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Supply Chain Management holds the key to the viability of nursery enterprises

Green-life producers and retailers mostly deal direct, so one might expect a smooth supply chain running efficiently to the consumer. In reality, many industry participants are instead shackled by primitive business practices, archaic physical distribution systems, inappropriate materials handling equipment and the adoption of individualism instead of innovation. Hidden costs must be found and destroyed in order to remain competitive, given the massive changes in the marketplace for green-life. In this Nursery Paper Gerard McEville, Horticulture Supply Chain Services and Tom Rafferty, Supply Chain STO, highlight the hidden costs along the horticulture supply chain that are within our control or influence. The industry has plenty of information and tools to help build effective business practices. Putting these to work will enable enterprises to seize the many opportunities offered.



Sales rely on having the right stock, in the right place at the right time – the result of effective supply chain management

Profit from improved Supply Chain Management

What is supply chain management?

“Increasingly, the management of multiple relationships across the supply chain is being referred to as “supply chain management” (SCM). Strictly speaking, the supply chain is not a chain of businesses with one-on-one, business-to-business relationships, but a network of multiple business relationships.” (Lambert, in Handbook of logistics and supply-chain management, Brewer, Button and Hensher (2001) London, Pergamon)



Technology is available to identify and track stock – providing crucial information for business management and reducing costly errors.

An important element of this definition of supply chain management is the focus on business relationships. The ultimate business relationship is with the consumer, who parts with hard-earned cash to purchase the plant grown or sold by a nursery enterprise. However, it takes a team to deliver that desired outcome – providing the materials, services and skills to produce the plant and then ensure it is in the right place at the right time to meet the consumer’s needs.

Logistics manages the “effective forward and reverse flow and storage of goods, services and related information between the point of origin and the point of consumption in order to meet customers’ requirements.” (Council of Supply Chain Management Professionals)

Why this report?

In 2007-8, the Nursery & Garden Industry (NGI) became alarmed by a number of costly changes developing in the transport sector. Global fuel prices were a key factor at the time, but new safety regulations in the transport sector were also reducing the flexibility that the industry had previously enjoyed from plant transport services.

In response, the industry associations commissioned a broad review of supply chain and logistics issues. This approach recognised the need to take into account trolley-related issues as well as the fact that previous work in this area had been all but ignored by industry.

True to the above definitions, the analysis started with the marketplace and the consumer. It worked back through the retail, landscape and transport sectors, noting the flow and storage of goods, services and information (if any). A wide range of production enterprises provided useful insights to practices in this highly diverse industry. Although focused on the supply chain for plant-life, it was also essential to understand the flows of inputs to the production sector.

The report also draws on an extensive review of previous related work, much of it commissioned by the industry in the past, but never implemented, while other studies are from overseas.

Any such analysis uncovers an enormous range of issues. A “sorting” framework was adopted to provide a way through these. From this flowed five recommendations for the industry to address fundamental weaknesses in business practices. These include the need for urgent action to improve understanding by participants of the marketplace they exist to serve and of the supply chains in which they operate. The urgency is driven by the unprecedented rate of change in the marketplace for nursery products.

A fresh approach to communication and training is recommended, applying change management principles to enable industry participants to adapt and thrive in this new marketplace.

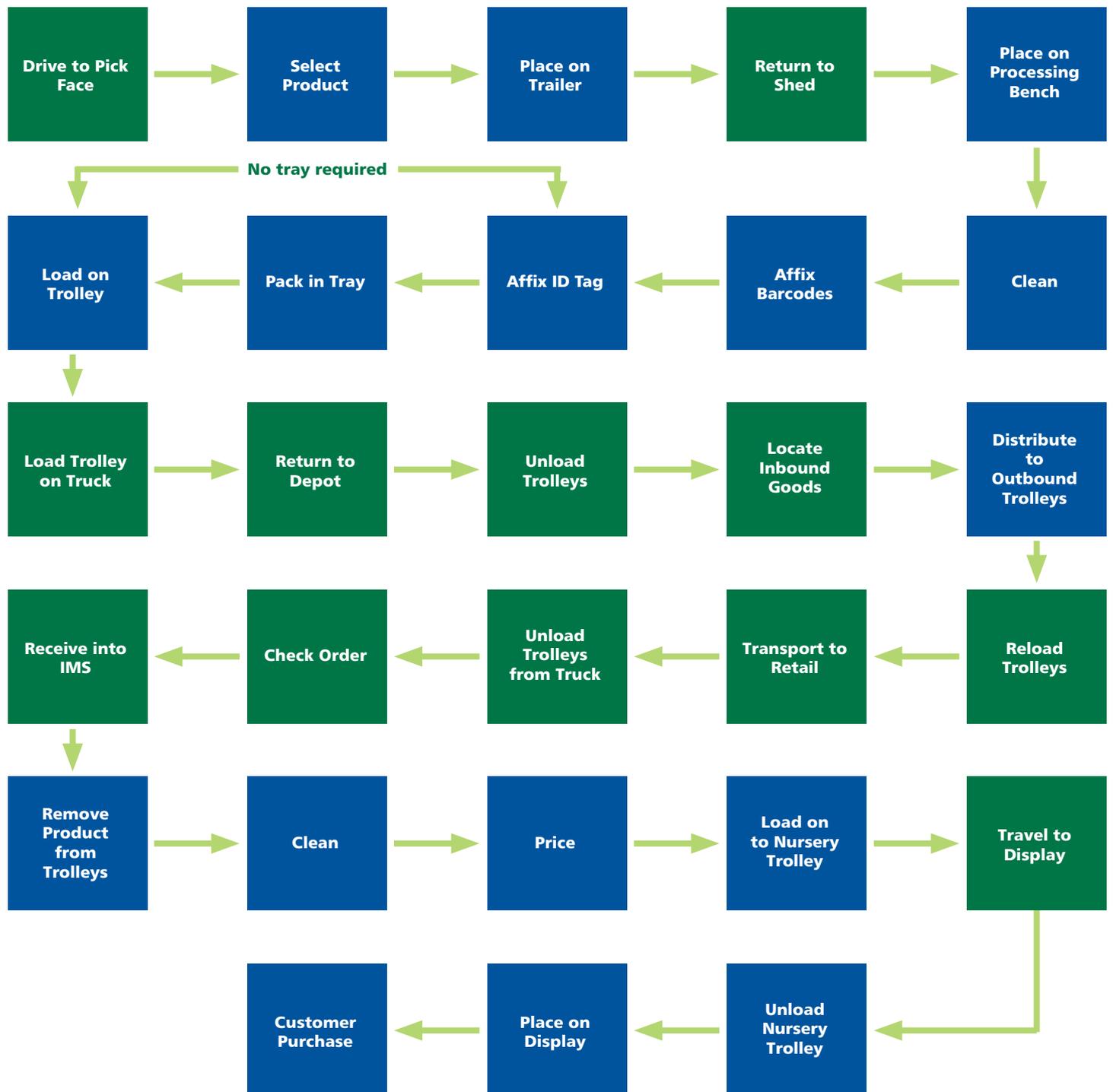
Typical nursery supply chain

One approach to seeking supply chain efficiencies is to undertake a mapping exercise. This diagram illustrates an example where a pot is handled 14 times (the blue boxes) during a plant's journey from nursery to consumer (not including handling during

the production process). This is not an unusual scenario in the industry.

Streamlining the chain involves more than simply removing a step or two. A multitude of interacting issues along the whole

chain must be considered. One way to address these is to consider them as: (1) information, (2) coordination and/or (3) innovation issues. These may also overlap as in some of the examples opposite.



Issues in the Nursery Industry supply chain

The full report provides an in-depth analysis of many of the issues impacting the efficiency and effectiveness of the many varied supply chains within the industry. Some of these will be covered in more detail

in future Nursery Papers. Some have also been covered in past Nursery Papers – these are listed on the supply chain webpages of the NGIA website www.ngia.com.au

A few are summarised here, as examples of Information, Coordination and Innovation issues providing challenges and opportunities for nursery and garden industry enterprises.

Supply chains issues cannot operate well without information. There is a vast range of types of information and the industry already gathers some of this. However, many in the industry fail to make good use of this and so the report recommends two strategies in this area:

- Review availability and use of marketplace data by the industry
- Develop and implement industry training on supply chain and marketing fundamentals.

Smooth coordination helps to eliminate the profit-sapping disruptions that are so common in day-to-day business. Many areas for improvement were identified, from notifying availability of plant stock and dealing with subsequent orders, to picking and despatching the orders and using transport services efficiently. There is also scope for industry organisations to improve coordination in their delivery of services to members, including the following strategies:

- Optimise the role of NGI in overall industry performance
- Develop and implement an industry materials handling standardisation plan.

INFORMATION
COORDINATION **INNOVATION**

Innovation comes in many forms, ranging from plant varieties to automated production and from marketing channels to barcode identification. This can not only drive competitive advantage, but is vital to keeping up with the changing external environment. The industry has invested in some excellent research over the past decade or more, much of it focused on sharpening performance along the supply chain. A range of actions are recommended for industry under the overall strategy of:

- Stop ignoring the research

Industry Data

The nursery industry is well-served through the existing Market Monitor program, but there is room to fine-tune the data collection and analysis. There is enormous scope to make better use of this information to guide strategic and tactical business decisions, as well as to drive the strategic direction of industry organisations.

Research data

The nursery industry has access to a wealth of information related to market developments, supply chain management systems and new technology. This includes previous project reports, Nursery Papers and overseas reports and articles. The Growsearch service provided by Queensland Primary Industries & Fisheries (QPIF) can provide copies of both current and past information for a small annual fee http://www.dpi.qld.gov.au/cps/rde/dpi/hs.xsl/26_11944_ENA_HTML.htm Some of these reports are also available on the supply chain page of the NGIA website www.ngia.com.au

Information and Communications Technology (ICT)

The use of computer hardware and software and its integration with communications technology is central to modern business. It is credited with a major role in driving productivity gains in both manufacturing and service industries over the last two decades. However, adoption of ICT in the nursery industry is at best patchy and poorly integrated between the retail and production sectors. E-commerce is one example of ICT where the industry has invested in research, but failed to follow through to implementation.

Activity Based Costing (ABC)

During the project, it was clear that most enterprises have little or no data on the costs incurred at each step of their operation, or of the overall chain. This information is essential in order to price for profitability and can also reveal those customers who may be regulars, but are actually too costly to service. On a broader scale, ABC can help identify generic activities that may be amenable to action on a whole-of-industry scale, such as those mentioned under innovation (above).

Overseas Innovation

Innovation is not always about technology or new products – often it relates to new ideas about how to relate to customers or build business relationships. While the Australian market is unique in its uneven distribution across an island continent, there is still value in looking for ideas beyond our shores. Some overseas reports and articles are cited in the supply chain knowledgebase, as well as reports from study tours by Australian industry personnel.

The Nursery Trolley

The “standard” trolley design was determined over a decade ago through industry-funded research. However, during the course of this project, the consultants noted 10 different trolley designs, (as well as a plethora of cage designs, stillage designs, specialised collapsible pallets, and standard pallets). These represent a considerable investment in equipment, mainly by transport companies, and this is one of the impediments to industry adopting a more efficient hiring arrangement.

Terms of Trade

Efficient supply chain management depends on participants fulfilling their role in the chain reliably. This involves every stage along the path to market, to ensure “Delivery in full and on time” (or DIFOT). It also requires clear payment terms and compliance with those terms, to ensure the cash flow needed to keep all parties in business. In many cases, nursery enterprises operate without clear trading terms, often resulting in dissatisfaction with the performance of trading partners.

References

The report contains a brief review of supply chain/logistics studies relevant to the nursery and garden sector. While not intended to be comprehensive, it does highlight the wealth of ideas and information available. These range from Horticulture Australia Ltd (HAL) project reports to Nursery Papers and magazine articles. In order to make this more accessible, a dedicated supply chain area has been developed on the NGIA website www.ngia.com.au with direct links to many of these sources. For copyright reasons, copies of some references must be obtained via services such as Growsearch.



Profitable supply chain management involves so much more than just trucks and trolleys.



The supply chain webpage on the NGIA website www.ngia.com.au

Conclusion

This Nursery Paper is designed to give a brief overview, from project NY08006, of the many factors involved in supply chain management for green-life. Some of these relate to the unique challenges and rewards of producing, handling and marketing living plants – the factors that sum up the attraction of the industry for so many participants. However, most of the factors relate to the fundamental principles of good business practice, which no enterprise can afford to ignore if it is aiming to be sustainable.

The incredible diversity of the nursery industry provides many opportunities for specialised production of niche lines of plants. This may explain the preponderance of very small production nursery businesses, which have been able to differentiate themselves in the market to date. However, there have been dramatic changes in the retail environment, with declining sales through many independent garden centres and increased sales through retail chain stores and landscaping.

These changes create new opportunities for the sector, which also has the advantage of being aligned with the overall consumer interest in “green” issues. However, small businesses, such as those comprising the nursery and garden industry, cannot afford to operate in isolation under such dynamic conditions.

Rather than focusing on specific issues such as fuel prices, a more holistic approach is needed to develop an understanding of the pathway to the consumer.

The industry has access to resources to assist with this process and it is intended to produce more Nursery Papers to explore these in more depth.



Responsive supply chains cater for emerging consumer interests, illustrated by this “grow your own vegetables” display.

Acknowledgements

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Photographs courtesy of Tom Rafferty and Michael Danelon.