

ESSENTIAL FOR GROWTH

The Australian Nursery
& Garden Industry's
Policy Position on Water



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The viability of the Australian Nursery and Garden Industry is intrinsically linked to the availability and affordability of suitable quality water for the production and ongoing care of plants.

The impact of water availability in the wider community plays an important part through influencing the profitability and strength of markets in which the Nursery and Garden Industry (NGI) operates. These markets consist primarily of the retail, landscape, farming, forestry and revegetation market sectors.

Given this, it is clear to see how water is essential for growth in the NGI in more ways than one. Likewise, based upon its reliance on water, the nursery industry acknowledges that it has a lead role to play in the wider water debate in Australia.

Since the mid-2000's the industry has undergone much change as wide spread drought resulted in water restrictions being placed upon businesses, the public and environment. These restrictions caused massive impacts to nursery industry markets and certainly had a detrimental impact upon industry profitability. Since then however, there has been a greater understanding develop within the industry and the wider community of the value of water, along with a number of cultural shifts in the use of water.

Focus at the consumer level has been directed upon smart water practices, conservation methods, such as alternate irrigation methods (drip irrigation) cultural practices (appropriate plant selection, mulching and the prudent use of allied products) and alternative water sources such as grey water, recycled water and rain water.

At the industry level more growers have adopted improved water conservation methods, updated irrigation infrastructure and adopted a more prudent approach to water budgeting, management and stewardship.

Water regulators have also taken a more considered approach to water restrictions and have indeed shifted their focus beyond water being a commodity to that of an enabling resource.

However we now operate in an era where the effects of climate change and variability expressed through increasingly frequent extreme weather events are being more strongly felt. Drought still remains an issue and is likely to remain so into the future. Storms and large scale floods have the potential to pollute our water environment and these events have been seen numerous times in recent years. This level of climate uncertainty therefore drives the NGI to continue undertaking a proactive approach to water policy.



Issues facing the Australian Nursery and Garden Industry

The Australian NGI faces a number of intrinsically linked challenges in relation to water, which can be broadly summarised into the areas of climate uncertainty and the influence of government policy on water.

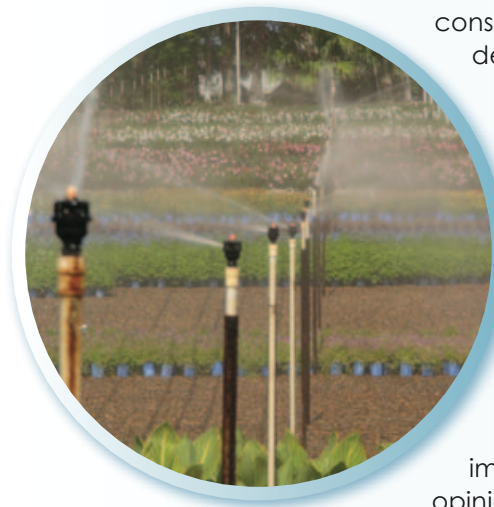
First and foremost of these are the ongoing impacts of drought and climate variability. The past decade has seen some of the most extreme weather conditions reflected in recorded Australian weather data. This high degree of climate impact places stresses upon the industry, indeed unlike other horticultural industries the Australian NGI is affected on both sides of supply and demand through weather events.

Rising water costs are another issue which poses challenges to the industry, as water is a key production input. Cost pressures on water supply directly influence the cost of production and these costs are by necessity passed onto the markets which influence sales volumes. Likewise rising water costs also influence the market directly as user markets need to supply water to maintain the product post farm gate. Water quality must also be factored into consideration when discussing water costs as in production nursery systems high quality water is essential for producing quality plant material. There are costs associated with establishing and operating recycled water schemes and this may result in a price discrepancy between recycled and mains water.¹ These pricing discrepancies limit adoption rates of recycled water products and leave industry and the markets more vulnerable to the impact of water restrictions and conservation measures if and when introduced in peak demand/limited supply periods.

Noted with water restrictions and enforced conservation measures are the influence that policy decisions have upon the Australian NGI. Policy decisions and how they are implemented directly impact the industry. Evidence of this was certainly seen beforehand with the introduction of widespread water restrictions in the middle of the previous decade.

Flowing on from the impact of policy and its implementation is the influence of general public opinion. There has been a considerable shift in the public's attitude to water in Australia in the past

decades and this has certainly impacted upon sales² and indeed the product demographics of the industry, with focus certainly in the height of drought to low water use plants and increasing use of xeriscaping (low water use landscaping).



¹ Water recycling; What to consider before setting up a recycled water scheme Sydney Water, 2013 http://www.sydneywater.com.au/web/groups/publicwebcontent/documents/document/zgrf/mdu3/~edisp/dd_057020.pdf

² Queensland lifestyle horticulture industry survey report Queensland Department of Employment, Economic Development and Innovation, July 2011

The variation in markets has also been demonstrated through the changing of urban demographics. Populations in urban areas are increasing, as is population density in these areas. The flow on effects from this will influence the debate around urban water in the coming years and will certainly impact upon the Australian NGI.

With the high degree of volatility surrounding weather impacts and the increasing pressures on urban water, comes the continuing need for the Australian NGI to take proactive steps. This will ensure it and its markets have the ability to access sufficient water in a sustainable and economical manner, maintaining the viability of both the industry and urban green infrastructure which will enhance the livability of cities.

Responding to these challenges, six central strategies have been formulated with industry consultation:

- 1. Leadership in policy development and investment in the area of water.**
Recognising the impact of policy decisions and investment on businesses and their customers, and the need for consultation.
- 2. Investment in on-farm support to address water management.**
The realignment of investment and a commitment by governments to support on-farm practices, innovation and incentives to adapt, manage and respond to water issues.
- 3. Building upon established industry best management practice.**
Recognising and supporting the Nursery Production Farm Management System (NPFMS) as a key water management strategy for the industry and investment in research development and extension.
- 4. Water security and assurance of access.**
Without water and a future for water management both at the industry and community level then the industry will suffer and decline.
- 5. Recognition of water as an enabling resource.**
This recognises the capacity that water has to enable jobs, economic development as well as the impact it has on the livability of our cities.
- 6. Support and acknowledgment for industry initiatives in water management by government and water regulators.**



1. Leadership in policy development and investment in the area of water

Recognising the impact of policy decisions and investment on businesses and their customers, and the need for consultation.



Policy development by state, territory and federal governments has significant implications for the Australian NGI. Rapid policy development that is poorly designed and orchestrated may lead to greater impact on the industry than current water management arrangements across Australia.

Changes in water policy, especially urban water policy have significant impact upon the sustainability of the Australian NGI. Therefore, the opportunity to provide input into strategies and decisions made by Commonwealth, State and Territory Governments or authorities will always be required.

Proposed changes to water policy must be based upon sound science, credible and accurate data and demonstrated improvements to water conservation.

Policy impact statements must be undertaken with any proposed changes to water policy to identify and consider all impacts and benefits including social, environmental and economic aspects before implementation.

Water policy must be based upon principles of fairness and equitability and conservation measures must be applied in a transparent, consistent and predictable manner complimented with industry consultation.

The Australian NGI requests that they be consulted and given adequate time and mechanisms to respond to issues regarding current and future changes to water management arrangements. This will ensure the industry has the best opportunity to contribute meaningfully in these discussions, take ownership of decisions made and assist in producing policy of substance.

Water policy must also be subjected to ongoing review and improvement processes. This will ensure an adaptive approach to the changing needs of industry, community and government and will see the continual incorporation of new knowledge and best practice into policy.

The Australian NGI is in principle supportive of nationally coordinated water policy approaches.

Likewise the Australian NGI is supportive of the ongoing development of water market and pricing mechanisms to support water conservation efforts, provided that such pricing mechanisms are fair and equitable across the water use spectrum and the development of water markets do not unduly disadvantage the Australian NGI and are based upon sound information on water use needs.

2. Investment in on-farm support to address water management

The realignment of investment and a commitment by governments to support on-farm practices, innovation and incentives to adapt, manage and respond to water issues.

The production of quality plants requires access to reliable water supplies of appropriate quality. As a result the Australian NGI has valued water as the foundation on which industry growth and productivity is based. As such the Australian NGI support government policy which encourages on-farm practices, innovations and incentives to manage water use and improve efficiencies.

This importance of water has led to the development of innovative approaches to water management and use and has driven continued improvements in water use efficiency.

In the past years a great deal of investment has been directed into water use efficiency. Much of this investment has been in partnership with the Federal Government and Horticulture Innovation Australia Limited (previously Horticulture Australia Limited) through the Nursery Industry levy.

Some examples of this investment include;

Nursery Industry Water Management Best Practice Guidelines³ - first produced in 1997 it was incorporated into the Nursery Production Farm Management System (FMS) in 2005 and subsequently updated in 2010. These guidelines focus upon 6 goals including; efficient water use, irrigation management tools, reuse of waste water, management of sediment, nutrient retention, and the environmentally responsible use of plant protection products.

Waterworks industry workshop series is a suite of workshops designed to assist growers in better understanding and improving on-farm water management practices through practical workshop delivered information. Delivery of these workshops is primarily conducted through the industry extension network, which deliver and facilitate on farm extension outcomes.

Water Management Tool Box for Nursery Production⁴ is a group of excel based calculators designed to support growers with water budgeting and managing irrigation and drainage water. This assists in the sustainable and responsible use of water on farm.

These examples constitute some of the change management tools which deliver results at the industry coal face and result in direct positive outcomes for industry water management. They also constitute a great method for delivering R&D outcomes through the industry extension network. It is also cognisant to consider that behavioural change in water management will be fundamental in ensuring long term water security.

Given the success of these initiatives it is of no doubt that further investment into this area will continue to see positive returns, as growers adopt these basic processes into their business practices and continue to translate new information into on farm practice and better water management outcomes.



³ Water Management Best Practice Guidelines
http://www.ngia.com.au/Section?Action=View&Section_id=556

⁴ Water Management Tool Box for Nursery Production
<http://www.watertoolbox.ngi.org.au/>

3. Building upon established industry best management practice

Recognising and supporting the Nursery Production Farm Management System (NPFMS) as a key water management strategy for the industry and investment in research development and extension.

The Australian NGI seeks recognition and support of the Nursery Production Farm Management System (FMS) by all levels of government as a key water management tool for the local industry. This industry driven best management practice (BMP) program provides production nurseries, growing media suppliers and greenlife markets with a framework for sound on farm risk management in relation to water amongst other key areas.⁵

The Nursery Production FMS incorporates three key programs

- **Nursery Industry Accreditation Scheme Australia – Best Management Practice** (NIASA-BMP),
- **EcoHort®** - which promotes best management practices in environmental and natural resource management and;
- **BioSecure HACCP**- which promotes best practice in pest and disease management and biosecurity risk assessment and management

Both the EcoHort® and BioSecure HACCP programs play key roles in managing the impact of nursery use on water in areas such as nutrient loads and pathogen control.

It is essential that the NPFMS utilise the best available science and are regularly updated as research evolves and new findings on innovative practices to manage water become available. Investment in R&D into these best practice programs is vital to ensure these programs are relevant and in line with innovation and technological advancements in areas such as water scheduling, application methods, recycling and treatment.

Ongoing investment is also required to ensure the resources are available to deliver this valuable program to whole of industry through an extension network. Extension activities will ensure businesses can apply the outcomes of the Nursery Production FMS, as well as provide businesses with the outcomes of other government and industry research and development programs to directly address water management and water use efficiency.



⁵ Nursery Production Farm Management System
http://www.ngia.com.au/Category?Action=View&Category_id=524

4. Water security and assurance of access

Without water and a future for water management both at the industry and community level then the industry will suffer and decline.

This policy position acknowledges that the availability of reliable and appropriate quality water supply is integral to the sustainability of the Australian nursery and garden industry at both the industry level and at an individual business level.

The Australian NGI acknowledges that water is a finite resource and is committed to sustainable water use. The industry is an efficient and responsible water user, and has demonstrated a commitment to addressing water issues and making ongoing performance improvements.

The availability of water extends to the markets that the Australian NGI services namely, the retail sector, landscape sector, farming and forestry sectors. Without access to water these markets will suffer which will directly influence the profitability of the Australian NGI. In addition water availability will impact upon urban greenspace quality and viability.

Complementing the need for industry water security and assurance of access, urban water use supply must be considered in a broader context addressing the whole of water cycle. Such considerations include the disposal, capture, treatment and reuse of water, as well as the incorporation of storm water, wastewater and treated effluent into the commonly available suite of water resources.

The Australian NGI strongly supports a move away from reliance on potable water sources in both production nurseries and in the urban forest setting and actively encourages moves to on site recycling and improved access to reclaimed storm water or treated effluent fit for use where available. Indeed the Australian NGI supports moves to optimise the use of all available water resources.

This will ensure that our water sources are diverse and will drive resilience to the impacts of climate change and variability.

With the importance of water to the industry clearly seen the Australian NGI will seek to develop a greater understanding of the risks to long term water availability and seek to develop strategies to manage these risks.



5. Recognition of water as an enabling resource

This recognises the capacity that water has to enable jobs, economic development as well as the impact it has on the livability of our cities.

The Australian nursery and garden industry is a significant sector of the Australian horticultural industry with an estimated value in excess of \$2.2 billion annually.⁶ It is important to note that the breadth of the industry is quite diverse with end user markets being supported in nurseries, forestry, revegetation, fruit and vegetable farming, cut flower markets and other specialised arenas.

Central to supporting this industry is water, without it the economic impacts would be significant. This has been demonstrated in the past, in the wake of the 2004 drought and the introduction of stringent water restrictions at business, consumer and public levels, which led to job losses and reduced turnover.

Transitioning beyond the direct economic impacts to the NGI, it is prudent to consider the impact of water as an enabling resource on the urban green infrastructure of our cities, towns and suburbs.

Improving our urban green infrastructure is increasingly being seen as an essential component to managing some of the key negative products of the urban environment.⁷ A good level of tree canopy coverage has positive benefits to ameliorate the urban heat island effect which has flow on effects to the levels of human mortality rates due to heat injury. Another important flow on effect of a good tree canopy cover is the positive influences on power consumption for heating and cooling. By shading our suburbs and reducing wind velocities with trees, peak energy use demands can be reduced. This can reduce load requirements on energy infrastructure.

Further to this good tree canopy coverage will reduce the impact of rainfall events, especially through reducing peak load pressures upon existing water management infrastructure. This is especially important as urban population densities increase and the base load on waste water management systems is placed under strain.

Likewise it has been documented through numerous peer reviewed studies that a good level of urban green infrastructure plays an invaluable role in improving human mental health and physical wellbeing in the urban environment. Biodiversity is also improved through increasing the levels of urban green infrastructure.

However without the support of water these benefits would cease or would be at the very least severely impacted upon. It is therefore vitally important that the extended green infrastructure of our cities, towns and suburbs be incorporated into water policy and that the enabling ability of water is recognised in this arena.



⁶ Hort Innovation Report NY16004 Nursery Industry Statistics

⁷ Green Infrastructure: Life support for human habitats Ely M. and Pitman S. 2014 http://www.environment.sa.gov.au/files/1a6b24e1-d957-4da7-bb86-a12d0114fccd/bg-gen-Green_Infrastructure_Evidence_Base_December_2012.pdf

6. Support and acknowledgment for industry initiatives in water management by government and water regulators

Over the past 20 years the Australian NGI has undertaken a number of initiatives designed to promote and improve water management both within the industry and the wider community. Indeed the Australian NGI is both well positioned and committed to educate consumers on water management within the urban environment. Likewise Nursery & Garden Industry Australia (NGIA) is, and will continue to be, committed to improving industry water management through promoting best practice supported by sound science and the delivery of innovation and implementation of new technologies.

Some initiatives that the industry has developed and support are detailed;



Smart Approved Water Mark⁸; A collaborative effort between NGIA, Water Services Association of Australia, Australian Water Authority and Irrigators association of Australia developed the Smart Approved Water Mark scheme. This scheme provides a channel to inform consumers about the outdoor products and services they can use to save water.



Best Management Practice (BMP); as previously acknowledged in this policy the Nursery Production Farm Management System (NPFMS), incorporating Nursery Industry Accreditation Scheme, Australia (NIASA), EcoHort and BioSecure HACCP, is a suite of best management practice programs (BMP) which are designed to facilitate incremental improvements and assist in a systematic management of processes in production nursery businesses. A key aspect of this is the integration of water management into each of the NPFMS programs.



202020 Vision⁹; An initiative of the Nursery & Garden Industry Australia in conjunction with Horticulture Innovation Australia, the 202020 Vision is a national campaign with the goal of increasing urban

green space in Australia by 20 percent by 2020. Complementing this vision is a significant body of research supportive of the need for increasing urban green space and infrastructure. Aspects of this research relate directly to water management in the urban environment through the use of trees and plants to intercept rainfall and control run off, thereby reducing load on waste water systems and limiting the impact of erosion.

These initiatives demonstrate the determination of the Australian NGI in relation to being a leader in pertinent water issues. It also clearly demonstrate the ability of the Australian NGI to act as an educator of the public in water conservation and conduit of water conservation information.



⁸ Smart Approved Water Mark www.smartwatermark.info

⁹ 202020 Vision www.202020vision.com.au

Further Information

If you would like further information about the Australian Nursery & Garden Industry's Policy Position on Water please contact:

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