



One Health
Student Conference
USAMV București



DETERMINANTS OF FOOD WASTE AMONG CONSUMERS: RESULTS FROM A CROSS-SECTIONAL STUDY

Ioan Bogdan PEȚ, Adelina VENIG UNGUR, Elena PEȚ

December 3-5, 2025, București



Introduction



Made with **GAMMA**

Identifying the factors that drive food waste among consumers is essential given the substantial economic, social, and environmental implications of this phenomenon.

Although self-reported concern for reducing food waste is increasing, preventive behaviors are not consistently applied, revealing a significant gap between attitudes and actual practices.

Therefore, an in-depth analysis of consumer behavior is necessary to inform educational interventions and public policies aimed at promoting sustainable food consumption.



The purpose of the study and the objectives



Made with GAMMA

The aim of this study is to identify and analyze the key determinants of food waste among consumers by examining their planning habits, food management practices, and disposal behaviors across urban and rural contexts.



The purpose of the study and the objectives

Obiectivul 1 To analyze consumers' food planning, purchasing, and household food management behaviors in order to identify practices that contribute to food waste.

Specific objectives:

O1.1. Planning and purchasing behaviors

O1.2. Household food management and handling of leftovers





The purpose of the study and the objectives

Obiectivul 2. To assess consumers' level of awareness and attitudes toward food waste, as well as the preventive measures they adopt to reduce it.



Made with canva

Specific objectives and associated items:

Awareness, attitudes, and information sources



Materials and methods

For this analysis, a questionnaire was developed consisting of three sections: socio-demographic data; the consumer profile regarding food planning, purchasing, and household food management; and attitudes toward food waste.

A total of 273 respondents participated in the study, and their answers were coded in Excel and subjected to summative statistical processing. The interpretation of the results was carried out using descriptive statistical methods, with findings presented through graphs and tables.



**Materials and
methods**
273 respondents

Characteristics	Share in the Sample	N	Ratio (%)
Gender	Female	175	64.1
	Male	98	35.9
Age (years)	18–30	105	38.5
	31–40	68	24.9
	41–50	46	16.8
	51–60	31	11.4
	Over 60	23	8.4
Education level	High school education (ongoing/completed)	16	5.9
	Post-secondary education (ongoing/completed)	5	1.8
	University education (ongoing)	134	49.1
	University education (completed)	97	35.5
	Postgraduate education (ongoing/completed)	21	7.7
Household monthly net income (RON)	Under 1500	82	30.1
	1501–3000	77	28.2
	3001–5000	58	21.2
	5001–5500	32	11.7
	5001–8000	16	5.9
	Over 8000	8	2.9
Residence	Urban	146	53.5
	Rural	127	46.5



Results and discussions

Obiectivul 1. To analyze consumers' food planning, purchasing, and household food management behaviors in order to identify practices that contribute to food waste.

Specific objectives and associated items:

O1.1. Planning and purchasing behaviors

Items:

How often do you plan what you are going to cook before going shopping?

When purchasing food, how often do you use a shopping list?

How do you decide which foods to buy?

How often do you go grocery shopping?

How often do you purchase food products during holidays?

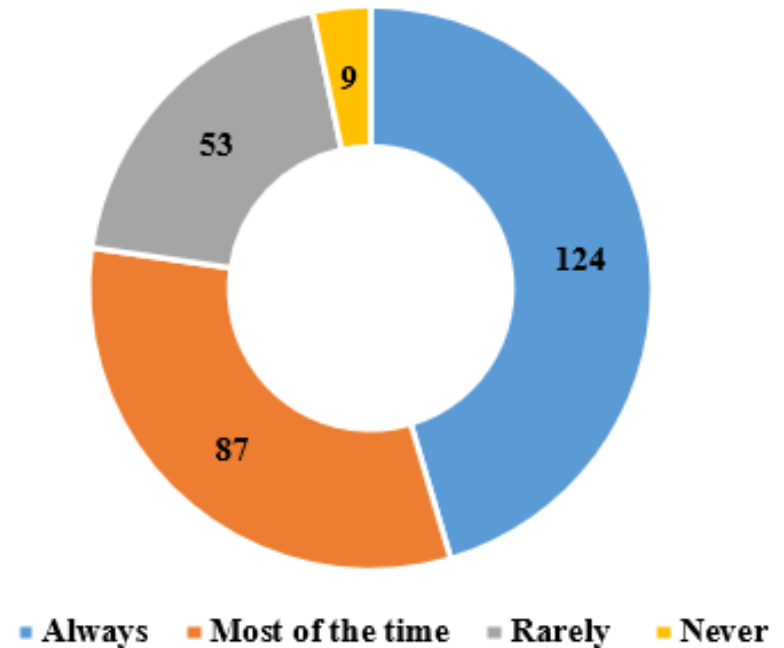
Obiectivul 1. O1.1. Planning and purchasing behaviors

Item:

How often do you plan what you are going to cook before going shopping?

The results show that approximately 45.4% of respondents always plan what they are going to cook before shopping, while 31.9% do so most of the time.

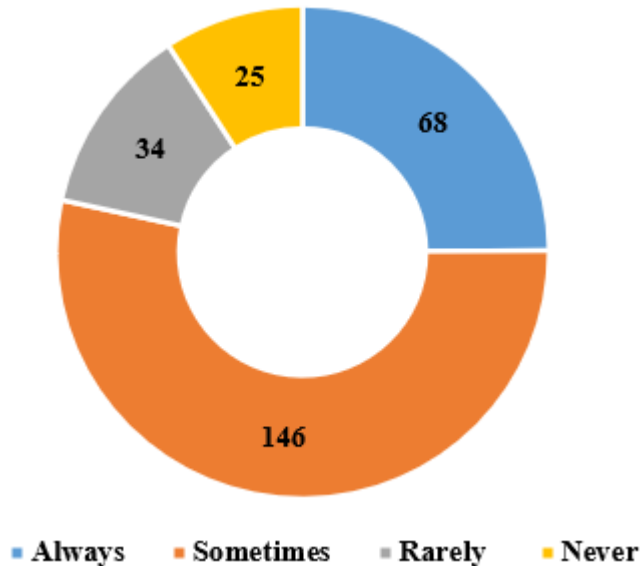
In contrast, 19.4% report planning rarely and 3.3% never plan their meals in advance. These proportions indicate that although meal planning is common among consumers, a segment of the population still engages in limited planning, which may contribute to higher levels of food waste.



Obiectivul 1. O1.1. Planning and purchasing behaviors

Item:

When purchasing food, how often do you use a shopping list?



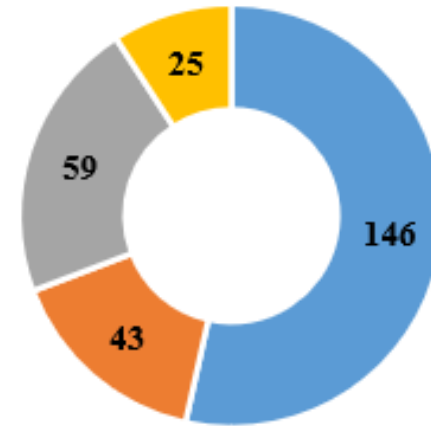
The results indicate that approximately 24.9% of respondents always use a shopping list when purchasing food, while 53.5% do so sometimes. In comparison, 12.5% report using a list rarely, and 9.2% never rely on one. These proportions suggest that although more than half of consumers use shopping lists occasionally, consistent use is less common, which may influence the likelihood of unplanned purchases and potential food waste.

Obiectivul 1. O1.1. Planning and purchasing behaviors

Items:

How do you decide which foods to buy?

The results show that 53.5% of respondents decide which foods to buy based on household needs, while 15.8% rely on discounts and promotions. Additionally, 21.6% make decisions according to the recipes they plan to prepare, and 9.2% follow other criteria. This indicates that practical household requirements are the primary factor guiding food purchase decisions.

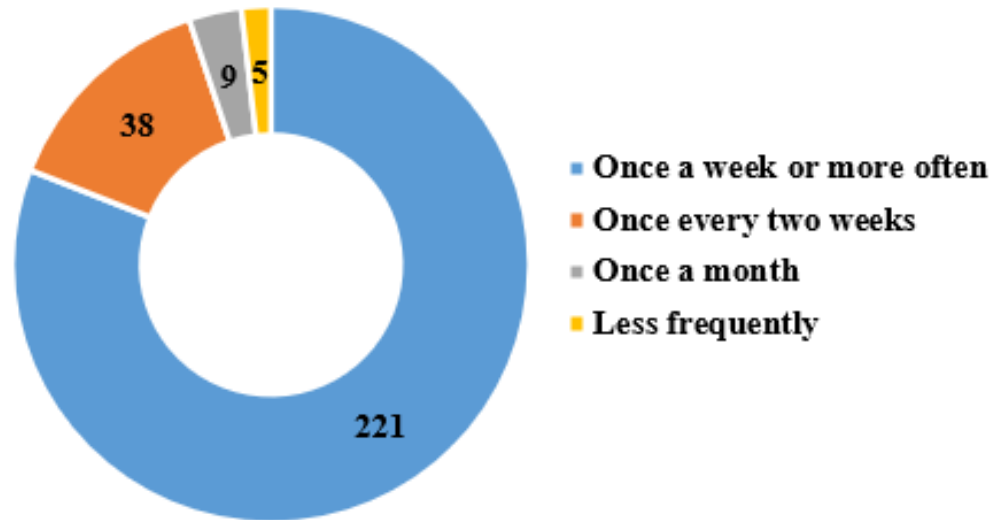


- **Depending on what is needed in the household**
- **Depending on discounts and promotions**
- **Depending on the recipes you plan to prepare**
- **Other criteria**

Obiectivul 1. O1.1. Planning and purchasing behaviors

Items:

How often do you go grocery shopping?

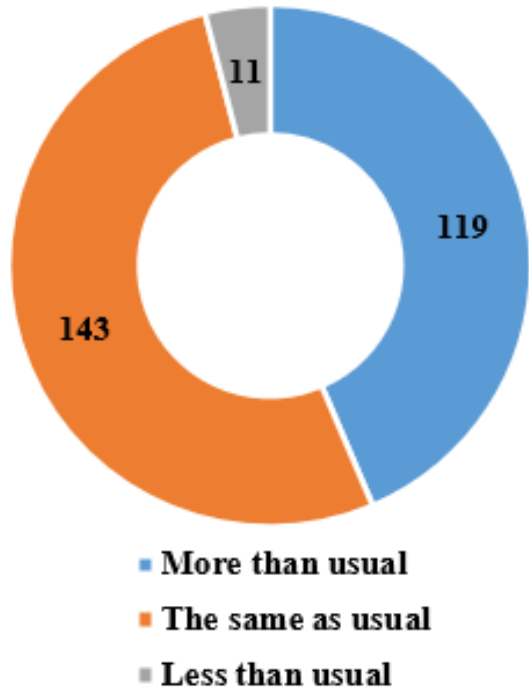


The results indicate that grocery shopping is predominantly a frequent activity, with approximately 81% of respondents shopping once a week or more often. This high frequency suggests that consumers tend to restock their households regularly, which may help maintain food freshness but can also increase the risk of over-purchasing if shopping is not well planned.

Obiectivul 1. O1.1. Planning and purchasing behaviors

Items:

How often do you purchase food products during holidays?



The findings indicate that 54.3% of respondents maintain their usual frequency of food purchases during holidays, while 45.3% report buying more than usual.

A small minority, 5%, purchase less than usual. These results suggest that holiday periods are associated with either sustained or increased food purchasing, reflecting heightened consumption needs or festive behaviors.



Results and discussions

Obiectivul 1. To analyze consumers' food planning, purchasing, and household food management behaviors in order to identify practices that contribute to food waste.

Specific objectives and associated items:

O1.2. Household food management and handling of leftovers

Items:

How often do you use the food you already have at home before buying new items?

What measures do you take to preserve fresh food?

What do you do with the food after consuming the first portion?

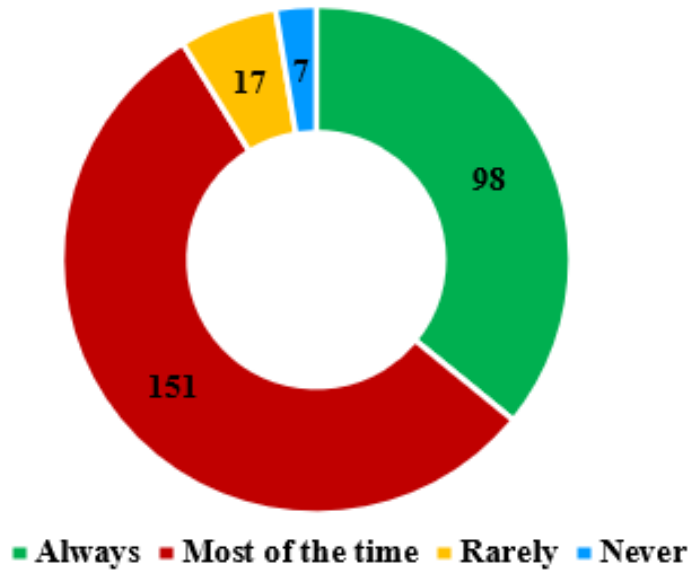
How often do you try to transform leftovers into new dishes?

How often do you consume foods that are close to their expiration date?

Obiectivul 1. O1.2. Household food management and handling of leftovers

Item:

How often do you use the food you already have at home before buying new items?



The results show that 55.3% of respondents use the food they already have at home before purchasing new items most of the time, while 35.9% always do so.

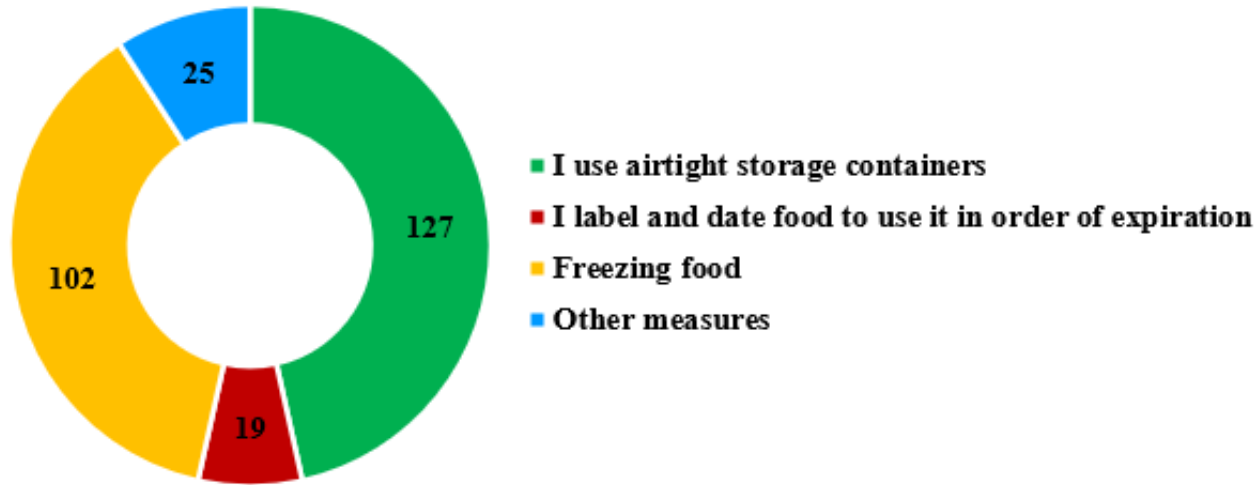
Only a small proportion use existing food rarely (6.2%) or never (2.6%).

This indicates that the majority of consumers make a conscious effort to utilize available food, which may help reduce household food waste.

Obiectivul 1. O1.2. Household food management and handling of leftovers

Item:

What measures do you take to preserve fresh food?



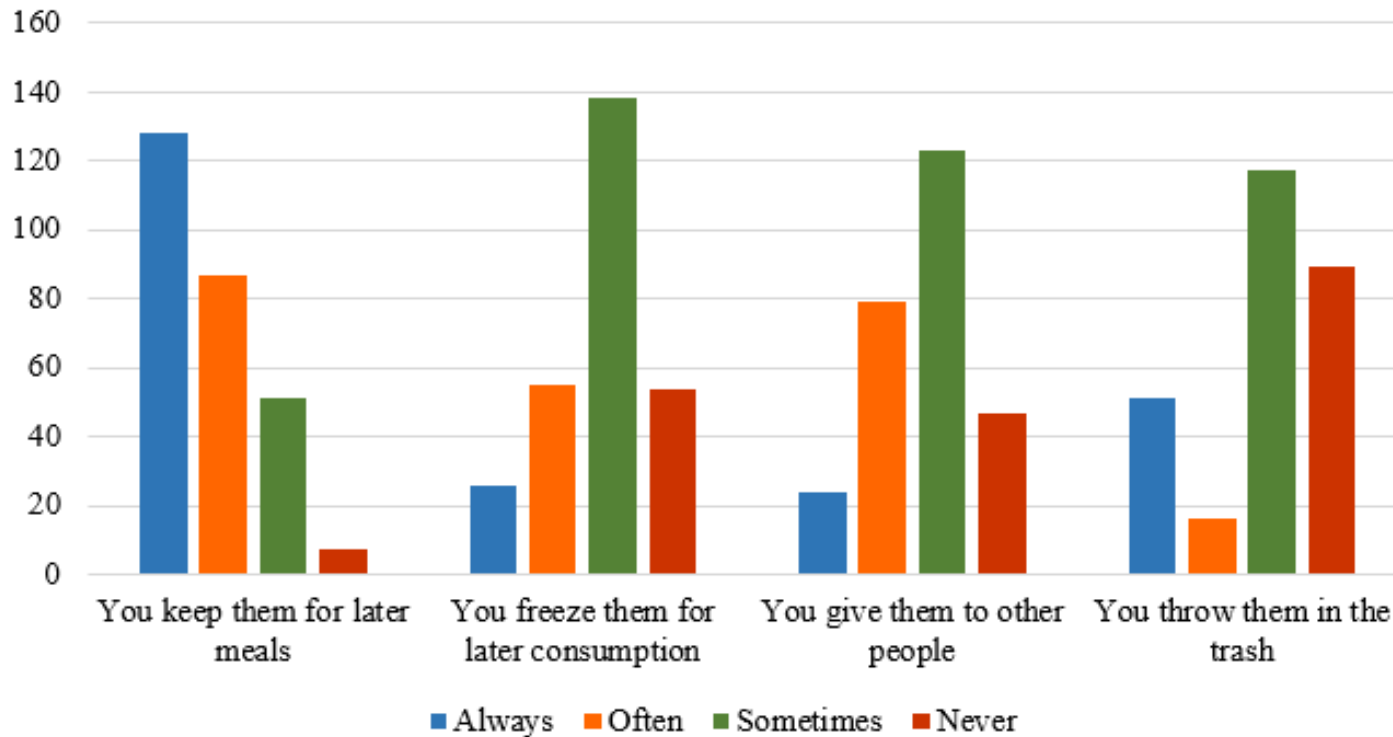
The results indicate that 46.5% of respondents use airtight containers, 37.4% freeze food, 7% label and date items for proper rotation, and 9.1% apply other measures. This suggests that the majority prioritize practical methods to extend the shelf life of fresh food.



Obiectivul 1. O1.2. Household food management and handling of leftovers

Item:

What do you do with the food after consuming the first portion?

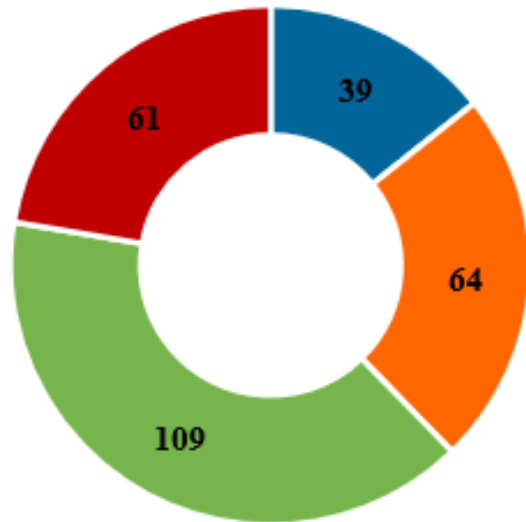


The results show that most respondents keep leftovers for later meals (51.3% always, 34.9% often). Freezing is less common, with the majority doing it sometimes (55.3%). Sharing leftovers is done sometimes by most (49.4%), while discarding food is infrequent, with most respondents throwing it away sometimes (46.9%) or never (35.6%). This suggests a general tendency to preserve or reuse food rather than discard it.

Obiectivul 1. O1.2. Household food management and handling of leftovers

Item:

How often do you try to transform leftovers into new dishes?



- Always
- Most of the time
- Rarely
- Never

The results indicate that most respondents transform leftovers into new dishes infrequently, with 39.9% doing so rarely and 22.3% never.

Only a minority consistently repurpose leftovers, suggesting limited adoption of this food-saving practice.

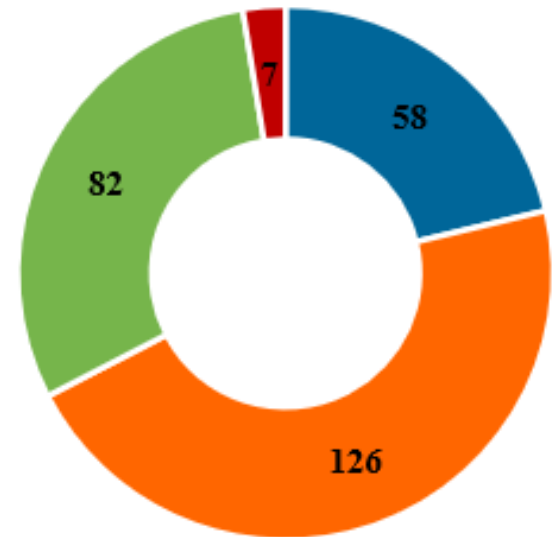
Obiectivul 1. O1.2. Household food management and handling of leftovers

Item:

How often do you consume foods that are close to their expiration date?

The results show that the majority of respondents consume foods close to their expiration date at least occasionally, with 48.4% doing so sometimes and 22.3% always.

A smaller proportion consumes such foods rarely (31.5%) or never (2.7%), indicating a moderate willingness among consumers to use products before they expire.



■ Always ■ Sometimes
■ Rarely ■ Never



Results and discussions

Obiectivul 2. To assess consumers' level of awareness and attitudes toward food waste, as well as the preventive measures they adopt to reduce it.

Specific objectives and associated items: **Awareness, attitudes, and information sources**

Items:

How important is it for you to reduce food waste?

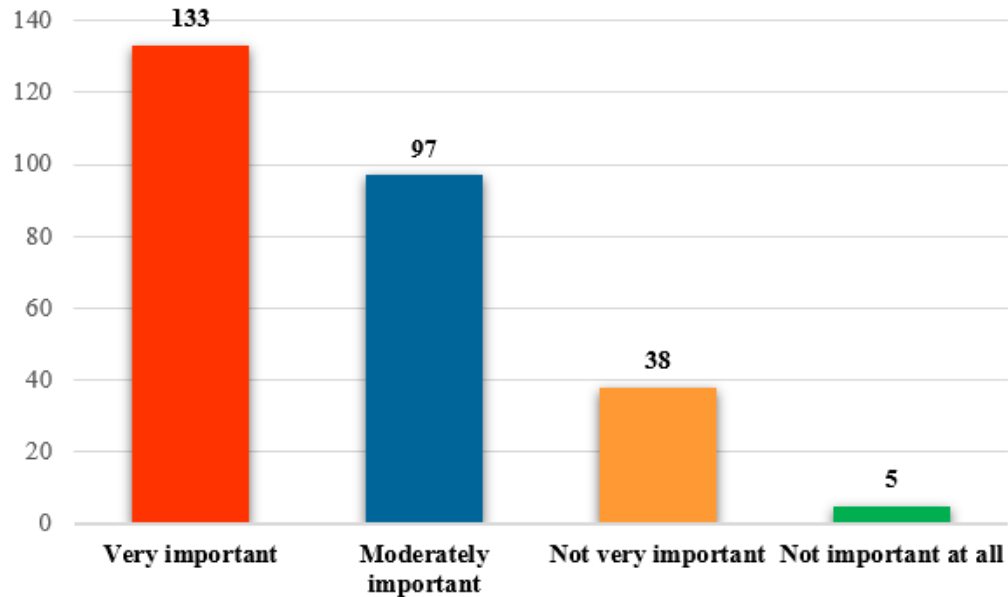
How well-informed are you about the negative impact of food waste on the environment?

How concerned are you about food waste?

Obiectivul 2. Awareness, attitudes, and information sources

Item:

How important is it for you to reduce food waste?

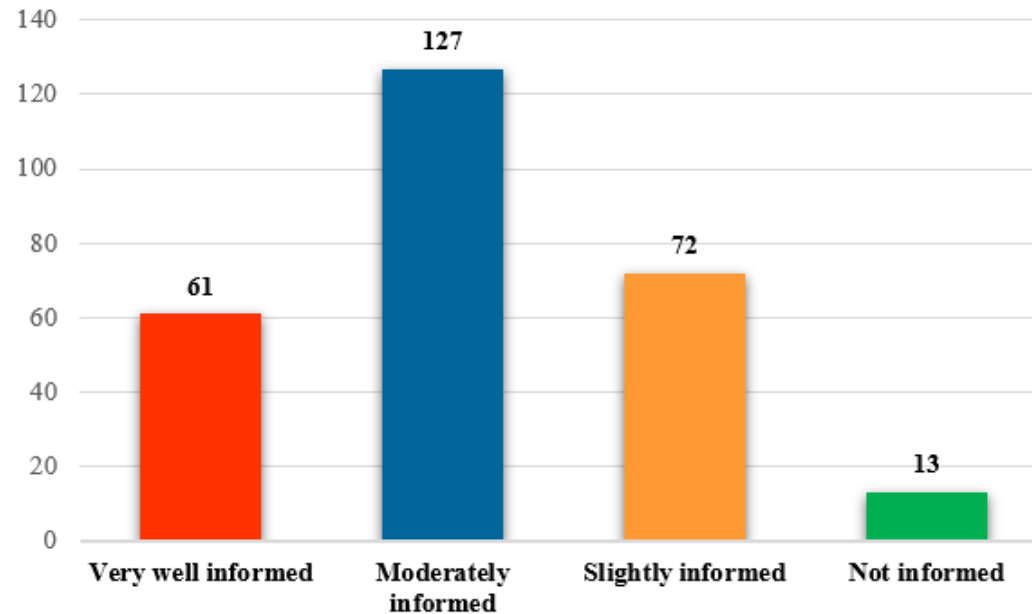


The findings indicate that most respondents consider reducing food waste to be important, with 48.7% rating it as very important and 35.5% as moderately important. Only a small proportion view it as not very important (13.9%) or not important at all (1.8%), reflecting a generally high level of concern for minimizing food waste.

Obiectivul 2. Awareness, attitudes, and information sources

Item:

How well-informed are you about the negative impact of food waste on the environment?

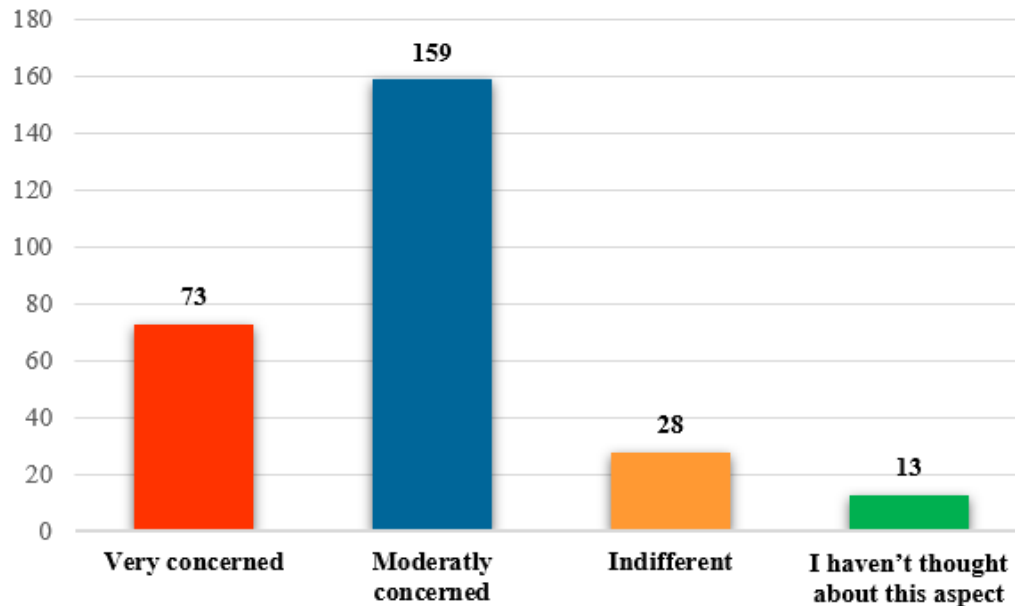


The data indicate that while a substantial proportion of respondents (50.4%) consider themselves moderately informed about the environmental impact of food waste, only a minority (24.2%) perceive themselves as very well-informed. Moreover, nearly one-quarter (25.2%) report being slightly or not informed at all. These findings suggest that, although awareness is present, there remains significant potential to enhance consumer knowledge regarding the ecological consequences of food waste, which could facilitate the adoption of more sustainable practices.

Obiectivul 2. Awareness, attitudes, and information sources

Item:

How concerned are you about food waste?



The findings indicate that the majority of respondents express concern about food waste, with 50.9% being moderately concerned and 23.3% very concerned.

A smaller proportion are indifferent (9.0%) or have not considered this issue (4.2%).

These results suggest that while most consumers recognize food waste as an important issue, there is variability in the intensity of concern, highlighting the need for targeted awareness initiatives to further engage less concerned individuals.



Conclusions and recommendations



Made with GAMMA

Meal planning and the use of shopping lists influence consumption behaviors

Most respondents plan their meals before shopping and use shopping lists occasionally or regularly, which may contribute to reducing food waste.

Food purchasing decisions are primarily driven by household needs

The main factor guiding food purchases is the actual needs of the household, indicating a more practical than impulsive approach.



Conclusions and recommendations

Food management and leftover reuse are common but not universal practices

While most respondents store and reuse leftovers for subsequent meals, transforming them into new dishes or freezing food is not consistently practiced.

Consumption of near-expiration foods is moderate

Many consumers are willing to use products close to their expiration dates, reflecting a degree of concern for minimizing food waste.





Conclusions and recommendations

Awareness and concern regarding food waste are high, but variable

Most respondents consider reducing food waste important and demonstrate moderate knowledge of its environmental impact, suggesting the potential for further educational interventions to enhance awareness and promote sustainable behaviors.

Preventive practices are partially adopted

Despite expressed concern and moderate awareness, concrete measures to reduce food waste are not uniformly applied, highlighting a gap between attitudes and actual behaviors.





Conclusions and recommendations



Made with GAMMA

Recommendation: Consumers should enhance their food management practices by consistently planning meals, using shopping lists, and repurposing leftovers.

Additionally, increasing awareness of the environmental impact of food waste and adopting preventive measures—such as freezing surplus food and consuming products close to their expiration date—can significantly reduce household food waste and promote more sustainable consumption patterns.



References

- Simões, J., Carvalho, A., Gaspar de Matos, M. 2022. How to influence consumer food waste behavior with interventions? A systematic literature review. *Journal of Cleaner Production*, 373, doi.org/10.1016/j.jclepro.2022.133866.
- Chereji, A.I., Chiurciu I.A., Popa, A., Chereji I., Iorga, A.M. 2023. Consumer Behaviour Regarding Food Waste in Romania, Rural versus Urban. *Agronomy*, 13(2), <https://doi.org/10.3390/agronomy13020571>
- Barnisca, M., Sim, A., Bîrgovan, A. L., & Lakatos, E. S. (2024). Behavioral analysis of daily food waste in Baia Mare: an insightful study. *Review of Management and Economic Engineering*, 23(1), 43–48. <https://doi.org/10.71235/rmee.21>
- Vittuari, M. et al. 2023. How to reduce consumer food waste at household level: A literature review on drivers and levers for behavioural change. *Sustainable Production and Consumption*, 38, p. 104-114, doi.org/10.1016/j.spc.2023.03.023.
- Pocol, C.B., Pinoteau M., Amuza, A., Burlea-Schiopoiu A., Glogovețan A.I. 2020. Food Waste Behavior among Romanian Consumers: A Cluster Analysis. *Sustainability*, 12(22); doi.org/10.3390/su12229708
- Adhikari B.K. , Barrington S. , Martinez J. , King S. (2009) Effectiveness of three bulking agents for food waste composting. *Waste Manage.*, 29 (1), p. 197-203, [10.1016/j.wasman.2008.04.001](https://doi.org/10.1016/j.wasman.2008.04.001)
- Aiello G. , Enea M. , Muriana C. (2015) The expected value of the traceability information. *Eur. J. Oper. Res.*, 244 (1), p. 176-186
- Food and Agriculture Organization of the United Nations, 2013. Food waste footprint; Impacts on natural resources. Summary report. ISBN 978-92-5-107752-8.

Thank you for your attention!



Made with GAMMA



December 3-5, 2025, București



One Health
Student Conference
USAMV București