

NURSERY PAPERS

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WAR ON WASTE

Waste is an inevitability in all industries. For production nurseries, the monetary cost, environmental impacts and societal expectations have shifted this once peripheral issue, into a core component of business strategy.

Embracing new waste management practices and seeking more cost-effective collection and disposal options are vital tools in improving the bottom line as well as boosting a business's reputation in an increasingly environmentally conscious society.

This Nursery Paper explores the various methods available to growers to reduce waste and provides practical advice on improving the environmental impact of production without sacrificing profit.

SUMMARY

- Waste reduction and management are critical factors for individual business prosperity and in reducing environmental impacts
- Reducing the impact of waste begins with procurement decisions; purchasing materials and stock that has less packaging should not only be cheaper, but reduces the time spent dealing with waste
- Conducting a waste audit self-assessment will enable nurseries to identify the types and volume of waste being generated, enabling the development of a waste reduction strategy
- The Australian Government is investing in local resource recovery industries. It's expected that there will be an increase in waste collection services as a result
- The value of waste is dictated at the end-user, based on how well disparate waste streams are separated. Clean, single-type uncontaminated waste improves the value of waste
- Start a conversation. Engagement with peers, staff, and customers will help to encourage action on waste across the industry



Various waste streams separated at a nursery



Plastic wrap isolated from general waste

BACKGROUND

There are numerous waste streams within the nursery industry. The largest streams are:

1. Greenwaste – In most nurseries, the second largest waste volume. It includes plant cuttings, rejected plants and used growing media.
2. Plastics – The most common types of plastics used in nurseries are growing containers, product packaging and pallet wrap. However, be aware, different types of plastics are not able to be baled or recycled together, resulting in several sub-streams.
3. Controlled waste – potentially hazardous materials like pesticides, fertilisers and paint.
4. General waste – typically the largest waste stream comprising materials that are unable to be recycled, have no collection infrastructure in place and typically end up in land fill.

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A typical nursery produces many different waste streams

A simple definition of waste is any surplus material that is no longer required for the intended purpose. It is an inevitability of business but one that until recently has been an afterthought in business management.

However, the waste industry is evolving. As landfill sites are steadily filled and the long-term impacts of waste become clearer, society has moved away from a landfill approach, to a focus on resource recovery.

Each of the above waste streams and sub-streams can be reclassified as a commodity with a dollar value. As a result of government investment, proactive organisations are launching programs which will take various waste products away for free, with a view to profit from the resale or re-manufacture of these raw materials.

The initial value of this waste can be heavily influenced by how strong

waste management practices within the nursery are.

With this in mind, there is no better time to review current waste management practices in order to improve profitability and environmental impact.

By changing how the industry looks at waste management, more time, money and resources can be spent on the core business – growing plants.

IMPROVING WASTE MANAGEMENT PRACTICES

There is no one-size-fits-all approach to waste management. Each nursery will have different volumes of waste, different resourcing and the range of collection services varies greatly by location.

However, by implementing just some of the following practices, a nursery can improve its bottom line, improve its environmental impact and create a better environment for its employees.

Conduct a waste audit self-assessment

The first step to improving waste outcomes is to conduct an audit on the types and weight/volume of the waste being created. The information can be used to calculate the size of the problem, triage focus areas and to negotiate waste collection contracts.

A nursery self-assessment template is available for download from www.greenlifeindustry.com.au.

Assess suppliers

The best way to reduce waste is to review procurement arrangements. In negotiating contracts, suppliers that use less plastic packaging should be favoured. In theory, not only should less plastic mean a cheaper product, it also means less waste to manage once the purchased goods have been used, ultimately saving money and time. Suppliers that use recyclable packaging should also be prioritised.



Sterilised pots ready for reuse

Invest in sterilisation equipment

Reusing materials can drastically improve the bottom line of a business. A core example is in the sterilisation of growing containers. A large production nursery studied as part of the levy-funded project “An investigation into waste management in Australian production nurseries (NY13003)” found that by installing sterilisation equipment at a cost of \$39,400 it was able to save purchase costs of approximately \$70,000 in the first year alone.

Implement waste separation strategies

Waste recovery companies are actively seeking various forms of waste. However, the value of this waste is determined by the level of contamination by foreign materials or other waste types. By installing a baler and implementing sound separation strategies, the value of waste and likelihood of free

collection will increase. Collection, or a convenient drop-off can typically be organised for greenwaste, plastic, controlled and general waste. For specific information contact your local resource recovery companies.

Partner with other businesses

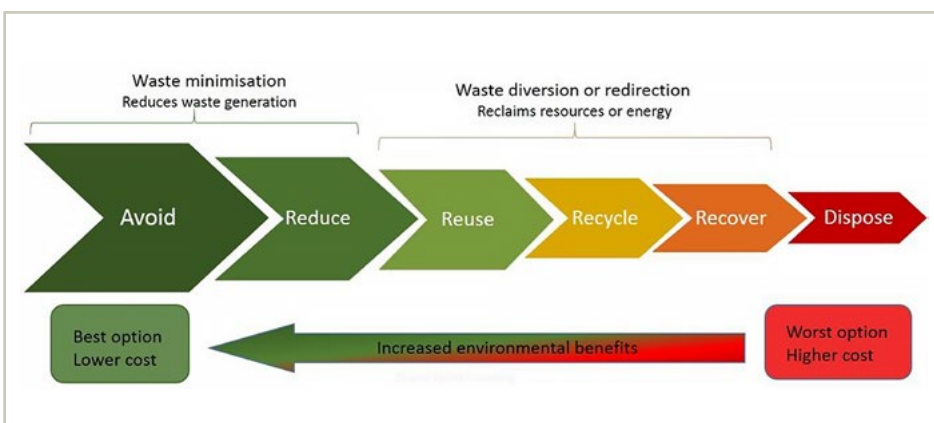
Smaller nurseries should explore partnerships with nearby businesses to pool waste streams. By creating economies of scale through larger volumes, the value of waste streams will increase.

Engage staff

In order to ensure that waste management procedures are followed, all staff must be engaged, educated and empowered. Staff should be trained to identify different waste streams to assure the value of waste at collection. If staff feel personally invested in waste management, it will pay dividends for the business.

When in doubt – follow the waste hierarchy

The simplest way to devise a waste management strategy is to consult the waste management hierarchy (see figure below). By prioritising the avoidance or reduction of materials which will become waste, less waste will be generated and for less cost to the business, economy and environment. Beyond that, nurseries should explore methods to reuse, recycle or recover materials before disposal is considered.



Source: An investigation into waste management in Australian production nurseries – NY13003 – EHR consultants

MEET THE EXPERT: DAVID HUNT, TECHNICAL ASSISTANT, NGIQ

In 2014, David Hunt embarked on a levy-funded project (An investigation into waste management in Australian production nurseries – NY13003) to investigate waste management in Australian production nurseries. While the challenges are consistent, David has started to notice some changes within the industry.

“The challenges remain the same. Regardless of size, nurseries are grappling with resourcing issues whether that be labour, income or time. Cultural issues around where our recycling actually ends up persist and the value of waste is not well understood.

“Ultimately, it’s hard to blame businesses for poor waste management practices in the past, especially when the financial incentive was non-existent. But the tide is shifting, and we are starting to see nurseries prioritise waste management as a core business outcome.”

According to David, all areas of the waste lifecycle are being addressed by the industry and although there is a long way to go, momentum is building.

“As an industry we are doing a better job at cutting waste off at the source by buying from the supplier that uses less packaging and prioritising recyclable packaging.

“We are also seeing more examples of businesses that are investing in sterilisation and baling equipment which improves the value of their waste materials. Some of these businesses are seeing a positive return on that investment within a year.

“These steps are small, but crucial, and provide outcomes that will have long-term positive effects on a nursery’s bottom line and the industry’s sustainability.”



ELLENBY TREE FARM: IT JUST MAKES SENSE

According to Craig Woodroffe from Ellenby Tree Farm, not only does prioritising waste management make them a good custodian of the land, it makes simple commercial sense.

“The cost of landfill is on the rise, so why would we pay for 6 cubic metres of landfill a week, when with a little bit of strategic thinking, we can pay for 2 cubic metres instead.”

That’s in reference to the Ellenby Tree Farm’s focus on waste management using a variety of strategies including separating waste streams, sterilisation and re-use of drums and engaging staff to ensure each member of the team is aligned to the values of waste reduction.

In fact, they take waste separation so seriously at Ellenby that the only waste that goes to landfill are various



Craig Woodroffe, Ellenby Tree Farm

contaminated products, for which no waste collection stream yet exists.

“Oil, used machine parts, various types of plastics, pots and greenwaste are all separated and recycled.”

Whilst improving waste management practices isn’t necessarily a new revenue stream, over the long run, not only does

it have a net-positive impact on the organisation’s bottom-line, it also has a positive impact on the organisation’s environmental impact and its reputation as a corporate citizen.

“Everyone has a duty to leave the land in a better shape than they found it. As a business this is a priority for us and we’re proud to be leading the way. We are already seeing customers include environmental impact as part of their decision-making process. Ultimately, those businesses that aren’t looking to minimise their waste are at risk of falling behind.”

“Every little bit counts, while some waste streams, particularly metals, do actually provide a return on investment its more about reducing the cost of disposal and at the end of the day, any waste that is diverted from landfill is a good thing.”



MAJOR RESOURCE RECOVERY ORGANISATIONS

There are numerous resource recovery specialists operating across the country. The largest operators are Remondis, Cleanaway, Veolia and Suez. These operators take most types of waste and they all operate pick-up services. The fees will vary depending on the volume of waste streams and the levels of contamination

In addition to the large national players, there are businesses across the country operating in regional or local levels that can manage the collection of waste.

Visit <https://businessrecycling.com.au>, and search by waste type and postcode to find the resource recovery specialist which best fits your business

Alternatively, contact the local council waste transfer station to discuss arrangements.

				
REGIONS AVAILABLE	NATIONAL			
SERVICES AVAILABLE (NON-EXHAUSTIVE)	Chemical drums Pesticides Fertiliser Plastic wrap Bulka bags Rigid plastic Garden cuttings	Chemical drums Pesticides Fertiliser Plastic wrap Rigid plastic Garden cuttings	Chemical drums Bulka bags Rigid plastic Garden cuttings	Bulka bags Rigid plastic
PICK UP AVAILABLE	Yes – fees may apply	Yes – fees may apply	Yes – fees may apply	Yes – fees may apply
DROP OFF AVAILABLE	No	Yes	No	No

Source: (<https://businessrecycling.com.au>)

LINKS TO RESOURCES

For more information on waste management practices or to find resources to help you manage your waste stream: https://www.greenlifeindustry.com.au/Category?Action=View&Category_id=753

PAST EDITIONS OF NURSERY PAPERS ARE AVAILABLE ONLINE, on the Greenlife Industry Australia website: https://www.greenlifeindustry.com.au/Section?Action=View&Section_id=46