



STAY HEALTHY ONBOARD GUIDE

OCTOBER 2023

Creative Cooking

Maximizing Ingredients & Reducing Food Waste



Introduction	3
Food Waste on Board	4
Food Items on Board and Leftovers	6
Methods to Reduce Food Waste on Board	8
Creative Leftover Meal Ideas	10
Leftovers Recipe	12
Oceanic's Suggestions	13

INTRODUCTION

Overview

Food waste refers to the food that is intended for consumption, but instead, it is wasted by ending up in the trash.

Food waste can occur in all production processes, from the farm to distribution, to retailers, to the consumer.

Generally, food waste may occur for several reasons: losses from mold, pests, inadequate climate control, losses from cooking, and/or intentional waste. (USDA)

Key Facts

- Globally, approximately 13% of the food produced is lost between harvest and retail. (United Nations)
- Approximately 17% of the total global food production is wasted in households, in food service, and in retail. (United Nations)
- According to several studies, bulk carriers may generate 4.11m³ food waste in 130 days, dry bulk carriers 2.75m³ in 140 days, and general cargo vessels 1.25m³ in 90 days. (EMSA/OP/02/2016)



FOOD WASTE ON BOARD

Food waste can happen at any stage of food usage on board: ordering/purchase, storage and management, preparation/cooking, and consumption.

Potential Reasons for Food Waste on Board

There are several reasons that could lead to food waste on board:

- **Inappropriate Food Handling**

Cooks need to ensure that food is being delivered and handled appropriately to avoid spoilage and contamination.

Oceanic provides sufficient food handling, hygiene, and safety information in the *Galley Crew Manual*.

- **Inappropriate Food Storage**

Multiple food storage factors could potentially lead to food waste:

- Lack of visibility in walk-in fridges and inspection of food and ingredients
- Improper use of ingredients
- Improper cleaning procedures of dry stores, fridges, and galley
- No implementation of the FIFO method

The FIFO method means first in first out and indicates that goods should be used in the order in which they are delivered. Goods delivered first should be placed in the freezer in front, leaving the recently delivered goods to be placed behind.

Oceanic advises dating the goods on receipt or food-grade labels and placing new deliveries behind those already in storage to ensure that the FIFO method is in place.

- **Inappropriate Food Preparation**

Improper food preparation methods could result in food waste:

- Lack of the ability to identify the required food ingredients
- Lack of proper understanding of food portions per person
- Lack of the ability to recognize the proper cooking timing

- **Not following a weekly menu**

Not following a menu plan, results in increased food waste. When following a menu, cooks can ensure that the food prepared meets the consumption guidelines and remains within budget.

Oceanic supports by providing recommendations and menus with nutritious and well-balanced meals, created by our culinary team in collaboration with our nutrition experts.

- **Improper Handling of Leftovers**






The cook should have the ability to store leftovers in appropriate storage containers, properly labelled with production date, and refrigerated. Several food items can be stored and used to create a new dish (please see next chapter, Food Items on Board and Leftovers).




- **Working Inefficiently**

Oceanic advises cooks that they:

- ✓ Keep two clearly labelled containers when cooking, one for the food scraps that cannot be used, such as vegetable peels, spoiled produce, and trimmings, and the other container for edible scraps. While certain parts of vegetables, fruits, or meats might not be used in the primary dish, they can be repurposed into stocks, soups, or sauces.
- ✓ Position both containers strategically in the kitchen where they are easily accessible but not in the way of the galley crew. Having them close to the food preparation areas encourages proper use.
- ✓ Use visual aids such as a poster indicating examples of what goes in each container. Visual guides can be particularly helpful.

FOOD ITEMS ON BOARD AND LEFTOVERS

FOOD ITEMS	NOTES
<p>Cooked Vegetables</p> 	<ul style="list-style-type: none"> • Most cooked vegetables can be safe for 3 to 4 days in the refrigerator. • Make sure they are properly stored in airtight containers.
<p>Cooked Rice</p> 	<ul style="list-style-type: none"> • Rice can carry bacteria called <i>Bacillus cereus</i>. • It is safe to consume rice within 1 to 2 days if properly stored in the refrigerator. • It is crucial that the rice cools down quickly after cooking.
<p>Cooked Pasta</p> 	<ul style="list-style-type: none"> • Similar to rice, pasta should be stored in the refrigerator and consumed within 1 to 2 days.
<p>Soups and Stews</p> 	<ul style="list-style-type: none"> • Soups and stews can last 3 to 4 days in the refrigerator. • Reheat them thoroughly to kill any bacteria before consuming.
<p>Meat and Poultry</p> 	<ul style="list-style-type: none"> • Cooked meat and poultry can be safe for 3 to 4 days in the refrigerator. • Make sure they are properly stored in shallow containers to cool quickly.

<p>Seafood</p> 	<ul style="list-style-type: none"> • Fish and shellfish should be consumed within 1 to 2 days after cooking.
<p>Eggs</p> 	<ul style="list-style-type: none"> • Cooked hard-boiled eggs can be safe for up to a week if they are stored properly in the fridge.
<p>Baked Goods</p> 	<ul style="list-style-type: none"> • Baked goods such as bread, cakes, and cookies, can last several days to a week if stored properly in an airtight container.

It is important that a cook can use his senses effectively, to determine if leftovers are still safe to eat. If the food looks, smells, or tastes strange, it is best that the food is discarded. Additionally, proper food safety practices should always be followed, such as refrigerating leftovers within two hours of cooking and reheating them once to 167°F (75°C) before consuming.

METHODS TO REDUCE FOOD WASTE ON BOARD

❖ Proper Stock Monitoring

It is advised that Chief Cook will conduct proper stock monitoring, including stock management and accurate ordering.

- Maintaining a stock and order log can be helpful to easily identify the crew's food needs and avoid over-ordering.
- New orders should be placed, based on the stock inventory, menu planning, and the number of crew members on board.
- When receiving food, quality, proper temperature, and packaging should be checked.
- If the food items received on board are not properly labelled, we recommend reporting that to your purchaser or the Oceanic HSEQ Department.

❖ Physical Stock Counting

A monthly physical stock count ensures accurate quantities of food on board. Additionally, Chief Cooks can identify the food items close to the expiration date and the ones running out of stock, safeguard a proper rotation of stock, and secure appropriate stock levels.

❖ Proper Storage Practices

Proper storage practices should be applied to ensure that minimal food is wasted:

- Food items should be stored immediately after delivery.
- Food items should be stored on shelves of thoroughly clean and dry stocking space, and always with some space from the ground and walls.
- Storage temperatures should be below 5°C for perishable fresh food items.
- Proper food handling and sufficient ventilation in the storage area will minimize food spoilage.
- Use well-ventilated storage containers for fruits and vegetables; keep separated containers if possible.
- Keep sensitive food items such as eggs, away from the storage doors, as temperatures fluctuate upon entry.
- Use clean and dry containers for storage.
- Do not place any cart boxes inside the walk-in fridge and do not bring them to the galley.
- Vegetable fridge and other perishable fresh food items should be inspected daily.
- The FIFO method should always be applied.

❖ Proper Food Preparation Practices

Several proper food preparation practices could potentially lower food waste:

- Eliminate over-trimming during preparation of bulk meats, and whole vegetables.
- Apply proper butchering techniques for the identification of different parts of meat and their usage.

❖ Proper Cooking Techniques

The cooks need to be comfortable with cooking techniques. A probe stick thermometer is essential to ensure that food is well cooked at appropriate temperatures. Additionally, a scale should be used for meal portion sizes.

• Following a Proper Menu

Following a proper bi-weekly or weekly menu is vital.

- A menu facilitates the ordering process and controls the amount of food for each new purchase, ensuring sufficient stock.
- Following a menu, helps the cook prepare food that accommodates the energy needs of the crew, eliminating leftovers.
- Not having or following a menu plan can lead to unsafe food handling and confusion amongst the crew.



CREATIVE LEFTOVER MEAL IDEAS

A Cook can get creative on board with leftovers to minimize food waste and provide varied meals for the crew.

- **Soups & Stews**

Leftover meats, vegetables, and grains can be combined to create hearty soups and stews. Add some broth, seasonings, and fresh herbs to enhance flavour.

- **Fried Rice**

Leftover rice, along with assorted vegetables, meat, and seafood, can be stir-fried to make delicious fried rice. Add soy sauce, garlic, and/or ginger for extra flavour.

- **Salads**

Leftover cooked vegetables, meats, and grains can be added to fresh greens for a tasty and fulfilling salad. Top it with a homemade dressing or vinaigrette.

- **Sandwiches**

Use leftover meats, cheese, and vegetables to make sandwiches. Add homemade condiments and fresh greens for a quick and satisfying meal.

- **Casseroles**

Combine various leftovers such as meat, vegetables, and pasta or rice in a casserole dish. Top with cheese or breadcrumbs and bake until bubbly and golden.

- **Pasta Dishes**

Leftover meat and vegetables can be added to pasta. Toss them in olive oil or tomato sauce and sprinkle with grated cheese.

- **Pizza**

Use leftover bread as a base. Top it with tomato sauce or fresh tomato, cheese, and assorted leftovers for a unique and flavoured pizza.

- **Omelettes or Frittatas**

Leftover vegetables, meat, and cheese can be folded into omelettes or mixed into frittatas for a hearty breakfast.

- **Tacos or Quesadillas**

Use leftover meat, vegetables, and cheese to fill tacos or quesadillas. Add a homemade salsa for a great twist.

- **Smoothies**

Overripe fruits can be blended into smoothies with yogurt or milk.

- **Sauces & Gravies**

Leftover meat can be shredded and added to sauces or gravies. Serve the sauce over pasta, rice, or mashed potatoes.

- **Infused Water**

Use leftover fruits, herbs, or citrus peels to infuse water or tea, creating refreshing and flavourful beverages.

Remember! The key is to be creative and open to experimenting with flavours. By doing so, you can transform leftovers into delicious and satisfying meals for the crew.

VERY IMPORTANT!! For potentially hazardous food such as rice, soup, mashed potatoes, and chicken breast, proper cooling processes are vital when already cooked:

- ✓ Cool from 63°C to 21°C within 2 hours, and then from 21°C to 5°C or lower in additional 4 hours (2-hour/4-hour rule).
- ✓ Once the food is cool to 21°C, store it by placing it in shallow stainless-steel pans, on the top shelves of the refrigerator, in such a way that the air circulates. Additionally, monitor to ensure cooling at 5°C or lower within 4 hours to prevent bacterial growth and maintain food safety.

RECIPE WITH LEFTOVERS

Chicken with Vegetables Fried Rice

Vegetables Egg Fried Rice

Ingredients (10 servings):

500g leftover long-grain rice (properly cooled as per guidelines)

50ml cooking oil

40g minced garlic

5pcs medium eggs

200g mixed leftover or fresh vegetables

A dash of cooking salt

30g spring onions

A dash of ground black pepper



Method:

1. Heat a large heavy-bottomed non-stick skillet over high heat.
2. When hot, add 1 tablespoon of oil and garlic, and cook until light golden.
3. Add green onions and stir-fry until fragrant, about 30 seconds.
4. Add the vegetables.
5. Cook until done but still crisp.
6. Add the cooked rice and use a spoon to break any clumps. Fry for a few minutes.
7. Add the eggs and season with salt and pepper.
8. Stir the rice again, breaking up any clumps.

Minimum internal cooking temperature for fish: 167°F (75°C) for 15 seconds.

Nutritional comments:

This meal is complete and well-balanced as it combines food from the 3 main food groups (carbohydrates, protein, vegetables).

VERY IMPORTANT!! Reheating a food does not necessarily cause it to lose nutrients, but the way it is heated and stored can impact its nutritional quality. Consider using gentler reheating methods, such as steaming or oven baking at low temperatures, to preserve nutrients better than deep frying or prolonged boiling. Store, handle, and reheat food properly to ensure both safety and nutritional quality.

If a certain food is not available at your vessel, you might order.



Oceanic's Suggestions:

- ✓ Ensure proper food storage, handling, and processing practices are followed on board!
- ✓ Follow weekly or bi-weekly well-balanced menus!
- ✓ Trust your sight and smell when something does not seem okay or smells good!
- ✓ Utilize leftovers creatively to contribute to a sustainable future!



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