



GUIDE TO
SUSTAINABLE
MENUS



A guide to sustainable menus

A step by step approach
to sustainability



NOURISH
The future of food
in health care.

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Chapter 3

Sustainable elements in food service operation and equipment

1

Production and distribution

When there is an opportunity to rethink the entire food service department, it is vitally important to envisage the most sustainable possible ways of working. But chances to completely change the type of system are rare, and menus are dependent on the system.

The most sustainable type of production and distribution from a food-consumption point of view (eliminating waste, increasing satisfaction, reducing costs) is “mixed liaison” production (cook & chill and cook & serve) that responds to immediate food requests, with the foods available for table service or room service ordered by users with flexible service times¹⁴.

In long-stay accommodation, when users are no longer able to think about their mealtimes, to read, or even to feel hungry, it is more sustainable to consider installing a proximity kitchen in care units. With this type of service, users can smell the food as it is being cooked (stimulating appetite), talk directly to the cook about their preferences (increasing satisfaction), and eat a freshly prepared hot meal in the dining room together (breaking isolation, increasing food consumption). On the other hand, managing safety (diet, texture) may be challenging, so employees must be well trained by a dietician.

2

Human resources

Position structure

The structure of positions in the food service department must be reviewed considering the preferred type of operation, since the number of cooks and attendants and their weekday or weekend schedule will have a major effect on the department’s efficiency and the choice of foods on the menu. Here are some examples of issues that could be considered:

¹⁴ In general, “cook & serve” is preferable to “cook & chill,” because chilling and reheating food wastes energy. However, cooking and chilling can save energy when large amounts of food are prepared (e.g. pasta or spaghetti sauce).

- Reorganize task descriptions and schedules for à la carte service
- Organize cooks' timetables to improve flexibility of meal service times and improve food freshness
- Increase attendants' hours for dividing food into reusable containers of house meals.

Training and qualification

Introducing more sustainable habits requires changes in practice, for which employee training is essential—for kitchen employees, service employees and technicians visiting the users. Satisfaction is key and is the responsibility of all interveners.

- Interactions between all players must be efficient so that users receive exactly what they want and what they will eat (user satisfaction, no waste).
- Working methods must be reviewed to identify wasteful practices (e.g. reduce the use of disposable gloves).
- Training in sustainable nutrition must be provided to encourage changes in habits, not only for a healthy lifestyle but also for healthy use of the planet's resources.



Sustainable equipment and storage spaces

The quantity and type of equipment available have a major impact on possible menu choices. When the time comes to repair or recondition an item of equipment or procure a new one, an analysis should be carried out to consider the sustainable aspects of its use — improving satisfaction based on comments received, analyses of waste, increase in the offering of sustainable products, savings in energy and water, reliability (durability) over time, efficient (“lean”) production methods, etc.

Here are some thoughts to consider in the management of equipment and storage spaces in the food service department.

Characteristics of sustainable equipment

- Choose equipment with the most sustainable energy source. Electricity is the most sustainable source if it comes from hydroelectricity or from solar or wind-power sources. However, where electric power is produced from natural gas or coal, equipment running on natural gas is to be preferred.
- Equipment with reduced energy consumption (ENERGY STAR certified) or water consumption. These items are more expensive to purchase, but through energy savings they provide a good return on investment.
- Combination ovens (convection, steam) often cut cooking times and therefore save energy.
- Use a rapid cooling unit if large quantities of hot food must be stored in a refrigerator.
- Working with the procurement department, draw up a list of criteria for sustainable purchases of large and small items of equipment. This should be integrated into the procurement department's sustainable procurement policy.
- Use reusable crockery (including lids) for all foods that must be portioned out.
- Promote consumption of water by providing reusable glasses next to water sources.
- Discuss the options of waste management with the appropriate departments to ensure that a suitable onsite waste management option is available (composting, recycling, etc.).
- If disposable dishes must be used¹⁵ :
 - Use compostable, biodegradable dishes and throw them in the compost.
 - Be wary of wax-lining in cardboard packaging: check with your recycling provider to see whether these are recyclable.

¹⁵ Chaire internationale sur le cycle de vie pour Recyc-Québec. Analyse du cycle de vie de tasses réutilisables et de gobelets à café à usage unique. CIRAIQ, October 2014, 159 pages and CIRAIQ. Mémoire déposé dans le cadre de l'évaluation des enjeux et des impacts du bannissement des sacs d'emplettes à usage unique dans les commerces de détail sur le territoire de la ville de Montréal. June 4, 2015, 17 pages

- Aluminum may or may not be recyclable depending on your recycling provider.
 - Plastics are mostly recyclable: every plastic is stamped with a triangle-shaped logo with the number in the middle which indicates a type of plastic: each facility must check with the local municipality to see which are recyclable. Even polystyrene (“Styrofoam”) can be recycled in some area.
 - If no composting or recycling facilities exist and disposable dishes go in the garbage, use polystyrene dishes, since they will have less of an environmental impact than cardboard or “biodegradable plastic” dishes, which cannot decompose in the anaerobic conditions in landfill sites. Even so, using dishes that are destined for landfill has to be considered the worst possible option!
- An industrial dishwasher and pot washer saves water and energy when the quantity of dishes is sufficient.
 - Ensure the long-term reliability of equipment by establishing an annual preventive maintenance schedule.
 - See that daily equipment maintenance is carried out (cleanliness, air intake kept clear, door seals in good condition) to prevent energy wastage.

Sustainable characteristics of storage spaces

- Fit out spaces for the use of bulk containers and reusable crockery.
- Prioritize cool storage (refrigerator rather than freezer), which requires less energy and allows fresh (more sustainable) foods to be added to menus.
- Make sure that cold rooms are not overly large, and that the doors of cool zones are properly closed.
- Freezers are more efficient when full, so size should suit actual need.

- Maintain inventory for what is needed only and emergency reserve supplies using a Kanban and barcode system.
- Ensure that inventory is taken to automate ordering: electronic dispatch directly to suppliers (no paper, no faxes, no lost sheets of paper).

4

Production standards

Service tailored to the needs of the clientele

Food production should stay as close as possible to user demand in order to stay in pull, rather than push, production: users make their choices from the menu and the kitchen produces them. Here are some measures to help achieve this:

- Produce in response to actual need: identify quantities of food needed as close to production time as possible.
- Monitor leftovers and sales daily and adjust the quantities to be produced accordingly.
- Monitor inventory (kitchen or care units) to avoid waste; reduce or increase quantities according to actual need.
- Restock foods in accordance with needs.

Working method (preparation, cooking, cooling, washing)

Each chapter on foods (chapters 4 to 11) contains a section on controlling surpluses and leftovers that provides several hints and tips to reduce food waste. Using these tips may bring about a revision of cooks' and attendants' working methods. It is important to raise employees' awareness and train them to reduce waste.

Tour the department (Gemba walk) to check on working methods and identify improvements that will cut out unnecessary energy use while maintaining health and hygiene rules. Here are some avenues for improvement.

- Use cooking methods that preserve the nutritional value of foods (steam) and reduce water use.
- Review the methods of recipes to use fewer pans, utensils, and items of equipment that need cleaning.
- Avoid cooking, cooling, and reheating small quantities of food, because cooling is a non-added-value step (waste of energy and unnecessary movement).
- Don't open oven doors, and put lids on saucepans.
- Increase the efficiency of movements in cold rooms to avoid opening doors.
- Reduce the use of aluminum foil (use reusable lids, recycled aluminum foil or plastic film).
- At the salad bar, put out small containers that need to be changed more often in order to reduce waste.
- Where possible, use or reuse cooking water in the production process.
- Wash floors with water drained from tanks for the washing and disinfection of instruments and equipment.
- Introduce composting and waste recycling, and train staff.
- Use kitchen towels made of recycled paper and compost them.
- Use a steam machine for washing equipment where possible. The high temperature and pressure of the steam jet makes it possible to eliminate the use of soap, reduces water use and increases the speed of cleaning.
- Use organic, biodegradable soaps and disinfectants.
- Use automatic soap dispensers to reduce the amount used.
- Use rainwater to water the kitchen garden.
- Keep large reusable plastic boxes and containers and give them to the recreation/activity department, to

volunteers, to users or to employees; find partners who will make use of containers of all kinds.

C. KEEP ABREAST OF NEW TRENDS

- Ask your suppliers about new food products or new, more sustainable packaging sizes.
- Subscribe to equipment suppliers' newsletters to find out about new cooking methods and new equipment becoming available.
- Create partnerships with organizations in your community or foundations that can fund initiatives for the welfare of users.
- Reserve a space to grow your own herbs, fruits and vegetables outside (roof, terrace, plot of land), and why not try a henhouse to produce eggs?
- Bring in beehives to pollinate your urban garden, with the possibility of harvesting and selling your own honey!

Other References

To learn more about healthy diet for sustainable food systems, see:

EAT-Lancet Commission. (2018). EAT-Lancet Commission brief for Food Service Professionals. Retrieved from https://eatforum.org/content/uploads/2019/01/EAT_brief_food-service-professionals.pdf

Willett, W. Rockström, J. Loken, B. Springmann, M. Lang T. Vermeulen, S. et al. Food in the Anthropocene: the EAT-Lancet Commission on sustainable food systems. *The Lancet Commissions*. 2019; 393: 447-492

Health Care Food Services Resource Guide—Going Green in the Kitchen with ENERGY STAR® in English and French

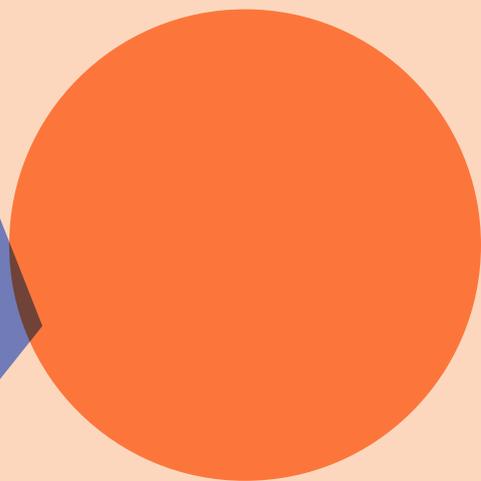
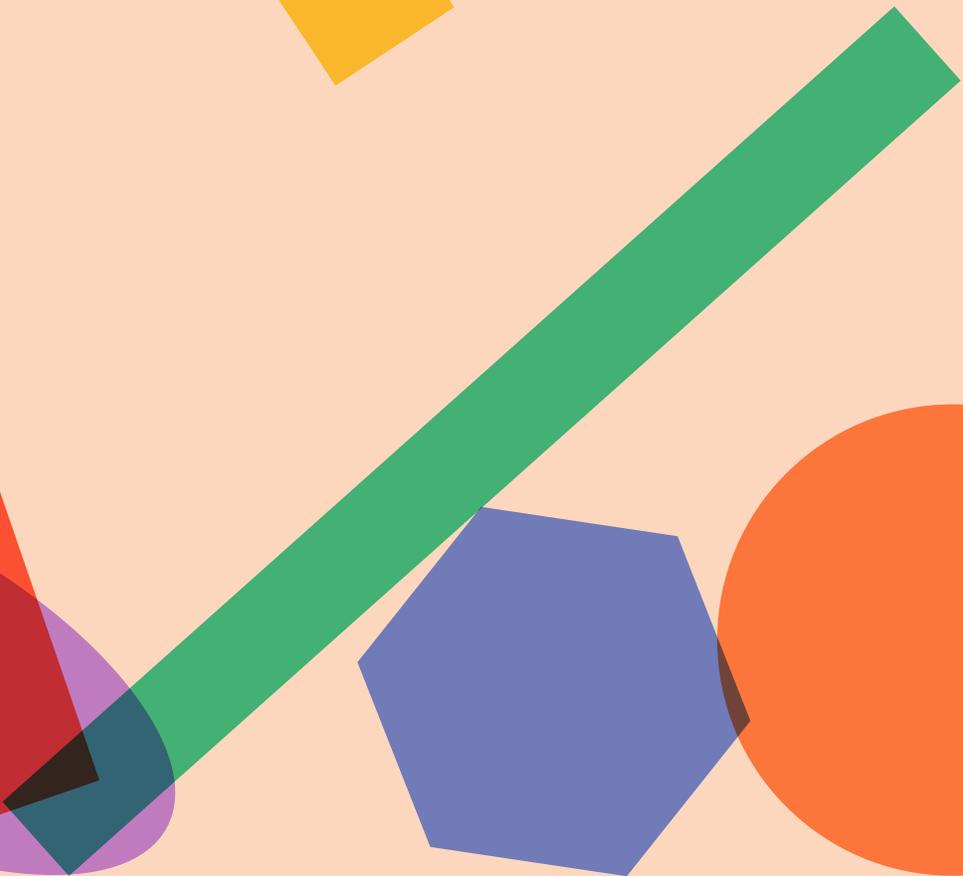
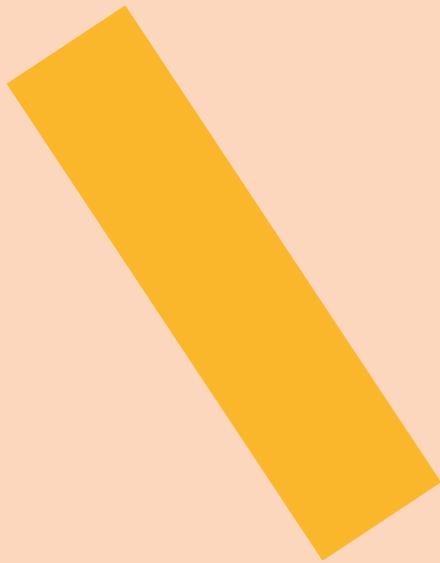
Taking a bite out of organic waste—case study: <http://greenhealthcare.ca/wp-content/uploads/2017/07/CCGHC-Organic-Waste-Case-Study-June17-2013-FINAL.pdf>

St Joseph's Group Purchasing Organisation makes local food an integral part of buying strategy: <http://greenhealthcare.ca/wp-content/uploads/2017/07/St-Josephs-GPO-Case-Study-2-LocalFood.pdf>

Conducting Food Origin Audits: <http://greenhealthcare.ca/food-origin-audits/>

K. Zeuli, A. Nijuis, R. Macfarlane and T. Risdale. The impact of climate change on the food system in Toronto. *Int. J. Environ. Res. Public Health* October 2018, 15(11), 2344

Elansari A., Bekhit A.ED.A. (2015) Processing, Storage and Quality of Cook-Chill or Cook-Freeze Foods. In: Siddiqui M., Rahman M. (eds) *Minimally Processed Foods*. Food Engineering Series. Springer, Cham



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