



Garddwriaeth Cymru Horticulture Wales

**A practical guide for business
Reducing waste in horticulture**



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Reducing waste in horticulture: A practical guide for business

About this guide

The rising cost of waste disposal, the resulting environmental impacts, such as greenhouse gases and water pollution, coupled with new legislation and an increasing market demand, are all factors that are driving businesses to reduce their waste.

To do this, horticulture businesses need to know where waste happens in their process, the types of waste that arise and the practical steps they can take to prevent or reduce waste happening.

This guide introduces practical ways for horticulture businesses to prevent and reduce the common types of waste that arise in their operations. It includes 3 sections with practical actions contained in each, that are designed to form a waste reduction plan.

It is intended as one of suite of practical guides that are currently being developed by Horticulture Wales for the industry. This guide does not address water or chemical waste that are planned to be covered separately.

Did you know?

- Landfill tax is set to rise to £94.15 / tonne from April 2020.
- To help mitigate climate change, the Welsh Government has set legal obligations to reduce greenhouse gas emissions by at least 80% by 2050. Businesses wishing to access Welsh Government support will be expected to demonstrate ways they are working towards this goal.

1. Directory of common waste materials

Waste created in horticulture can vary in type, frequency and in volume. This can depend on what is produced and how it reaches the customer. The table below contains summary information about the common types of waste that happen in horticulture operations.

Action 1: Use the list below to identify the types of waste materials that happen in your operations.

Waste material	Typical uses	Preventative actions
Metal	<ul style="list-style-type: none"> - Trolleys - Trays - Cans - Foil 	<ul style="list-style-type: none"> - durable and reusable. - Aluminium and steel can be easily recycled.
Wood	<ul style="list-style-type: none"> - Pallets - Crates - Void filler 	<ul style="list-style-type: none"> - wood wool and chippings can be composted with garden waste - strips and planks can be reused or recycled
Glass	<ul style="list-style-type: none"> - bottles - jars - windows 	<ul style="list-style-type: none"> - easily recycled - packaging can be sterilised and reused
Plastic	<ul style="list-style-type: none"> - Pots - Trays - Bags - Pipes 	<ul style="list-style-type: none"> - non-black plastics can generally be recycled - black plastic plant pots, tubs and trays can be recycled via some dedicated take-back schemes - durable plastics can be sterilised and reused
Rubber	<ul style="list-style-type: none"> - Tyres - Gloves 	<ul style="list-style-type: none"> - can be recycled - requires specialist disposal
Paper and card	<ul style="list-style-type: none"> - Boxes - Bags - Labels 	<ul style="list-style-type: none"> - can be composted and recycled - often additional moisture barriers prevent this.
Substrate	<ul style="list-style-type: none"> - Coir - Potting mix - Green compost 	<ul style="list-style-type: none"> - can be reused, after sterilisation and nutrients are often added
Food waste	<ul style="list-style-type: none"> - Rejected & unsold produce 	<ul style="list-style-type: none"> - can be donated to charities if fit for human consumption - sold as ingredient or animal feed - easily composted if unprocessed
Oil	<ul style="list-style-type: none"> - Farming and processing machinery 	<ul style="list-style-type: none"> - can be recycled - requires specialist disposal
Electronics	<ul style="list-style-type: none"> - Batteries - Printer cartridges - IT equipment 	<ul style="list-style-type: none"> - can be recycled - requires specialist disposal

2. Identifying where waste arises

Once you have identified the types of waste that arise it is useful to know where this waste happens along your production process. Doing this will help you to prioritise the areas where you can reduce waste.

The diagram below describes 3-step a breakdown of a typical horticulture operation.

Action 2: Using the list of waste materials that you identified in Action 1. Consider where each one arises against each step of your operation.



Buying and using goods and services can create waste that must be disposed of. For example, when goods are delivered in single use packaging.

Waste can be reduced by taking it into account when choosing suppliers and where you source raw materials from.



Different businesses have different production methods and waste can arise throughout this process, for example, repairs to machinery, rejected plants and produce, and excess substrates can all create waste.

Waste can be reduced by identifying the types of waste that may be avoidable and taking steps to eliminate them from your production.



Packaging ensures that your produce can be stored and delivered to customers safely and in the best possible condition is vital.

Waste can be reduced by avoiding excessive packaging and moving away from single-use packaging.

3. Managing waste

Once you have identified the types of waste materials and where they arise, the next step is to create an action plan to determine how you will deal with this waste.

Preventing waste happening is the ideal scenario. When the waste that your business creates cannot be prevented you should consider these steps in the following order:

- a. **Reduce**, can you identify where, in your business operation, you can take steps to minimise the waste your business creates? For example, by distributing out of specification produce to charities, by using lighter weight packaging, or by bulk buying.
- b. **Reuse**, can any of the waste you create be used again? Composting waste vegetation, reusing plastic items and returnable packaging are common ways businesses can effectively extend the life of materials that would otherwise go to waste.
- c. **Recycle**, can you separate waste materials for collection? Establishing storage areas and bins for different waste materials that can be collected by, or delivered to, reputable waste collection organisations.

Action 3: Use your list of waste materials and where they arise from Actions 1 & 2 to consider the practical steps you can take to prevent or reduce this waste happening.

If, after working through these steps, you are left with some waste that cannot be avoided, it can either be sent to landfill or incinerated. This type of disposal of waste should only be considered as a last resort.

Did you know?

- The **Circular Economy** describes processes that keep materials in use for as long as possible, thereby reducing waste. Good practices include composting, where waste vegetation and produce breaks down naturally, and selling lower grade produce as 'wonky veg' or for raw ingredients.
- When disposing of waste you must ensure you keep a record of all receipts and invoices from waste collection and disposal organisations.

4. Acknowledgements and further reading

Every effort has been taken to ensure the information contained within this guide is accurate and current at the time of writing. Inevitably things do change – technology advances, new innovations happen, legislation changes. Horticulture businesses face unique challenges and many have individual needs so we hope that this guide can be used alongside your own research to help you take-action to reduce waste in your operations.

This guide is one of a suite of practical guides that **Horticulture Wales** are developing for the industry, these are freely available online at: <http://horticulturewales.co.uk/resources/packaging-and-waste-reduction/>

The following web resources are also provided to help you on your way. Click on the links to access these external websites.

Policy and legislation

- The Welsh Government's Waste Strategy for Wales, Towards Zero Waste, can be accessed here: <https://gov.wales/towards-zero-waste-our-waste-strategy>
- This link to Government guidance on dealing with farm waste has a section on disposing of plant material: <https://www.gov.uk/guidance/non-hazardous-waste-treatment-and-disposal#disposing-of-plant-material>

Business Support

- WRAP are a UK Government funded organisation to encourage waste recycling and resource efficiency in business, including information on horticulture: <http://www.wrap.org.uk>
- Business Wales is the Welsh Government's business support service. It offers advice on starting and running a business, and provides links to dedicated horticulture support programmes such as Farming Connect and Tyfu Cymru, including information on waste management: <https://businesswales.gov.wales/managing-waste>

Other sources of information

A huge variety of articles are available online, some useful ones are listed below:

- <https://www.fwi.co.uk/livestock/a-guide-to-farm-recycling-the-options-and-costs>
- <https://www.hortweek.com/waste-management/products-kit/article/1422665>
- <https://horticulture.ahdb.org.uk/search/node/waste%20reduction>

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Published in 2019 by: Horticulture Wales, www.horticulturewales.co.uk

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