.60; Italy: 3.72; Greece: 3.54).

5. Printed materials - average 3.26 (Poland: 3.19; Italy: 3.36; Greece: 3.22).

6. Traditional lectures - average 3.01. This method ranks last in all three countries (Poland: 2.93; Italy: 3.11; Greece: 2.99).

These results clearly indicate a strong preference among young adults for modern, digital, and interactive forms of education. Social media, which form an integral part of the daily life of this age group, are perceived as the most effective channel for delivering educational messages. In contrast, traditional methods, such as lectures or printed materials, enjoy much less recognition.

Interestingly, this pattern of preferences is consistent across all three surveyed countries, despite cultural and social differences. This suggests that young adults throughout Europe show similar preferences as to how they would like to receive educational information.

However, it is worth noting some subtle differences between countries. Respondents from Italy rate all educational methods slightly higher than respondents from other countries. This may indicate a generally greater openness to various forms of education or a higher level of interest in the topic of reducing food waste.

Statistical significance tests confirmed that the differences between countries are significant for the following methods: traditional lectures, interactive campaigns on social media, social campaigns, and mobile applications. In each case, respondents from Italy showed the highest preferences, which is consistent with their highest willingness to undertake education and highest awareness of the food waste problem.

Preference differentiation within the age group

Although the study focused on a relatively narrow age group (18-30 years), correlation analysis revealed interesting relationships between age and preferences regarding educational methods:

- Age and preference for interactive campaigns on social media: r= -0.32. This means that younger respondents within the studied group show a stronger preference for this method.
- Age and preference for mobile applications: r = -0.28. Similarly, younger respondents prefer mobile applications more.

- Age and preference for traditional lectures: r = 0.18. Conversely, older respondents somewhat more often show a preference for traditional methods.
- Age and preference for printed materials: r = 0.12. Older respondents somewhat more often prefer printed materials.

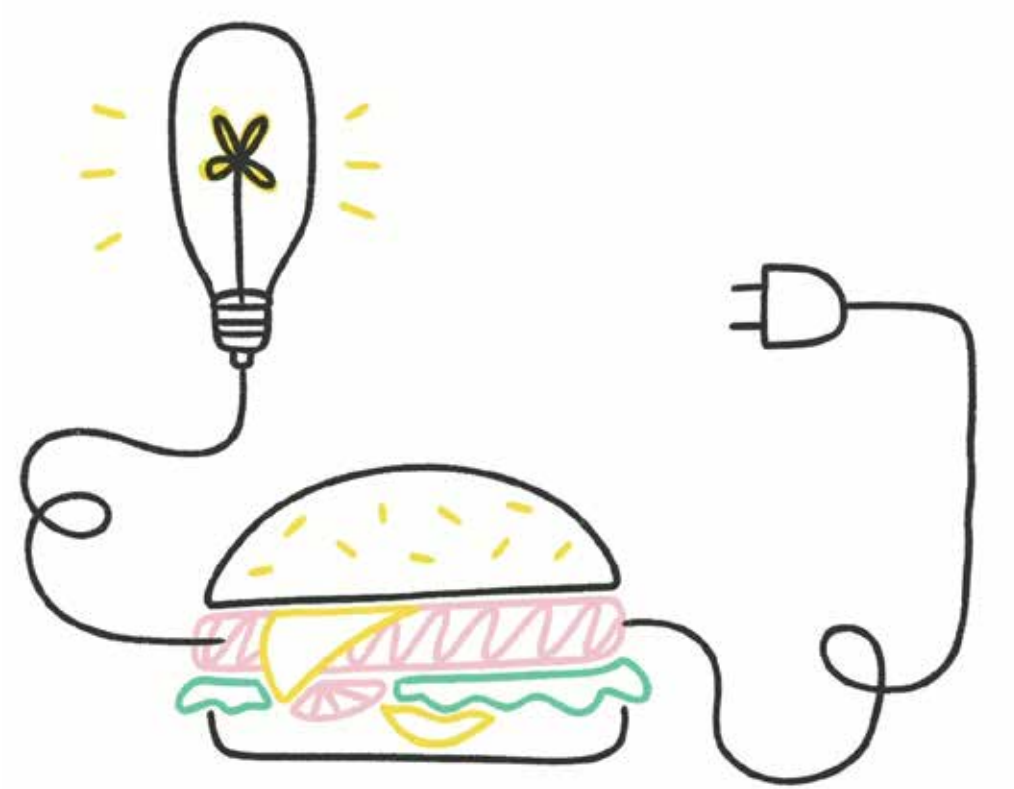
These relationships highlight how quickly preferences regarding media and information consumption change, even within such a narrow age group. They also suggest that effective educational strategies should be carefully tailored not only to the general age group but also to specific subgroups within it.

From knowledge to action: the potential of education

The key question remains: can education effectively influence changes in behaviors related to food waste? Our study provides several important clues.

First, the negative correlations between awareness of educational campaigns, participation in them, and the declared scale of food waste suggest that education can contribute to reducing food waste. People who are aware of the problem and actively engage in educational initiatives report a smaller scale of food waste.

Second, the fact that participation in practical initiatives shows the strongest correlation with the scale of food waste suggests that education should combine theory with practice. Providing information alone may not be enough - concrete actions are needed that allow for the application of acquired knowledge in practice.



Third, the high willingness of young adults to undertake education (73.0% of respondents) indicates significant potential for educational activities. This openness to education provides a solid foundation on which effective educational strategies can be built.

At the same time, however, the significant gap between awareness of educational campaigns (38.6%) and participation in them (17.1%) suggests that there are barriers that make it difficult to move from knowledge to action. These barriers may include time constraints, lack of availability of initiatives, but also psychological mechanisms that make it difficult to change established habits.

Conclusions and implications for future educational activities

Analysis of the role of education in reducing food waste among young adults in Poland, Italy, and Greece leads to several key conclusions:

1. There is significant potential for educational activities.
Young adults are open to education on reducing food waste, and awareness of the problem and participation in educational initiatives correlate with a smaller scale of food waste.

2. Effective educational methods are those that are digital and interactive.
Social media, social campaigns, and mobile applications are preferred by young adults, while traditional methods, such as lectures, enjoy much less recognition.

3. Practice is as important as theory.
Participation in practical initiatives shows the strongest correlation with the scale of food waste, suggesting that education should combine providing information with concrete actions.

4. There is a gap between awareness and action.
Despite awareness of the existence of educational campaigns, only a small proportion of young adults actively participate in them, indicating the need to remove barriers hindering engagement.

5. There are differences between countries.
Italy stands out with the highest awareness of the problem, highest participation in initiatives, and greatest willingness for education, which may result from a stronger culinary tradition and cultural respect for food.

6. There are differences within the age group.
Even within the narrow 18-30 age group, there are significant differences in preferences regarding educational methods, highlighting the need to personalize the message.

These conclusions suggest that effective educational strategies should focus on interactive, digital methods, combine theory with practice, be adapted to the cultural specificity of a given country, and take into account the diversity within the target group.

Particularly promising seem to be social media campaigns, which can reach a wide audience, and mobile applications, which can offer personalized support in everyday food management. At the same time, it is important that these digital tools are linked to practical initiatives, such as culinary workshops, food sharing programs, or community composting.

Education remains a fundamental element in the fight against food waste, but to be effective, it must evolve along with the preferences and needs of the audience. Our study is a step toward better understanding these preferences and adapting educational activities to the realities of the 21st century.

4. Pro-environmental Behaviors and Food Waste

Green attitude, less waste?

Is there a relationship between general concern for the environment and the tendency to waste food? Do people who declare pro-environmental attitudes actually throw away less food? Does awareness of the impact of food production on the ecosystem translate into everyday behaviors in the kitchen?

These questions are crucial in the context of creating effective strategies to reduce food waste. If there is a clear link between pro-environmental behaviors and less food waste, educational campaigns could effectively connect these two areas. On the other hand, if such a relationship does not exist or is weak, this may indicate a "value-action gap" - a situation where declared values do not translate into specific behaviors.

Our study conducted among young adults from Poland, Italy, and Greece sheds new light on this issue, examining the relationship between environmental awareness and the scale of food waste, and analyzing how the potential benefits of reducing food loss are perceived.

The relationship between environmental awareness and the scale of food waste

To examine respondents' pro-environmental attitudes, we asked them to respond to several statements regarding the impact of food production on the environment. The results show a moderate level of environmental awareness:

- "When buying food, I try to pay attention to how its production affects the environment" - average 3.51 on a 1-5 scale.
- "I try to avoid food products whose production is harmful to the environment" - average 3.58.
- "I am interested in how food production affects the environment" - average 3.69.

Interestingly, there are statistically significant differences between countries in the level of declared pro-environmental attitudes. Respondents from Italy show the highest level of environmental awareness (averages from 3.62 to 3.82), followed by respondents from Poland (from 3.47 to 3.65), and the lowest from Greece (from 3.44 to 3.61).

The key element of the analysis, however, was the correlation between these attitudes and the declared scale of food waste. The analysis showed moderate but statistically significant negative correlations:

- Scale of food waste and attention to the impact of food production on the environment: $r = -0.31$.
- Scale of food waste and avoidance of products harmful to the environment: $r = -0.29$.
- Scale of food waste and interest in the impact of food production on the environment: $r = -0.26$.

These correlations indicate that people showing greater concern for the environment report a smaller scale of food waste. Although this relationship is not very strong, it suggests that environmental awareness may be a factor contributing to more responsible food management.

Similar relationships were observed in the case of pro-health behaviors. People declaring greater concern for health - preferring natural products, buying organic products, and avoiding food additives - also show a lower tendency to waste food (correlations from r = -0.18 to r = -0.24).

These results suggest that campaigns promoting the reduction of food waste could effectively appeal to ecological and health values, which seem to be linked to more responsible food management.

The potential of new technologies

In the digital era, it seems natural to ask about the potential of applications and tools based on artificial intelligence in reducing food waste. Our study shows that young adults see significant potential in such solutions. Respondents highly rate various aspects of the potential impact of a dedicated food management application (averages on a 1-5 scale):

- Increasing the efficiency of managing food supplies at home: 3.82.
- Educating users about sustainable consumption: 3.82.
- Personalizing inventory management and shopping planning: 3.82.
- Personalizing educational methods: 3.78.
- Increasing the variety of prepared meals: 3.68.
- Increasing the frequency of planned purchases: 3.67.

Interestingly, respondents from Poland and Italy rate the potential of applications significantly higher than respondents from Greece in all studied aspects. This may reflect differences in the availability and prevalence of using mobile applications in everyday life or differences in the general level of trust in technological solutions.

Correlation analysis showed moderate to strong positive relationships between the perceived potential of applications and willingness to use them (r from 0.43 to 0.47). This suggests that people who see greater potential for applications in various aspects of food management are more inclined to use such tools.

These results indicate promising prospects for technological solutions as tools supporting the reduction of food waste. Mobile applications, especially those using artificial intelligence to personalize user experiences, can provide effective support in daily food management and shopping planning.

Benefits of reducing food loss

What benefits of reducing food waste are most valued by young adults? This question is key to designing effective educational messages that can motivate behavioral change.

Our study allowed us to create a ranking of potential benefits from reducing food waste based on average ratings on a 1-5 scale:

1. **Financial savings in households:** 4.30.
2. **Reduction of negative environmental impact:** 4.15.
3. **Reduction of greenhouse gas emissions:** 3.99.
4. **Effective protection of nature:** 3.92.
5. **Reduction of drinking water consumption:** 3.90.
6. **Preparing more diverse dishes:** 3.80.
7. **Reduction of agricultural land area:** 3.70.
8. **Reduction of pasture area:** 3.64.


40%

This ranking indicates that young adults recognize both economic and environmental benefits of reducing food waste, with economic benefits (financial savings) rated the highest.

It is also interesting that respondents from Italy rate the potential benefits of reducing food waste significantly higher than respondents from Greece, especially in the case of financial and environmental benefits. These differences may reflect different levels of awareness of the problem and its consequences in different countries.

Correlation analysis showed strong relationships between various aspects of environmental benefits, e.g., between reducing negative environmental impact and reducing greenhouse gas emissions (r = 0.67) or between reducing agricultural land area and reducing pasture area (r = 0.71). This indicates consistent perception of various aspects of environmental benefits.

At the same time, a moderate relationship was observed between economic and environmental benefits (r = 0.45 between financial savings and reducing negative environmental impact). This suggests that young adults perceive synergy between economic and ecological benefits resulting from reducing food waste.

These results indicate that effective educational campaigns should emphasize the multidimensional benefits of reducing food waste, with emphasis on both economic benefits, which are most appreciated, and environmental benefits, which may appeal to people with higher environmental awareness.

From attitudes to actions - how to overcome barriers?

Although our study showed a link between pro-environmental attitudes and a lower tendency to waste food, the strength of this relationship is moderate. This indicates the existence of a so-called “value-action gap” - a situation where declared values do not fully translate into specific behaviors.

What factors may contribute to this gap and how can they be overcome? Our study provides several clues:

1. Practical barriers.
Even people with high environmental awareness may encounter practical obstacles to reducing food waste, such as lack of time for planning purchases, limited culinary skills, or difficulties in storing food. Technological solutions, such as inventory management applications, can help overcome these barriers.

2. Structural barriers.
Factors such as availability of food in appropriate portions, household infrastructure, or food distribution system can hinder reducing waste. These barriers often require intervention at the systemic level.

3. Psychological barriers.
Established habits, social norms, or cognitive dissonance can constitute significant obstacles to changing behaviors. Educational campaigns should take these psychological mechanisms into account and propose strategies to overcome them.

4. Cultural diversity.
Our study showed significant differences between countries in the level of environmental awareness and behaviors related to food waste. This indicates the need to adapt interventions to the cultural specificity of a given country.

These conclusions suggest that effective strategies for reducing food waste should combine environmental education with practical tools and support that will help translate pro-environmental attitudes into specific actions. At the same time, systemic changes are needed that will facilitate making sustainable food choices.

General conclusions

Analysis of the relationship between pro-environmental behaviors and food waste among young adults in Poland, Italy, and Greece leads to several key conclusions:

1. There is a link between environmental awareness and less food waste.
People declaring higher concern for the environment and health show a lower tendency to waste food. This relationship, although moderate, indicates potential benefits from combining environmental education with campaigns against food waste.

2. New technologies have the potential to support sustainable behaviors.
Applications and tools based on artificial intelligence are perceived as promising support in food management and shopping planning. Particularly valuable may be features that personalize the user experience.

3. Economic and ecological benefits go hand in hand.
Young adults recognize both economic and environmental benefits of reducing food waste, with financial benefits rated the highest. This synergy can be used in educational campaigns.

4. There are cultural differences in the approach to the problem.
Respondents from Italy show the highest level of environmental awareness and rate potential benefits of reducing food waste the highest. These differences indicate the need to adapt interventions to the cultural specificity of a given country.

5. A multidimensional approach is needed.
To effectively reduce food waste, a combination of environmental education, practical tools and support, and systemic changes is needed. Only such a comprehensive approach can help bridge the “value-action gap.”

These conclusions provide a solid basis for developing effective educational and policy strategies aimed at reducing food waste. In the next chapter, we will present specific recommendations for various social groups - consumers, educators, and authorities and institutions - based on the results of our study.

5. Recommendations for Different Social Groups

Time to act – practical guidelines

We now know the scale at which we waste food, which products most often end up in the trash and for what reasons. We understand the role of education in countering this problem and comprehend the relationship between environmental awareness and food behaviors. Now it's time for the most important part - specific recommendations that will help different social groups effectively reduce food waste.

Our study conducted among young adults from Poland, Italy, and Greece provides valuable guidance that can be used by consumers in their daily decisions, by educators in designing effective interventions, and by authorities and institutions in shaping public policies. These recommendations are based not only on our results but also on best practices and proven solutions from around the world.

For consumers: How to effectively plan shopping and store food?
As our study showed, the main causes of food waste in households are unplanned purchases, buying in reserve, and spoilage of stored food. Here are specific tips on how to counter these problems:

1. Planning purchases

- Make a shopping list and stick to it. Our study showed a strong correlation (r = 0.65) between unplanned purchases and shopping without a list. Before going to the store, check what you already have at home, then prepare a list and try to stick to it. Avoid impulse purchases.
- Plan meals for the entire week. This will allow you to buy exactly what you need and avoid excess products that may spoil. In Poland, where preparing too large portions is a significant problem (average 3.41), such planning is particularly important.
- Make more frequent, smaller purchases instead of less frequent, larger ones. In Italy, where unplanned purchases are a key problem (strongest correlation with the scale of waste r = 0.45), a model of frequent but smaller purchases may be more effective.
- Don't go shopping hungry. Psychological studies show that hunger increases the tendency to buy more food than we actually need.

2. Food storage

- Organize your refrigerator and pantry. Place products with a shorter shelf life at the front so you don't forget to use them. Regularly check what you have and what is approaching its expiration date.
- Know the difference between "best before" and "use by". Our study showed that a rigid approach to expiration dates correlates with greater food waste (r = 0.23). "Best before" is the date until which the manufacturer guarantees the highest quality of the product, but it can often be safely consumed even after this date. "Use by", on the other hand, is the final deadline for safe consumption.
- Use appropriate containers for storage. Airtight containers, vacuum bags, or special reusable covers can significantly extend the freshness of many products.
- Store products at the appropriate temperature. Different products require different storage conditions. For example, tomatoes, potatoes, onions, and garlic are better stored in a dark, cool place than in the refrigerator.

- Freeze excess food. If you see that you won't be able to use products before they spoil, freeze them. This applies not only to meat or bread but also to many other products, such as herbs, mushrooms, or even milk and cheese.

3. Creative use of leftovers

- Learn to prepare dishes from leftovers. Our study showed that leftovers from prepared meals are one of the three most frequently discarded product categories (54.6% of respondents). Many traditional dishes, such as Italian minestrone or Polish bigos, were created precisely as a way to use leftovers.
- Introduce a day for leftovers. Designate one day a week when you use all the leftovers from the refrigerator instead of cooking new dishes.
- Freezing prepared meals. Cook larger portions, but freeze the excess instead of keeping it in the refrigerator where it might spoil.
- Process aging products. Overripe bananas are great for baking, wilted vegetables for soups, and stale bread for toast, ground breadcrumbs, or bread pudding.

4. Using technology

- Use food management applications. Our study showed that young adults highly rate the potential of applications in reducing food waste (averages from 3.67 to 3.82). Applications such as "Too Good To Go", "Olio", or "No Waste" can help manage inventory, plan meals, or share excess food.
- Use smart thermometers. Instead of rigidly sticking to expiration dates, use food thermometers to check if a product is still safe to eat.
- Join online food sharing communities. Social media and special platforms enable sharing excess food with neighbors or the local community.

For educators: Which educational activities are most effective?

Our study showed that only 38.6% of young adults are aware of the existence of educational campaigns related to reducing food waste, and only 17.1% actively participate in them. At the same time, as many as 73% of respondents declare willingness to undertake education in this area. How to effectively utilize this potential?

1. Adapting educational methods to young adults' preferences

- Use social media. Our study clearly indicates that interactive campaigns on social media are the preferred educational method among young adults (average 4.11 on a 1-5 scale). Platforms such as Instagram, TikTok, Facebook, or YouTube offer excellent opportunities to reach this group.
- Create short, visually attractive content. Videos, infographics, quizzes, or challenges are more engaging than long texts or traditional lectures.
- Use elements of gamification. Challenges like "zero waste week", applications tracking reduction of food waste, or competitions for the best recipes using leftovers can increase engagement.
- Engage influencers and opinion leaders. Collaboration with popular internet creators can significantly increase the reach of educational campaigns.

2. Combining education with practical activities

- Organize culinary workshops. Our study showed that educational workshops are the third preferred educational method (average 3.62). Practical classes teaching how to plan meals, store food, or use leftovers can be very effective.
- Create mentoring programs. People experienced in reducing food waste can share their knowledge and skills with others.
- Initiate local food sharing projects. "Community refrigerators", "food sharing", or community composting engage people in practical activities.
- Develop cooperation with food banks. Our study showed that participation in practical initiatives, such as donating food to food banks, has the strongest correlation with a smaller scale of food waste ($r = -0.26$).

3. Personalization of the message

- Adapt communication to cultural specificity. Our study showed significant differences between countries in the level of awareness of the problem and preferred educational methods. In Poland, it's worth focusing on planning portion sizes, in Italy on planning purchases, and in Greece on choosing products of appropriate quality.
- Consider demographic factors. Our study showed that preferences regarding educational methods differ even within the narrow 18-30 age group. Younger respondents more strongly prefer digital methods, older ones are somewhat more open to traditional forms.
- Emphasize benefits important to the recipient. For people with high environmental awareness, environmental arguments may be key, for others, economic or health benefits may be more convincing.

4. Focus on long-term behavioral change

- Promote small, gradual changes. Complete change of eating habits is difficult. Instead, encourage small, realistic changes that can lead to greater effects over time.
- Build communities. Support groups, group challenges, or online communities can help maintain motivation and exchange experiences.
- Monitor and celebrate progress. Applications tracking the amount of unsaved food, saved money, or reduced CO_2 emissions can provide positive reinforcement.
- Educate from the earliest years. Although our study focused on young adults, effective education should begin in childhood, when basic habits are formed.

For authorities and institutions: Which policies can reduce the problem of food waste?

While individual actions are important, the food waste problem also requires systemic solutions. Our study provides guidance for authorities and institutions that want to effectively counter this phenomenon.

1. Educational policies

- **Include the topic of food waste in school curricula.**
  Formal education should cover issues related to food production and waste, sustainable consumption, and environmental impact.
- **Support information campaigns.**
  Our study showed that social campaigns are the second highest rated educational method (average 3.82). Public authorities should finance and promote such campaigns.
- **Invest in research and innovation.**
  Support research on effective methods of countering food waste and on innovative technologies and solutions.

2. Legal regulations

- **Introduce clear guidelines for marking expiration dates.**
  Our study showed that a rigid approach to expiration dates contributes to food waste. Better and more understandable markings can help consumers make informed decisions.
- **Consider regulations encouraging the transfer of unsold food.**
  An example is the French Garot law, which prohibits supermarkets from throwing away food fit for consumption and obliges them to donate it to charitable organizations.
- **Establish food waste reduction targets.**
  In line with Sustainable Development Goal 12.3, aim to halve global food waste at the retail and consumer levels by 2030.

3. Economic incentives

- **Consider tax reliefs for actions reducing food waste.**
  These could include transferring unsold food, investing in technologies reducing losses, or educating consumers.
- **Introduce incentives for households.**
  For example, "pay-as-you-throw" systems, where waste fees depend on their quantity, can motivate to reduce food waste.
- **Support innovative business models.**
  Platforms selling food close to its expiration date, applications connecting consumers with restaurants offering unsold meals, or startups processing "ugly" fruits and vegetables into valuable products deserve support.

4. Infrastructure and logistics

- **Invest in food transfer and redistribution systems.**
  Food banks, food sharing platforms, community refrigerators - all these initiatives need infrastructural support.
- **Develop composting infrastructure.**
  Inevitable food waste should be composted, not stored in landfills, where it generates methane.
- **Support local food systems.**
  Shorter supply chains can reduce losses related to transport and storage.

5. Cross-sectoral cooperation

- **Promote cooperation between all participants in the food chain.**
  Farmers, producers, distributors, retailers, consumers, and waste managers - all should be involved in solving the problem.

- **Encourage public-private partnership.**
  Public authorities, business, and non-governmental organizations can collaborate on initiatives reducing food waste.
- **Support the exchange of best practices.**
  Our study showed differences between countries in approaches to the food waste problem. International exchange of experiences and good practices can benefit everyone.

Acting at different levels – the key to success

Effectively reducing food waste requires actions at various levels – from individual consumer decisions, through local educational initiatives, to national and international policies. Our study shows that young adults are open to education and see the potential of new technologies in solving this problem.

At the same time, the results indicate the need to adapt actions to the cultural specificity and economic context of a given country. What works in Italy may require modification in Poland or Greece.

Reducing food waste is not only a challenge – it's also an opportunity. An opportunity for financial savings, for reducing negative environmental impact, for a more equitable distribution of resources. By using the recommendations contained in this chapter, various social groups – from individual consumers, through educators, to policy makers – can contribute to a significant reduction of this global problem.



6. Summary and Conclusions

Key research insights

We have reached the end of our journey through the complex world of food waste. The study conducted among young adults from Poland, Italy, and Greece has shed new light on this common but often overlooked phenomenon. Let's look at the most important conclusions that emerge from our analysis.

Universal problem, local specificities

Food waste affects all the surveyed countries, albeit with varying intensity. As many as 85% of respondents admit that the phenomenon of food waste occurs in their households, although most assess its scale as small. At the same time, there are clear differences between countries - respondents from Italy declare the lowest scale of food waste (49.7% claim that they "never waste food" or "generally do not waste food"), while in Poland this percentage is only 38.0%.
These differences reflect different culinary traditions, approaches to food, and economic contexts. In Italy, a country with a rich culinary tradition and cultural respect for food, awareness of the problem is highest, and the declared scale of waste - the lowest.

Universal mechanisms, different priorities

Despite cultural differences, the main mechanisms leading to food waste are similar across all countries. Unplanned purchases, buying in reserve, and spoilage of stored food are the three most frequently indicated causes. However, their relative importance differs between countries - in Poland, preparing too large portions is particularly significant; in Italy, unplanned purchases; and in Greece, purchasing low-quality products.
Similarly, bread, fruits and vegetables, and leftovers from prepared meals are the most frequently discarded product categories in all countries, albeit with varying intensity and local specificities.

Potential of education, limitations in action

Our study reveals significant potential for education in countering food waste. As many as 73% of respondents declare willingness to undertake education in this area, and awareness of educational campaigns and participation in them correlate with a smaller scale of food waste.

At the same time, there is a clear gap between awareness and action - only 38.6% of respondents are aware of educational campaigns, and only 17.1% actively participate in them. This gap indicates the need not only to increase awareness but also to remove barriers hindering the transition from knowledge to action.

Preferences for digital methods, potential of new technologies

Young adults clearly prefer modern, digital, and interactive forms of education. Interactive campaigns on social media (average 4.11), social campaigns (3.82), and mobile applications (3.72) top the ranking of preferred methods, while traditional lectures (3.01) enjoy much less recognition.

At the same time, respondents highly rate the potential of food management applications in reducing waste (averages from 3.67 to 3.82). This indicates promising prospects for technological solutions as tools supporting daily food management and shopping planning.

Connection with environmental awareness, multidimensional benefits

Our study showed a moderate but significant relationship between pro-environmental attitudes and a lower tendency to waste food (correlations from r = -0.26 to r = -0.31). People declaring greater concern for the environment and health throw away less food, suggesting that campaigns promoting reduction of food waste could effectively appeal to ecological values.

At the same time, young adults recognize both economic and environmental benefits of reducing food waste, with financial savings (average 4.30) rated highest, followed by benefits for the natural environment.

International differences, common challenges

Italy stands out with the highest awareness of the problem, highest participation in educational initiatives, and greatest willingness for education. Respondents from this country also show the highest level of pro-environmental attitudes and rate potential benefits of reducing food waste the highest.

Greece, a country struggling with a more difficult economic situation, shows specific behavior patterns and the lowest indicators in many aspects of the study. Poland often ranks between these two countries. These differences highlight the need to adapt educational and policy actions to the cultural and economic specificity of a given country, while also considering the universal mechanisms leading to food waste.

Looking to the future - towards sustainable consumption

Our study not only diagnoses the problem of food waste but also points the way toward a more sustainable future. What actions should be prioritized in the coming years?

Intelligent educational campaigns

Future educational campaigns should use digital channels and interactive forms that are preferred by young adults. Social media, mobile applications, and gamification offer excellent opportunities to reach this group.

At the same time, the message should be personalized - adapted to the cultural specificity of a given country, demographic factors, and individual preferences. Campaigns should emphasize both economic benefits, which are most appreciated, and ecological benefits, which may appeal to people with higher environmental awareness.

Breaking barriers to action

Knowledge alone is not enough - practical tools and support are needed that will help translate this knowledge into everyday behaviors. Applications for managing supplies, food sharing platforms, or culinary workshops teaching the use of leftovers can help bridge the "value-action gap."
At the same time, systemic changes are needed that will facilitate making sustainable choices - from better marking of expiration dates, through economic incentives, to development of infrastructure supporting redistribution of uneaten food.

Next-generation technologies

Applications based on artificial intelligence, which personalize the user experience, analyze shopping patterns, and suggest recipes using available ingredients, have enormous potential in reducing food waste. Our study shows that young adults are open to such solutions and highly rate their potential.

The development of such technologies, combined with their availability and ease of use, can significantly contribute to reducing food waste in the future.

Building a culture of respect for food

Italy, the country with the lowest declared scale of food waste among those studied, is characterized by a strong culinary tradition and cultural respect for food. This suggests that promoting a culture of respect for food - appreciating its value, history, preparation skills, and sharing meals - can be an effective long-term strategy.

Such an approach requires education from the earliest years, engaging entire families and communities, as well as using various cultural channels - from schools, through media, to online communities.

Cross-sectoral and international cooperation

The food waste problem is too complex to be solved by one group or sector. Cooperation is needed between all participants in the food chain - from farmers, through producers, distributors, retailers, to consumers.
At the same time, international exchange of experiences and good practices can benefit everyone. Our study shows differences between countries, but also many similarities - sharing effective solutions can accelerate progress in reducing food waste worldwide.

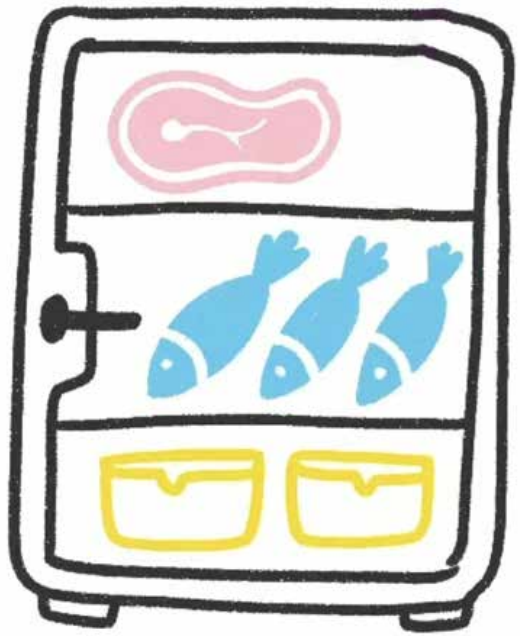
Our responsibility, our opportunity

Food waste is not only an ethical problem - it's an economic, environmental, and social challenge of global reach. At the same time, it's a challenge that gives us a unique opportunity for change. By reducing the scale of food waste, we can simultaneously save money, reduce negative environmental impact, and contribute to a more equitable distribution of resources.

Our study shows that young adults are aware of the problem and open to changes. This gives hope that the current generation can become a catalyst for transformation toward more sustainable food systems.

The responsibility for this transformation rests with all of us - consumers making daily purchasing decisions, educators shaping awareness and skills, authorities and institutions creating favorable systemic conditions. By acting together, at different levels and in different sectors, we can significantly reduce the scale of food waste and create a more sustainable future.

Let's remember - every unsaved slice of bread, every utilized fruit or vegetable, every eaten leftover is a small step toward this future. These small steps, multiplied by millions of households, can bring about enormous change. A change that the planet - and we ourselves - very much need.



Annex: 5 Educational Lesson Scenarios

Scenario 1: "Digital Food Detective"

Objective: Teach young people effective shopping planning and food inventory management through the use of new technologies.
Duration: 90 minutes
Target group: 15-19 years old
Materials: Smartphones, internet access, examples of food management applications

Course of activities:

1. Introduction (15 min):
- oPresentation of key statistics from the study (85% of respondents admit to wasting food)
- oInteractive brainstorming: "What products do you most often throw away at home?"
- oConfrontation of answers with study results (bread 72.3%, fruits and vegetables 68.7%, leftovers from prepared meals 54.6%)

2. Exploration of applications (25 min):
- oPresentation of 2-3 popular food management applications (e.g., Too Good To Go, Olio, No Waste)
- oGroup task: testing one of the applications on the spot
- oDiscussion of how applications can help in better shopping planning (highest correlation with food waste)

3. "Plan a week" challenge (30 min):
- oStudents in groups plan a weekly menu and a shopping list using the application
- oAdditional challenge: minimizing waste by using the same ingredients in different meals

4. Presentation of ideas and summary (20 min):
- oEach group presents its plan
- oDiscussion about the benefits of better planning (financial savings: 4.30/5 in the study)
- oEstablishing a monthly challenge: using the application for shopping planning

Link to research results: Utilization of young people's preference for digital forms of education (average 4.11/5 for interactive campaigns on social media) and their positive attitude toward mobile applications (average 3.72/5).

Scenario 2: "Second Life of Food Laboratory"

Objective: Teach creative use of leftovers and products close to their expiration date.
Duration: 120 minutes
Target group: 13-19 years old
Materials: Basic kitchen ingredients, kitchen equipment, "rescue" products (e.g., stale bread, overripe fruits, vegetables)

Course of activities:

1. Introduction (15 min):

- Quiz: "What can be done with..." (presentation of various products and brainstorming about possible uses)
- Presentation of data on most frequently wasted products and reasons for discarding them

2. Culinary workshops (60 min):

- Division into teams with different challenges:
  Team 1: What to do with stale bread (toast, bread pudding)
  Team 2: How to use overripe fruits (smoothies, baked goods)
  Team 3: How to use leftovers from lunch (casseroles, frittata)
- Each team prepares 1-2 simple dishes

3. Tasting and recipe exchange (25 min):

- Presentation and tasting of dishes
- Creation of a shared "Food Rescue Book" with recipes

4. Educational game and summary (20 min):

- "What's the date?" - explanation of the difference between "best before" and "use by"
- Discussion about food safety vs. rigid adherence to expiration dates
- Homework: "Leftovers day" - one day a week when meals are prepared from leftovers

Link to research results: Addresses the problems of spoilage of stored food (average 3.52/5) and preparing too large portions (average 3.31/5). Utilizes participants' preference for educational workshops (average 3.62/5) as a method of learning.

Scenario 3: "Eco-impact: Carbon Footprint of Your Plate"

Objective: Show the connection between food waste and environmental impact, build environmental awareness.
Duration: 90 minutes
Target group: 16-19 years old
Materials: Computers/tablets with internet access, carbon footprint calculators, information materials

Course of activities:

1. Discovering connections (20 min):

- Interactive presentation on the impact of food production on the environment
- Surprising fact: "If food waste were a country, it would be the third largest emitter of greenhouse gases after the USA and China"
- Discussion in small groups about observed connections

2. Carbon footprint calculation (30 min):

- Calculating the carbon footprint of various food products
- Task: calculate the carbon footprint of typically wasted products (e.g., 1 kg of bread, 1 kg of fruits)
- Discussion: how much CO_2 we can "save" by not wasting food

3. "If everyone..." simulation (25 min):

- Students calculate environmental savings under different scenarios
- Example: "What would happen if everyone in Poland/Europe reduced food waste by 20%?"
- Visualization of results in the form of infographics

4. Individual action plan and summary (15 min):

- Each participant creates a personal "Eco-plan" for reducing food waste
- Emphasizing multidimensional benefits: ecological, economic, and social

Link to research results: Utilizes the connection between ecological awareness and lower tendency to waste food (correlation r =-0.31). Appeals to environmental benefits, which study participants rated highly (reducing negative environmental impact: 4.15/5).

Scenario 4: "Social Media Against Waste"

Objective: Utilize the potential of social media in education and building communities countering food waste.
Duration: 90 minutes + long-term project
Target group: 15-19 years old
Materials: Smartphones/computers with internet access, content creation materials

Course of activities:

1. Analysis of social campaigns (20 min):
- Review of effective campaigns on social media regarding food waste
- Analysis: what makes them effective? (format, message, aesthetics)

2. Content creation workshop (30 min):
- Mini-training on creating engaging content in various formats (short videos, infographics, challenges)
- Practical exercises in creating example posts

3. Campaign design (30 min):
- Group work on the concept of a social media mini-campaign (topic, target group, platform, action plan)
- Creating first materials

4. Presentation and launch (10 min):
- Each group presents its idea
- Voting for the best concept
- Launching the selected campaign on the school's profile or a dedicated project profile

5. Long-term project (continuation):
- Monthly meetings of the team responsible for the campaign
- Monitoring reach and engagement
- Developing the campaign based on obtained results

Link to research results: Utilizes the highest rated educational method among young adults - interactive campaigns on social media (average 4.11/5). Responds to preferences of younger respondents in the age group, who showed the strongest preference for digital forms of education (correlation r=-0.32).

Scenario 5: "Food Sharing Challenge"

Objective: Familiarize young people with practical food sharing initiatives and encourage social engagement.
Duration: 2 x 45 minutes + social project
Target group: 15-19 years old
Materials: Information materials, computers with internet access

Course of activities:

Part 1: Learning about initiatives

1. Introduction to the concept of food sharing (15 min):
- Presentation of various models of food sharing (food sharing points, food banks, platforms)
- Documentary film about food sharing initiatives

2. Local map (20 min):
- Mapping local initiatives in the area (e.g., food sharing points, food banks)
- Analysis: what is missing in our community?

3. Meeting with a guest (10 min):
- Conversation with a representative of a local initiative (live or online)
- Learning about practical aspects of operation

Part 2: Designing actions

1. Brainstorming (15 min):
- Generating ideas for local food sharing initiatives
- Selecting the best idea for implementation

2. Project planning (20 min):
- Developing an action plan (goals, schedule, needed resources)
- Division of tasks and responsibilities

3. Presentation and decision (10 min):
- Finalizing the plan
- Establishing specific steps and deadlines

4. Project implementation (long-term project):
- Implementing the planned initiative (e.g., school food sharing point, cooperation with a local food bank)
- Regular monitoring and evaluation meetings

Link to research results: Utilizes the study result indicating that participation in practical initiatives has the strongest correlation with the scale of food waste (r=-0.26). Also responds to young adults' preference for combining theoretical education with practical activities.



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