



Conducting and evaluating a pilot trial

FACTSHEET 9

*Food and Garden Organics
Best Practice Collection Manual*



Pilot trials

- A pilot trial can help to test the following characteristics of an organics scheme:
 - Participation rates
 - Diversion rates
 - Contamination rates
 - Different types of caddies, with or without liners
 - Householder attitudes and satisfaction
 - Effectiveness of communication/education strategy
 - Collection frequencies

Planning your trial

Planning Stages	Key information required
✓ Assessing the waste diversion potential	<ul style="list-style-type: none"> ✓ Area specific compositional analysis will provide an understanding of the available organics ✓ Only a proportion of the available organics will be captured in a collection service.
✓ Choosing the right collection system(s) to test	<p>Four typical collection options:</p> <ul style="list-style-type: none"> ✓ Garden organics only ✓ Food organics only ✓ Food and garden organics, but in separate containers ✓ Food and garden organics co-collected in a single container
✓ Locating a suitable treatment facility	<p>When planning an organics collection trial, it is important to consider how and where the collected material will be processed.</p>
✓ Choosing containers and other supporting tools	<ul style="list-style-type: none"> ✓ It is important to provide practical and convenient methods to make organics collections easy for householders. ✓ Consider factors such as dwelling types, storage spaces, household sizes, garden sizes, climate, time of year, cultural issues, etc.
✓ Identifying the trial design and sample area	<p>Some decision factors include:</p> <ul style="list-style-type: none"> ✓ Number of variables to be tested ✓ Representative demographics ✓ Sufficient sample size ✓ Use of a control area ✓ Ease of distribution and collection
✓ Identifying appropriate collection vehicles and trial logistics	<ul style="list-style-type: none"> ✓ Ensure the capacity of the collection vehicle is appropriate to the tonnage collected ✓ Ensure proposed collection schedules are compatible
✓ Communicating with stakeholders	<p>An effective education and engagement strategy is essential to the success of an organics collection trial. Remember to inform and consult with other important stakeholders that may be affected or may influence the results of the trial.</p>

Planning your trial (continued)

✓ Monitoring and evaluation	Monitoring and evaluation before, during and after the trial will help to demonstrate the performance of the trial and may include waste audits, visual inspections, participant surveys, and economic analysis among other methods.
✓ Applying the results	<p>Decision-making should be influenced by a wide range of environmental, economic and social factors.</p> <ul style="list-style-type: none">✓ Quantitative figures such as participation rate, capture rate and contamination can be used to determine overall diversion potential across the LGA✓ Economic information and participant satisfaction results can indicate the ease and cost-effectiveness of fully implementing a system

1. Assessing diversion potential

- The main issues to consider if you are evaluating how much garden organics will be presented for collection are:
 1. **Proportion of properties with gardens** – many urban councils have high proportions of housing stock with either no gardens or small gardens, where a separate garden waste collection service may deliver small amounts of garden organics
 2. **Garden size** – properties with larger gardens will produce more garden materials
 3. **Garden age** – the age of a garden will affect the amount of garden material produced
 4. **Seasonality** – garden organics increases in spring/summer/autumn and reduces in winter. On the other hand, food organics volumes show little seasonal variation.

2. Choosing the right collection system

- An organics collection service typically presents four general collection options:
 1. Collect garden organics only
 2. Collect food organics only
 3. Collect food and garden organics, but in separate containers
 4. Collect food and garden organics together in a single container

2. Choosing the right collection system: costs

- The **absolute collection costs** of a trial will be affected by the:
 - Number of additional staff and local wage levels
 - Purchase / lease of additional collection vehicles
 - Requirement for any vehicle modifications of existing or new fleet
 - Vehicle running costs, including fuel and maintenance
 - Type and size of collection bins and kitchen containers provided to residents
 - Type of liners for kitchen containers provided to residents
 - Intensity of public education and motivation campaign
 - Performance monitoring, including contamination
 - Additional management and administration

3. Locating a treatment facility

- During the trial, it is advisable to:
 - Seek to **fix treatment costs** by securing gate fees (or a portion of gate fees) for the organics over the duration of the trial
 - **Ensure the facility is licensed** to process the quantity and type of material to be collected
 - **Check that outlets have been secured** for the finished compost
 - **Ensure arrangements for dealing with contamination** are specified in the contract (e.g. responsibilities, contamination limits, and who pays if loads are rejected).

4. Container choice

- Important points to remember when implementing your pilot trial are:
 - **120–240 L wheeled bins** are best for co-collection of food and garden organics. The size depends on collection frequency and the average garden and household size and type of dwelling.
 - Smaller sized **wheeled bins (60L and 80L)** suit confined spaces and use in Multi Unit Dwellings and / or smaller families. Where food organics are collected separately on a weekly basis, a 20-25L container will be sufficient for the majority of households.
 - Providing households with bench top **kitchen caddies** encourages participation and increases food organics capture rates.
 - **Compostable liners** that fit inside kitchen caddies and meet the Australian Standards (AS 4736-2006) aid cleaning, storage and disposal and reduce leakage and spills. It should be noted that liners can become unreliable if stored for extended periods.

5. Identifying the trial design and sample area

- **Identifying the trial design** - compare two or more options:
 - **collection system** e.g. food-only versus co-collected food and garden
 - **service configuration** e.g. weekly residual waste collection versus fortnightly residual waste collection
 - **container type** e.g. enclosed versus aerated Mobile Garbage Bin and/or kitchen caddy
 - **supporting tools** e.g. use of compostable bags versus newspaper as a caddy liner.

5. Identifying the trial design and sample area (continued)

- **Identifying the sample area:**
 - Participating households should be carefully chosen to:
 - ensure accurate representation of the whole target population
 - it must mirror the profile of the population
 - the demographics should reflect the demographics of the council area overall.
 - Sample size should be as large as possible and will depend on key factors such as:
 - project budget
 - level of precision required for the intended use of the results.
 - as a simple rule, a sample of 1,000 households or more will generally provide an overall recovery rate that is sufficiently reliable.

6. Identifying appropriate collection vehicles and trial logistics

- Consideration must be given to:
 - Vehicle capacity: calculate and monitor tonnages; vehicles must be leak proof
 - Collection scheduling: consider existing collection schedules and routes
 - Planning & timing of procurement: purchase containers, caddies, liners early!

7. Communicating with stakeholders

- Communications is essential to the success of your trial:
 - Produce a communications plan
 - Conduct communications at the following intervals:
 - Pre-trial launch: what's coming and why
 - New trial launch: how to participate
 - Post-trial: is the scheme continuing, are there any changes?

8. Monitor and Evaluate

- It is recommended to conduct the following monitoring and evaluation before, during and after the trial:
 - Waste audit of the residual waste stream to be carried out pre-trial, mid-trial and the end of trial. Conducting audits in summer as well as winter will reveal seasonal variations in diversion and composition
 - Bin set-out rate audit to be conducted mid-trial and end of trial
 - Householders' satisfaction and participation surveys to be conducted mid-trial and end of trial

9. Applying the results

- Consider the following :
 - Quantitative figures such as participation rate, capture rate and contamination are used to determine overall diversion potential across the LGA
 - Economic information and participant satisfaction results indicate the ease and cost-effectiveness of implementing the system council-wide
 - Qualitative information from focus groups, surveys and other forms of participant feedback provide guidance for improving the system design and inform risk management planning for the future roll-out phase.
- The results will inform full LGA roll-out and improvements required to do this
- See Factsheet 9 for Pilot Trial Checklist

NB: Information in this presentation is taken from the *Food and Garden Organics Best Practice Collection Manual* (2012) published by the Department of Sustainability, Environment, Water, Population and Communities. The full document is available on the department's website

www.environment.gov.au/wastepolicy/publications/organics-collection-manual