LP. 2 Alternative Solutions

Target Audience

Vet Trainers

Goal (50-60 words)

The main goal of this Module is to teach trainees to make smart food purchasing decisions and find creative ways to avoid food waste. This includes planning meals, making informed choices about expiration dates, utilizing leftovers, and thinking about proper food storage techniques, ultimately promoting a sustainable food system and reducing environmental impact.

Objectives (1-3 Objectives)

After completing this Module, trainees should be able to:

- Think critically about food-buying decisions;
- Identify the best ways to use leftovers;
- Practice meal planning and alternative ways of using food packaging.

Theoretical Background (200-400 words)

Research, but also environmental organizations and other types of entities, have been sharing good practices and positive behaviors individuals can apply and acquire for their everyday lives in order to waste less food at home.

Planning one's (and their family's) meals and using a shopping list are good ways to start: it has been shown that going grocery shopping following a list reduces food waste (Jörissen et al., 2015). Being

mindful when it comes to the quantity of food that is being cooked is also important, to prepare appropriate portion sizes and avoid cooking more than what can be consumed (StopFoodWaste.ie, n.d.-a). Good storing practices help preserve food quality and extend the period during which food remains edible (StopFoodWaste.ie, n.d.-b), while recycling leftovers and transforming them into new meals can efficiently help avoid food waste (Secondi et al., 2015). Using the FIFO (First In, First Out) method for food storage is another smart way to minimize waste. By placing newly bought products behind those already on the shelf or in the fridge, the older items are consumed first, reducing the likelihood of discarding expired food (Van De Galle, 2024). Lastly, composting is a great sustainable practice for recycling unavoidable organic waste, turning it into nutrient-rich soil that can be used in gardens (RHS, n.d.).

On a slightly broader level, individuals can strongly contribute to avoiding food waste by taking part in community activities. Food sharing/recovery programs, as well as apps to exchange food instead of turning it into leftovers, such as "Too Good to Go" and "Olio", but also community gardens and educational initiatives are sustainable and positive activities individuals can engage in a community level (GreyHound, n.d.).

The importance of education, but also raising awareness, on the topic must not be forgotten. This can be done on several levels: at school, at the workplace, and through media campaigns. Educating people about the environmental, economic, and social impacts of food waste brings behavioral changes and represents a significant step towards a better future. School curriculums that include lessons on sustainability and food waste can help instill responsible habits from a young age.

However, a holistic approach in order to avoid food waste is needed, and the effort cannot be made only by the individual and small communities. It is important to remember that there are many practices that can be adopted by farms, distribution networks, retailers, and policymakers to reduce food waste at every stage of the supply chain, ensuring a more sustainable and efficient food system (Schanes et al., 2018).

| Lesson Plan Details | | | |
|---------------------|---|--|--|
| Lesson Plan title | Alternative Solutions to avoid Food Waste | | |
| | | | |
| 21st Century Skills | Choose the skills that will be developed in the lesson: | | |
| | Creativity | | |
| | Problem Solving | | |
| | Collaboration | | |

| | Decision making |
|--------------------|--|
| | |
| Duration | Activity 1: 15 minutes |
| | Activity 2: 40 minutes |
| | Activity 3: 40 minutes |
| | Scenario 1: 20 minutes |
| Classroom setting | Select how the class needs to be organized for the lesson: |
| | All together X |
| | ■ in groups X |
| | • in pairs |
| | individually |
| Required | Activity 1: |
| material/resources | Offline: Flipcharts, pens/markers |
| | Online: Access to a brainstorming platform, such as Mural, Mentimeter, etc. |
| | Activity 2: |
| | Online: paper sheets, pens/markers, printed profiles (see attachment A at the end of the Learning Plan). |
| | Offline: video call software that allows breakout rooms, software to take notes, email addresses, and/or sharing platforms to share activity material. |
| | Activity 3: |
| | Offline: bowl/box/hat/any type of container, ingredients written on |
| | small pieces of paper, pens/markers, paper sheets/notebooks. |
| | Online: Website/software for the random drawing (i.e. Wheel of Names Random name picker), software to take notes. |
| | Scenario 1: |
| | Offline: Printed scenario and choices |
| | Online: presentation and/or document with the scenario and choices |
| | |

| Prerequisites | - No prerequisites are needed |
|---------------|--|
| Additional | |
| resources | ILCES: website and platform for a EU financed project, aiming to educate communities on environmental issues and sustainable practices. |
| | Earth.org - <u>11 Effective Solutions for Food Waste</u>: alternative solutions to food waste at a household level but also at the other ones. |
| | Olio: an app that allows users to share surplus food with neighbors, helping to reduce food waste in communities. |
| | Love Food Hate Waste: A campaign that provides tips, tools, and resources to help reduce food waste at home. |
| | 5. The Food Waste Atlas: global tracker of food waste |
| | Too Good To Go: an app that connects consumers with restaurants and stores offering surplus food at discounted prices, helping to reduce food waste. |
| | 7. UN CC: e-learn - <u>Food Waste Prevention</u> : course on food waste prevention, mainly destined for developing countries, but complete with its information. |
| | 8. <u>VetLovesFood</u> : website destined for VET teachers, aiming to raise awareness about food-wasting prevention. |
| | World Economic Forum - 7 innovative solutions for fighting food waste: article on innovative and technological solutions to food waste. |
| | WRAP: Climate Action NGO that publishes resources about food waste. |
| | 11. WRAP: <u>Taste it Don't Waste it</u> - educational resources. |
| | 12. World Wildlife Fund - <u>BE A FOOD WASTE WARRIOR</u> : Toolkit of activities related to school lunch and food waste to carry out in school classrooms. |
| References | Graham-Rowe, E., Jessop, D. C., & Sparks, P. (2014). Identifying motivations and barriers to minimising household food waste. |

Resources, Conservation and Recycling, 84, 15–23. https://doi.org/10.1016/j.resconrec.2013.12.005

GreyHound (n.d.). Community Initiatives: Fighting Food Waste Together. https://greyhound.ie/communities-fighting-food-waste/

Jones-Garcia, E., Bakalis, S., & Flintham, M. (2022). Consumer Behaviour and Food Waste: Understanding and Mitigating Waste with a Technology Probe. *Foods (Basel, Switzerland)*, *11*(14), 2048. https://doi.org/10.3390/foods11142048

Jörissen, J., Priefer, C., & Bräutigam, K.-R. (2015). Food waste generation at household level: Results of a survey among employees of two European Research Centers in Italy and Germany. *Sustainability*, 7(3), 2695–2715. https://doi.org/10.3390/su7032695

RHS (n.d.). Composting. https://www.rhs.org.uk/soil-composts-mulches/composting

Schanes K., Dobernig K., Gözet B. (2018). Food Waste Matters—A Systematic Review of Household Food Waste Practices and Their Policy Implications. *J. Clean. Prod.* 2018;182:978–991. https://doi.org/10.1016/j.jclepro.2018.02.030

Secondi, L., Principato, L., & Laureti, T. (2015). Household food waste behaviour in EU-27 countries: A multilevel analysis. *Food policy*, *56*, 25-40. https://doi.org/10.1016/j.foodpol.2015.07.007

StopFoodWaste.ie (n.d.-a). Perfect Portions. https://stopfoodwaste.ie/resource/perfect-portions

StopFoodWaste.ie (n.d.-b). Preserving. https://stopfoodwaste.ie/resources/preserving

Van De Walle, G. (2024, May 5). First In, First Out (FIFO): What Food Handlers Must Know. FoodSafePal. https://foodsafepal.com/first-in-first-out-fifo/

Lesson Plan for Activities & Scenarios #1 (include 1-3 activities & 1-2 scenarios)

Activity 1. "...And there was nothing left!"

Overview: Participants brainstorm about the reuse and possible alternative uses of food packaging.

Objectives:

- Make participants aware of the variety and prevalence of food packaging in their daily lives;
- Encourage participants to think critically about the materials and shapes of different types of food packaging;
- Promote awareness of waste management practices, such as recycling, reusing, and reducing waste.

Duration: 15 minutes

Venue: online/offline

Number of participants: up to 20

Materials needed:

Offline: Flipcharts, pens/markers

- Online: Access to a brainstorming platform, such as Mural, Mentimeter, etc.

Instructions:

- 1. Start the activity by naming different types of food they can buy at the supermarket (i.e. meat, pasta, bread, yogurt, ice cream, fruit, etc.) and ask them to list the material and shape of all of their packaging.
- 2. Write participants' answers on the flipchart.
- 3. Give your participants a new task: they have to come up with creative, alternative, and feasible ways to use food packaging. They can use paper and pens/markers to write down their ideas.
- 4. Ask some volunteers to share their ideas with the rest of the group.

Debriefing:

During the debriefing section, you can ask participants the following questions, but remember to modify them based on your group characteristics:

- Did you find it easy or challenging to think of new uses for the packaging?
- Were you surprised by the amount of packaging used for different foods?
- What do you usually do with food packaging? Do you throw it away? Do you differentiate your waste at home?
- Has this activity made you reconsider your habits?
- Which ideas do you think are the most feasible to implement in your daily life?
- Would you share these ideas with your family or community to encourage more sustainable practices?

Tips for facilitators:

- In case participants need help to start the brainstorming, gather examples of different types of food packaging (clean and empty) before the activity.

- Remember to encourage active participation by asking open-ended questions, and to ensure all participants feel comfortable sharing their ideas.
- You can guide the conversation by grouping similar ideas together.
- Remember to encourage participants to think outside the box and consider unconventional uses for packaging.
- As a follow-up activity, you can suggest ways participants can implement their ideas in their daily lives and provide additional resources or information on sustainability and waste reduction.

Activity 2. What do they buy?

Overview: Participants create meal plans for different household profiles, providing practical examples and suggestions for waste reduction based on the household characteristics.

Objectives:

- Develop the ability to create a meal plan that meets the needs of a household;
- Learn to plan meals that minimize food waste and make efficient use of available resources;
- Foster a positive attitude towards reducing food waste and valuing food resources.

Duration: 40 minutes

Venue: online/offline

Number of participants: up to 20

Materials needed:

- Online: paper sheets, pens/markers, printed profiles.
- Offline: video call software that allows breakout rooms, software to take notes, email addresses and/or sharing platform to share activity material.

Instructions:

- 1. Participants will be divided into groups and assigned a household profile.
- 2. Each group creates a shopping list and a meal plan trying to avoid food waste based on the household's characteristics. They can reuse leftovers and also give suggestions to the assigned household.
- 3. Every group shares their work with the others, who give feedback and suggestions.

Debriefing:

During the debriefing sessions, you can ask the following questions, but remember to modify them based on your group characteristics:

- Was it hard to think about your household necessities?
- What strategies did you use to minimize food waste?
- Did any specific household characteristics make the planning more difficult or easier?
- Who do you think produces more food waste?

- Do you think creating a shopping list and a meal plan can help you avoid food waste in your daily life?
- Did you find this activity and other groups' suggestions helpful?

Tips for facilitators:

- You can add more household profiles and/or repeat the same ones depending on your necessities and on the number of groups forming in your class.
- Profiles (Attachment A) are examples, feel free to modify them, including also dietary restrictions and budget considerations to make the exercise realistic and challenging.
- Do not forget to monitor the process: walk around (or visit break rooms) and check in with groups periodically, offering guidance if they seem stuck.
- Use the debriefing questions to guide a structured discussion after the activity, and ensure everyone has an opportunity to share their experiences and insights. You can also emphasize practical tips and strategies for reducing food waste and effective meal planning

Activity 3. Empty your fridge

Overview: Participants create and share recipes made by ingredients they have randomly drawn, in order to avoid food waste and share sustainable practices with their community.

Objectives:

- Learn how to effectively use available resources (ingredients) to create diverse and functional solutions (recipes) and recognize the importance of utilizing all resources to avoid waste;
- Develop an appreciation for the value of sharing ideas and resources within a community;
- Demonstrate how sharing resources and ideas within a group/community can lead to more efficient use of ingredients and less waste.

Duration: 40 minutes

Venue: online/offline

Number of participants: up to 20

Materials needed:

- Offline: bowl/box/hat/any type of container, ingredients written on small pieces of paper, pens/markers, paper sheets/notebooks.
- Online: Website/software for the random drawing (i.e. <u>Wheel of Names | Random name picker</u>),
 software to take notes.
- List of ingredients (example): milk, old potatoes, old bread, cooking cream, eggs, yogurt, sliced cheese, tomatoes, broccoli, iceberg salad, old zucchinis, eggplant, open onions, ripe bananas, old apples, whole grain flour, old carrots, etc.

Instructions:

- 1. Participants are divided into groups. A representative from each group draws up to 5 ingredients from the container (if online, the website/software would randomly assign them).
- 2. Each group has to create and write some recipes including all the ingredients: tell the participants to imagine all of their ingredients are about to expire, so they have to use them all! Establish a few basic ingredients that everyone can use (the ones that are always in the kitchen), for example: oil, salt, sugar, pepper, etc.
- 3. Once finished, participants share with the class the recipes they created.

Debriefing:

In the debriefing section, start a reflection on the value of sharing for a community. You can ask the following questions, but remember to modify them based on your group characteristics:

- Was it difficult to pair your ingredients with the others?
- Have you ever done this with food that was about to expire at home?
- Did you gain new insights or ideas from other groups' recipes?
- Can you think of a time when sharing resources, ideas, or skills in a community setting led to a better outcome than working alone?
- What are the benefits of sharing resources and knowledge in a community setting?
- How can communities come together to minimize food waste and support each other?
- Can sharing recipes and ideas within a community foster a sense of belonging and mutual support?
- Are you going to use some of these recipes?

Tips for facilitators:

- Remember to modify the activity based on your group's characteristics. With a younger group, it might be easier to give fewer ingredients to work with.
- Feel free to modify the ingredients list. You can put one item more than once or add ingredients that are typical of your region/country.
- Guide the reflection with specific questions about the value of sharing and collaboration. Do not
 forget to facilitate a constructive feedback session where groups can share their thoughts on
 other groups' recipes and ideas.
- Summarize the main takeaways from the activity, focusing on the benefits of sharing resources, the importance of collaboration, and any creative strategies used.
- Help participants relate the activity to real-world scenarios. Discuss how the principles of sharing and collaboration can be applied in various community and professional settings.

Scenario 1. "Alternative uses"

Scenario

You are a VET trainee specialized in waste management, and were recently asked to assess the food waste management practices in your community, focusing on food packaging. You make a trip to the local supermarket and notice a significant amount of packaging used meat, bread, yogurt, pasta, and

fruit. Most of the packaging is made from materials like plastic, cardboard, and aluminum, which contribute to environmental waste if not recycled correctly. You are asked to come up with sustainable and creative ways to reuse food packaging.

Choices

- 1. Propose a recycling and waste reduction program for the supermarket;
- 2. Organize community initiatives to educate people on reusing food packaging creatively;
- 3. Cooperate with local manufacturers to design eco-friendly packaging alternatives that are both reusable and biodegradable.

Feedback choice n. 1

Developing a recycling and waste reduction program for the supermarket was a great choice. It demonstrated strategic thinking that leads to a sustainable solution tailored to the store's waste management challenges. This approach can help with long-term reduction in waste and improve environmental practices, but has a limited impact on the packaging people keep in their homes.

Feedback choice n. 2

Great choice. Educating people on how to creatively reuse food packaging promotes social responsibility and environmental consciousness. This strategy is impactful on a community level, but it could take time to be adopted by all the members of the community.

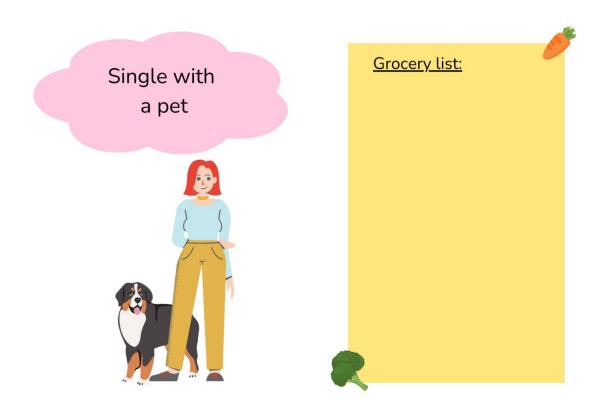
Feedback choice n. 3

Both a great and an innovative choice that addresses the root of the problem and helps create long-term solutions for reducing waste. However, this solution may require more time and investment to implement compared to the other options.

Attachment A Activity 2 Household Profiles:



| Monday | Tuesday | Wednesday | Thursday |
|--------|----------|-----------|----------|
| Friday | Saturday | Sunday | Notes |



| Monday | Tuesday | Wednesday | Thursday |
|--------|----------|-----------|----------|
| Friday | Saturday | Sunday | Notes |

Three-Generation Household

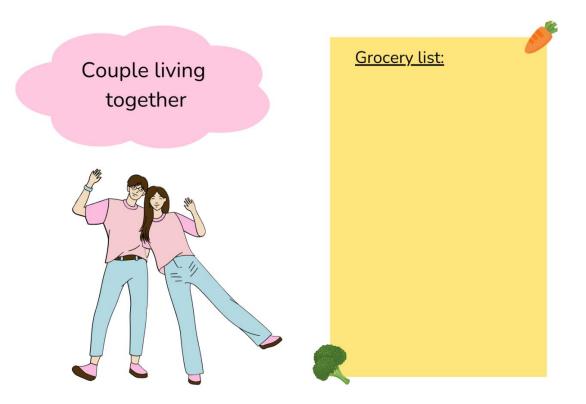


Grocery list:

| Monday | Tuesday | Wednesday | Thursday |
|--------|----------|-----------|----------|
| Friday | Saturday | Sunday | Notes |



| Monday | Tuesday | Wednesday | Thursday |
|--------|----------|-----------|----------|
| Friday | Saturday | Sunday | Notes |



| Monday | Tuesday | Wednesday | Thursday |
|--------|----------|-----------|----------|
| Friday | Saturday | Sunday | Notes |