



sustainable and nutritious food environments in early childhood education and care.

TOOLKIT



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**NATIONAL
NUTRITION
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partnership.

This toolkit was developed through a partnership between Deakin Institute for Physical Activity and Nutrition and National Nutrition Foundation. It helps support early childhood education and care (ECEC) services to implement practical, evidence-informed sustainability practices.



Suggested citation: Elford, Audrey; Spence, Alison; Campbell, Karen; Rozman, Margaret; Gelman, Ricky; Love, Penny (2026). Sustainable and Nutritious Food Environments in Early Childhood Education and Care: a Toolkit. Deakin Institute for Physical Activity and Nutrition; National Nutrition Foundation. <https://doi.org/10.26187/deakin.33117440>

The toolkit was informed by current research evidence and co-designed with ECEC service directors, cooks and educators.

The toolkit was also evaluated through an implementation pilot with ECEC services. Feedback from participating services helped strengthen the resource and demonstrated it can support sustainable food and mealtime practices in everyday settings.

By combining research evidence with the knowledge and experience of the ECEC sector, this toolkit provides practical guidance that has been developed, tested and refined for use in early childhood settings.

how to use this resource.

This toolkit is designed to be flexible
and used in a way that suits your service



01

Read the first part of the toolkit to learn about the key components of sustainable nutrition and food environments in early childhood education and care (ECEC).



02

Move to the second part of the toolkit for practical tips and ideas to help embed these approaches into everyday service practice.



03

Use the toolkit to identify what is most relevant for your service, set achievable goals and apply practical strategies across the kitchen and classroom.



Use this toolkit to support:

- ◉ A food or nutrition topic you are running
- ◉ A sustainability week or environmental awareness event at your service
- ◉ Learning experiences around climate change
- ◉ Conversations about planetary health
- ◉ Staff planning days when reflecting on your service approach
- ◉ Community or family event to demonstrate commitment to sustainability



Why this matters: Sustainability in the EYLF and NQS

Sustainability is a recognised principle within the Early Years Learning Framework. It calls on educators to support children to become 'socially responsible and show respect for the environment'. This commitment is also embedded into the National Quality Standard in Quality Area 3, which requires services to use resources efficiently and manage the environment responsibly.

Services can include strategies in this toolkit as practical, evidence-based actions to include in their Quality Improvement Plan.

Small changes made consistently can create real and lasting impact.



contents.

Partnership	02
How to use this resource	03
Introduction	06

PART 01

key elements of sustainable ECEC food environments.

Key elements of sustainable ECEC food environments.....	08
1. Provide a menu that meets guidelines without exceeding needs.....	09
2. Serve whole foods and minimally processed foods.....	10
3. Water should always be available to children.....	12
4. Minimise use of products in food packaging	13
5. Reduce food waste	14
6. Support seasonal, and where possible local and ethically sourced foods.....	16

PART 02

whole service approach.

Menu planning.....	20
At mealtimes	21
In the classroom	23
Educator resources.....	25
Management	26



introduction.



>900,000

Australian children
aged 0-5 years attend
ECEC



50%+

daily nutrition provided
in childcare hours



10-60%

of food purchased
may be wasted



**Over a year, long day care
services provide around
1000 meals and snacks**

For many children, ECEC provides more
than half of their daily nutrition.



**Between 10 and 60%
of food purchased by ECEC
services may be wasted**

Across Australia, this could equate
to around 168,000 kg of food waste
every day.

Every decision about the food ECEC's purchase, prepare, serve and associated wastage is an opportunity to make a difference. Small, practical changes can have a lasting impact on children's health and the health of our planet. Early childhood services are uniquely placed to make a difference. Every day you are shaping how young children understand the world around them. Including sustainable and nutritious practices in everyday routines helps children experience these ideas regularly.

This toolkit will guide you through practical, achievable ways to strengthen sustainable and nutritious practice in your service.

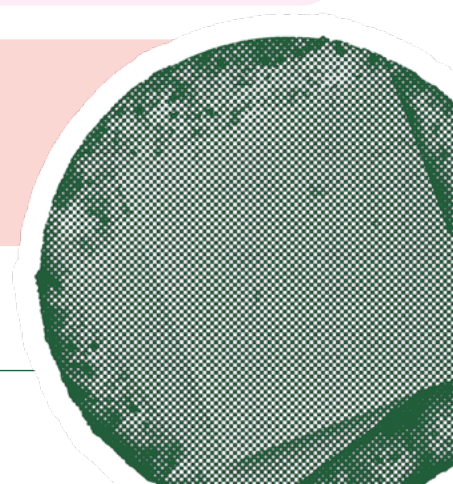


PART 01

key elements of sustainable ECEC food environments.

key elements of sustainable ECEC food environments.

1. provide a menu that meets guidelines without exceeding needs.
2. serve whole and minimally processed foods.
3. water should always be available.
4. minimise use of products in plastic packaging.
5. reduce food waste.
6. support seasonal, and where possible local and ethically sourced foods.



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

1. provide a menu that meets guidelines without exceeding needs.

Plan menus

Plan to meet children's nutrition needs. Use menu planning guidelines to offer the right balance of foods from the five food groups.

Serve

Serve age-appropriate portions, or support children in learning to serve themselves. Children's appetites change from day to day. Some children will eat more and some will eat less. Let children to decide how much of the food offered they want to eat. This helps them recognise their own hunger and 'had enough' cues and supports positive eating habits. Children can always ask for more if they are still hungry.

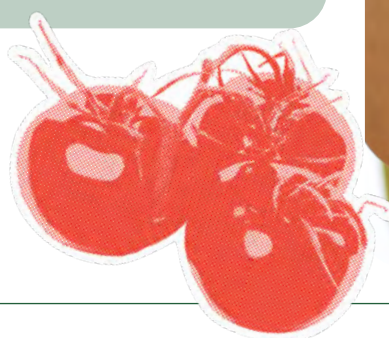
Review

Review menus regularly to check they meet the guidelines and provide an age-appropriate amount of food. This supports growth, helps reduce food waste and makes the best use of food and resources.



Helpful resources:

- ◉ [FoodChecker, online menu planning and assessment tool](#)



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

2. serve whole foods and minimally processed foods.

What to put in your menu

✓ Include whole foods or minimally processed foods

- Vegetables
- Fruits
- Wholegrain breads and cereals
- Legumes and beans
- Lean meats, poultry and fish

💡 Sustainability tip!

Eating nutritious foods in line with the Australian Dietary Guidelines can reduce the impact of food production on environmental sustainability.

✓ Include legumes and beans on the menu

Examples of legumes and beans include: lentils, chickpeas, kidney beans, black beans, borlotti beans, and cannellini beans.

Many children are not served legumes and beans at home or in ECEC services, so these foods may be new to them. Legumes and beans are nutritious, relatively low-cost foods, that can support more environmentally sustainable diets.



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

2. serve whole foods and minimally processed foods.

Tips & food ideas

✓ These tips below can help you add legumes and beans to your menu

- ◉ Introduce these foods slowly to the menu. For example, you can add a small amount of legumes and/or beans to a meat dish, slowly replacing the meat content over time
- ◉ Role model eating these foods alongside children at mealtimes
- ◉ Speak with children about these foods when introducing them. Using positive language and teaching them about how these foods grow is a great way to get them excited about trying new things

📢 Food Ideas

- ◉ Dips are a great way to introduce legumes, for example, chickpea dip with beetroot and cumin
- ◉ Some ECEC specific recipes can be found [here](#)



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

③ water should always be available to children.

Safe drinking water

Safe and clean drinking water should always be available.

Water and milk are the only drinks needed.

Other drinks such as juice or cordial should not be served.



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

4. minimise use of products in plastic packaging.

Where possible, be mindful of packaging when purchasing food

Ultra-processed foods are packaged foods that have been changed a lot from their original form. They often contain ingredients that are not usually used in home cooking. They are usually made to last longer or be more convenient, rather than to provide good nutrition.

Information

Processing and packaging ultra processed foods uses energy, plastics, and other environmental resources.

Ultra processed foods that are not recommended for use at ECECs include:

- ◉ Lollies
- ◉ Commercial cakes
- ◉ Highly processed meat such as frankfurts/hotdogs



Sustainability tips!

- ◉ Cooking from scratch using whole ingredients reduces the reliance on heavily packaged products. This lowers your environmental impact at the source
- ◉ Buy food with good shelf life in bulk e.g., rice and pasta
- ◉ Choose loose, unpackaged fruits and vegetables where possible
- ◉ Grow vegetables, fruit or herbs to save on packaging and food costs



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

5. reduce food waste.

Some food waste in ECEC settings is expected. Children at this age are exploring new foods and their appetite may change from one day to the next.

Here are some things to consider when reducing food waste in your centre:

- ⦿ Being aware of where food is wasted can help you reduce food waste.
 - Where is food most often left over in your centre? Is it in the kitchen, unserved, or plate waste? Discuss solutions with the team.
- ⦿ Adjust the amount of food you prepare based on the number of children in attendance, or if any food-based experiences are planned in the classroom.
 - Communication between the classroom and the kitchen is key!
 - Example: As part of the daily routine, educators should let the cook know by 9am the numbers in attendance. This way they can adjust the amount of food prepared.
- ⦿ Repurpose untouched fruits and vegetables where it is safe to do so. For example, make baby purees, freeze vegetable cut-offs for stock, bake muffins with unused fruit or vegetables or use unused vegetables in dips.

Food safety

Ensure that all repurposed foods have been handled in accordance with appropriate food safety practices.

Helpful resources:

- ⦿ [Reducing food waste at your service](#)



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

5. reduce food waste.

Balancing food waste reduction and responsive feeding.

Responsive feeding is an important part of creating positive mealtime experiences. Supporting children to eat according to their appetite helps build self-regulation, confidence and independence while fostering a positive relationship with food.

Support children to recognise and respond to their own hunger and 'had enough' cues by allowing them to decide how much they would like to eat from the foods provided.

Children should never be pressured, bribed or required to finish everything on their plate. Some food waste is to be expected when children are experiencing new foods. Work towards reducing food waste where possible using the tips in this toolkit rather than trying to eliminate it completely.



Tips to balance

- ⦿ Plan menus carefully so the kitchen prepares only what is needed for the number of children attending. This helps avoid over-catering and reduces the amount of food that ends up as waste.
- ⦿ Encourage children to serve themselves an amount they think they will eat with the option of taking more if they are still hungry. This ensures that children can follow their hunger and 'had enough' cues while helping to reduce food waste.

These practices align with the principles of the Early Years Learning Framework by promoting children's agency and wellbeing and support National Quality Standard Quality Area 2. They foster healthy eating habits in a positive and respectful mealtime environment.

KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

⑥ support seasonal, and where possible local and ethically sourced foods.

Where possible and available, connect with local growers, local food hubs or farmers markets, and speak to your suppliers about ethically sourced foods.

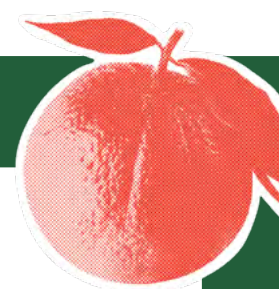
- ◉ Buying seasonal and local food can reduce the distance food travels. This helps protect the environment by using less fuel and long-term storage.
- ◉ Seasonal produce is often fresher and can support local farmers and businesses.
- ◉ Choosing ethically sourced foods helps support farming practices that consider the wellbeing of people, animals and the environment.



KEY ELEMENTS OF SUSTAINABLE ECEC FOOD ENVIRONMENTS

6. support seasonal, and where possible local and ethically sourced foods.

What's in season veg guide



summer.

DECEMBER, JANUARY, FEBRUARY

Asparagus	Avocado	Beans	Beetroot	Cabbage	Capsicum
Carrot	Celery	Corn	Cucumber	Daikon	Eggplant
Leek	Lettuce	Okra	Onion	Spring Onion	Peas
Sugar Snap Peas	Potato	Radish	Shallot	Silverbeet	Squash
Tomato	Watercress	Zucchini			

autumn.

MARCH, APRIL, MAY

Asian Greens	Avocado	Beans	Beetroot	Broccoli	Cabbage
Capsicum	Carrot	Cauliflower	Celery	Corn	Cucumber
Eggplant	Fennel	Leek	Lettuce	Mushrooms	Onion
Spring Onion	Parsnip	Potato	Pumpkin	Silverbeet	Spinach
Squash	Swede	Sweet Potato	Tomato	Turnip	Zucchini

winter.

JUNE, JULY, AUGUST

Asian Greens	Avocado	Broccoli	Broad Beans	Brussels Sprouts	Cabbage
Capsicum	Carrot	Cauliflower	Celery	Cucumbers	Eggplants
Fennel	Horseradish	Kale	Leek	Mushrooms	Okra
Onion	Spring Onion	Parsnip	Potato	Pumpkin	Radish
Shallot	Silverbeet	Spinach	Sweet Potato	Turnip	

spring.

SEPTEMBER, OCTOBER, NOVEMBER

Artichoke	Asian Greens	Avocado	Beans	Beetroot	Broccoli
Cabbage	Carrot	Cauliflower	Celery	Corn	Eggplant
Fennel	Leek	Lettuce	Mushrooms	Onion	Spring Onion
Parsnip	Peas	Potato	Pumpkin	Radish	Shallot
Silverbeet	Spinach	Squash	Sweet Potato	Tomato	Turnip



PART 02

whole service approach.

Supporting sustainable food practices works best when everyone in the service plays a part, including in the kitchen, classroom, garden and relationships with families and the community

This section provides practical tips and ideas to help embed the above components into everyday practice



WHOLE SERVICE APPROACH

menu planning.

When planning your menu, there are things to consider that can support sustainable food practices

☑ **Communication is key**

Talk to the educators daily to find out how many children are in attendance. Adjust the quantities to cook only the needed amounts.

☑ **Use leftovers safely**

- Storing leftovers properly can help cut down on food waste
- To do this well, make sure you have reusable, air tight containers, a thermometer and labelling supplies on hand. Items should always be labelled and dated before storage
- Ensure that you are up to date on safe food handling so you can freeze, thaw and reheat food safely

☑ **Internal food audit**

- Discuss food acceptance and food waste reduction with the director, educators and children. Work together to identify practical solutions
- For example, if all pumpkin was not eaten, can pumpkin be served in another way? This allows repeated exposure to food and may increase acceptance.



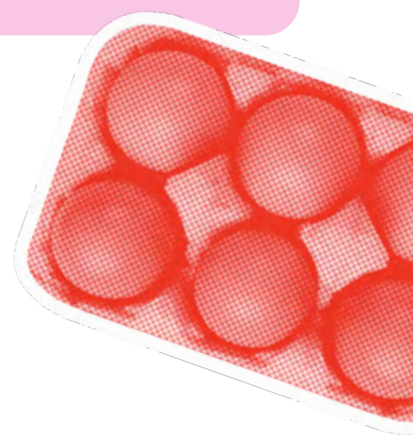
Helpful resources:

- [Reducing food waste at your service](#)
- [Love Food Hate Waste](#)
(has recipe ideas for excess unused food)
- [Love your food waste resource](#)



Food safety resources:

- [Read more about food safety here](#)
- [Do Food Safely free online course](#)



WHOLE SERVICE APPROACH

at mealtimes.

Even at a young age, simple hands on experiences with sustainable food practices can build lifelong habits and values.

Model positive feeding practices

- ☑ If possible, sit with the children during mealtime and model tasting or eating the food they are eating. Educators have found this can lead to increased acceptance of food as well as lower food waste.
- ☑ Create a calm, positive mealtime environment with minimal distractions where possible.
- ☑ Use descriptive and neutral language when talking about food, including when children choose not to eat or say they have had enough.

Examples:

Use descriptive language when talking about food, for example “This broccoli is so green, crunchy and bright!”.

Use neutral language when talking about eating behaviours, including when children choose not to eat or say they have had enough. For example, rather than commenting on whether children do or don’t finish their plate, you could instead discuss tastes, colours, textures, or other elements of curiosity about a meal.



WHOLE SERVICE APPROACH

at mealtimes.

Allow child-led mealtimes

Responsive feeding practices support children to listen to their own hunger and 'had enough' cues. Children should be supported to decide how much they would like to eat, with the option to have more if they are still hungry.

Appetites can vary from day to day, and it is expected that children may eat different amounts at different meals. Trusting children when they say they are full helps build independence, supports a positive relationship with food and can reduce unnecessary plate waste.

- Allow children to serve themselves where appropriate and choose how much they would like to eat.
- Offer more food if children are still hungry, rather than encouraging them to take larger serves at the beginning.
- Avoid pressuring, praising or rewarding children for finishing food.
- Encouraging or forcing children to finish their plates to save on food waste is not recommended, as it does not align with responsive feeding practices.



Supporting children to accept new foods

- Introduce new foods slowly and in different ways
- Prepare foods in a familiar way such as serving lentil patties alongside salmon patties
- Teach children about where the food comes from and how it grows
- Using books, art, toy kitchen play or gardening activities to familiarise children with new foods before they appear on the menu
- Children may need repeated, positive exposure to new foods before they feel comfortable eating them. Supporting children to become familiar with new foods can increase acceptance over time and help reduce waste.



WHOLE SERVICE APPROACH

in the classroom.

Teach about sustainable and nutritious food and food experiences

Learning about where food comes from, trying different foods and understanding food waste is important. The more children understand these ideas, the more they can get involved in everyday routines and develop an appreciation for their environment and where food comes from.



→ Activity based learning

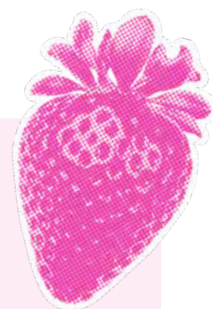
Food is a great opportunity to create conversations and help children be involved and curious about food and the environment.

- ◉ Involve children in food preparation like washing produce
- ◉ Grow herbs, vegetables or fruit
- ◉ Sort food scraps, recycling and rubbish into correct bins together
- ◉ Get children involved in collecting food scraps for a worm farm or compost bin
- ◉ Involve children in simple food storage tasks such as labelling containers
- ◉ Read books about where food comes from, growing food, enjoying vegetables or reducing waste.
- ◉ During group time, talk to the children about sustainable nutritious food and food waste
- ◉ Engage through drawings about what they have learnt.



WHOLE SERVICE APPROACH

in the classroom activity example:



Equipment:

- ☐ Small buckets for food waste collection
- ☐ Colour-coded stick or ruler
- ☐ Child-friendly chart

Steps:

- ① Appoint a daily “waste warrior”.
- ② Children scrape plate waste into buckets.
- ③ Using a colour-coded stick or ruler, measure how much food is wasted in scrap buckets for the day. Show on chart.
- ④ Discuss during group time. Ensure that solutions do not include pressuring children to eat more or eliminating less preferred foods.
- ⑤ Work together with the cook and children to brain storm.

For example

If most of the pumpkin soup was wasted, can we try pumpkin in another way? Roasted or as a dip? Could we try other experiences in the classroom with pumpkin before we try it next? Such as reading a book, making up a song, or using our senses to explore pumpkin! This gives children another chance to try the food and may help reduce waste.

WHOLE SERVICE APPROACH

educator resources.

Fun books about food can be a great way to increase children's interactions with vegetables and other foods. This promotes their interest in trying and eating such foods at mealtimes.



Book examples

- ◉ "The Foodie Flamingo" by Vanessa Howl
- ◉ "Rainbow Plate" by Preeya Alexander
- ◉ "Plants feed me" by Lizzie Rockwell
- ◉ "Before we eat" by Pat Brisson

For more book suggestions and other fun ideas to include food-related activities in your classroom, see: [Healthy eating games and activities resource](#).



Helpful resources:

- ◉ [Promoting healthy eating resource](#)
- ◉ [Promoting healthy eating – Free online training module](#)
- ◉ [Love what you eat \(kids edition\)](#)
- ◉ [Love your food waste](#)
- ◉ [Environmental sustainability and food resources: Cool Australia Curriculum Resources](#).



WHOLE SERVICE APPROACH

management.

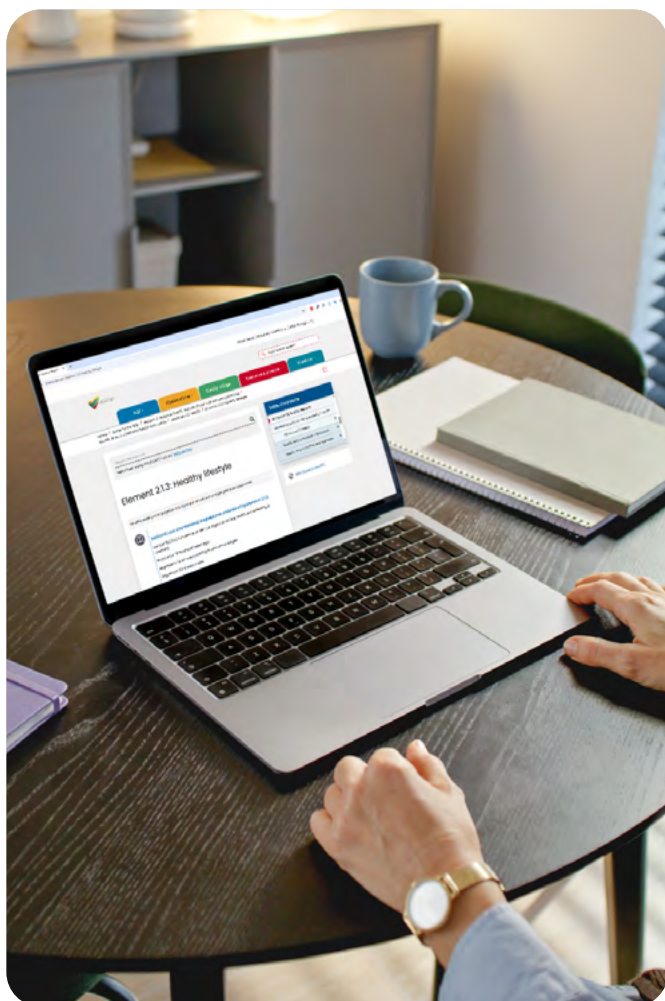
Your leadership matters!

Quality service

Providing menus that meet food and nutrition guidelines and support sustainable food environments aligns with **Element 2.1.3 of the National Quality Standard**.

ECEC staff identify leaders who value environmental sustainability and nutritious food are essential for success.

Ongoing communication with cooks and educators through regular meetings is key.



Helpful resources:

Healthy Eating Advisory Service

- Investing in best practice healthy menus

Healthy Places (formerly the Achievement Program)

- Climate and Health Pathway with great information on how to incorporate environmental sustainability, including food.

Stephanie Alexander Kitchen Garden Program

- Resources that are ECEC specific.

Local councils

- Speak to your local council about composting/waste management resources.

ACECQA

- Information on sustainability in ECEC, including food, and links to other resources.





WHOLE SERVICE APPROACH

goal setting.

Building Sustainable and Nutritious Food Environments

Use this page to reflect on your service's journey towards more sustainable and nutritious food practices. Identify your top priorities and set achievable short-term and long-term goals (1-2 goals for each) based on what you have learned in this toolkit. Review and update your goals regularly to celebrate progress and identify new opportunities.

Focus on quick wins and foundational changes you can implement immediately.



Example Goal: Use the menu planning guidelines to check your current menu and make one change, such as adding a new dish with legumes or beans.



Example Goal: Share one tip from the toolkit at your next staff meeting to discuss sustainable food practices and share toolkit learnings highlighting your commitment to improving sustainable food practices.

Short-Term Goals (Next 1–3 Months)

[illegible]

Long-Term Goals (Next 6-12 Months and beyond)

[illegible]

references.

Key references reporting the evidence which informed this toolkit:

Elford A, Spence AC, Campbell KJ, Rozman M, and Love P (2025). The co-design of support strategies for sustainable, healthy and affordable food provision in Early Childhood Education settings. *Public Health Nutrition*, 28: e12, 1–10.

[doi:10.1017/S1368980024002477](https://doi.org/10.1017/S1368980024002477)

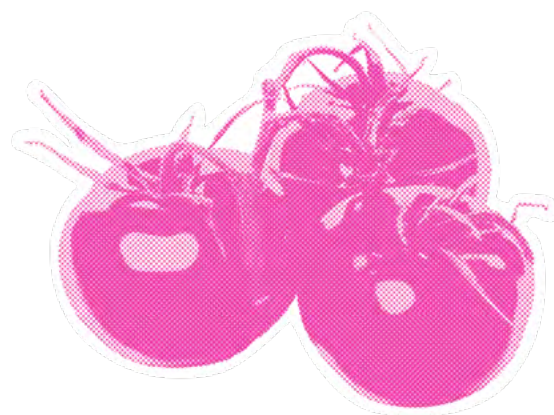
Elford A, Spence AC, Wakem A, Rozman M, Campbell KJ, Love P (2023). Environmental sustainability and food provision in the early childhood and education setting. *Public Health Nutrition*, 26(11), pp. 2200–2210.

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The original Toolkit content was created and tested by Audrey Elford, Penny Love and Alison Spence of Deakin University, with advice from National Nutrition Foundation staff in 2024. National Nutrition Foundation later contributed content concerning responsive feeding, seasonal vegetables and goal setting and commissioned the final design.

Thank you to the Victorian ECEC staff directors, cooks and educators who contributed to the co-design.

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<https://doi.org/10.26187/deakin.33117440>



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