

Final Report

National market development program for the Australian turf industry

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Delivery partner:

Turf Australia

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TU16002

Project:

National market development program for the Australian turf industry (TU16002)

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Public summary

The National Market Development Project for the Turf Industry was developed to drive an increase in the value of turf as perceived by turf growers, industry stakeholders, key influencers, consumers and the community. The project would achieve this by developing tailored information and by creating an army of advocates for the inherent value and many and varied benefits of turf.

The National Market Development Project strategy focused on the development of annual work plans and set key performance indicators to guide the project. The annual workplans were developed at both a national and state level. These plans were reviewed and evaluated throughout the project and reported in the six-monthly milestone reports.

Whilst a national project with a consistent national message, the state turf associations were a valuable contributor to the project focusing on their local stakeholders and delivering quality programs suited to their local stakeholders.

This project worked cohesively with the Turf Industry Communications Project to support the provision of high-quality resources for the project and extension of those resources, as well as collaborating for opportunities to deliver articles and material for the Turf Industry Communications project. This synergy between the projects worked extremely well and both projects provided guidance and resources that supported each project.

Development of quality resources for the project team was a key goal throughout the project and this included 4 professionally developed videos, many factsheets, banners, and marketing material, offering great opportunities for extension of material.

An army of advocates for promoting the benefits of natural turf was a key goal of the project and at the conclusion of the National Market Development project, it is estimated that more than 4.1 million people were engaged with or influenced on the value and benefits of natural turf. This result exceeds the expectations of the project, particularly considering the challenges of COVID-19 pandemic restrictions and lockdowns for two of the four and a half years of the project.

Keywords

Turf, Turf production, Market Development, Industry.

Introduction

The National Market Development Project for the Turf Industry was developed to drive an increase in the value of turf as perceived by turf growers, industry stakeholders, key influencers, consumers and the community. The project would achieve this by developing tailored information and by creating an army of advocates for the inherent value and many and varied benefits of turf.

Turf Australia's management of the project and focused on a multi-pronged approach to create awareness and disseminate market research & research findings to industry stakeholders, turf farmers, the turf maintenance sector and key influencers. A strategic, targeted, and tailored liaison program for key stakeholders and influencers, otherwise known as 'specifiers', was established at national, state and regional levels using targeted engagement, meetings, social media, presentations and exhibitions at relevant conferences, seminars and events.

The project will achieve two outcomes from the Turf Industry Strategic Investment Plan 2022-2026:

Outcome 1: Demand creation supports the Australian turf industry to expand into existing and future domestic markets.

Outcome 3: Improved capability and an innovative culture in the Australian turf industry maximises investments in productivity and demand.

The National Market Development project was an evolution on the previous industry & business development program outcomes (including projects TU13004, TU13028, TU13029 and TU11015 and TU12014). This program has a strong focus on influencing the influencers through promotion of the many proven benefits of turf, demonstrated in new and past research. The program will support turf growers with new information and resources to share through their contacts and clients, as well as developing a strategic plan at a national, state and regional level to target industry stakeholders, key influencers, consumers and the community, increasing the value and benefits of natural turf.

This project was collaborated extensively with the Turf Industry Communications Project to ensure the extension of resources developed was delivered throughout the comms publications. This synergy between the projects worked extremely well and both projects provided guidance and resources that supported each project.

As a national project, the state turf associations were a valuable contributor to the project focusing on their local stakeholders and delivering quality programs that worked for their location.

During the final stages of the National Market Development project an industry needs analysis was undertaken to determine grower sentiment for the direction of a new project following the conclusion of the National Market Development Project.

This project set out to create an army of advocates for natural turf and following extensive engagement and promotion throughout the project, it is estimated that around 4.4 million people were engaged with or influenced on the value and benefits of natural turf.

Methodology

The National Market Development Project strategy focused on the development of annual work plans and set key performance indicators to guide the project. The annual works are developed at both a national and state level. These plans were reviewed and evaluated throughout the project and reported on in the six-monthly milestone reports. The planning process included the development of a program logic framework and stakeholder engagement plan, and these documents were considered when developing and evaluating the work plans. Regular meetings were held with the project team lead by the National Market Development Manager and included the State Turf Industry representatives and Hort Innovation.

The key performance indicators for the project included:

- **Strategic Annual Work Plans**
Develop annual work plans to identify market development opportunities for the Australian turf industry which will align with Objective 1 of the SIP 2017-2021. Turf Australia facilitated a project advisory committee and meetings involving TA, representatives from the four State turf industry associations (or state-based service providers) and relevant Hort Innovation staff to develop strategic annual work plans for national market development.
- **Disseminate Market Research and Research findings**
(a) Tailored resource material focusing on key project targets in conjunction with the state associations. This key indicated included the development of new resources such as fact sheets, and marketing material for dissemination to turf growers, specifiers, and end users of turf.
(b) Disseminate research findings
Guided by the annual work plans a mix of activities were undertaken in the four main turf producing states (QLD, NSW, VIC, WA) including field days, seminars, engagement with turf growers and industry stakeholders and the turf maintenance sector. This engagement provided opportunities to share and present information on market research and research findings.
- **National engagement with influencers and key stakeholders**
(a) Develop and implement engagement programs with influencers and stakeholders at a national and state level.
This key area would focus on developing new relationships and working with existing networks for influencers and stakeholders to create opportunities to engage and inform, resulting in an increase in the perceived value of turf by consumers and the community. Influencing the influencer and creating an army of advocates that promote the many and varied benefits of turf. In addition, a target was set to create a more united turf industry, and this would include building stronger relationships with the wider turf industry such as maintenance sector and sports turf maintenance.
- **Provide relevant R&D information for Industry Communications (TU16004)**
Close collaboration of the Turf Industry Communications project managed by Turf Australia and Cox Inall Communication, ensured a strong synergy for project planning, concept creation and development of material for both projects. The project plan included development of new resources such as fact sheets, and marketing material for dissemination to turf growers and specifiers and end users of turf.
- **Support regional industry networks**
Consistent national messaging was important for the project and facilitated by Turf Australia with regular formal and informal communications among the state turf associations and regional service providers, as well as turf groups, such as Lawn Solutions Australia, Turfbreed and the Greenspace Turf Co-op. Collaboration at a regional, state and national level will help ensure consistent, reinforced messaging to all stakeholders.
- **Provide feedback to Hort Innovation on R&D opportunities**
Turf Australia is committed to developing, maintaining, and continually improving a two-way, professional relationship with Hort Innovation enabling quantitative and qualitative feedback on R&D opportunities. Throughout the project Turf Australia will provide feedback to Hort Innovation for opportunities of new projects as well as provide grower sentiment and industry updates.

The initial development of the project included an identification of industry gaps, and this came through engagement with growers, researchers, state turf associations and the wider turf industry. Understanding the industry's views of the key gaps would create a roadmap to work with and build a strong project and ideally a stronger industry. In August 2021 the National Market Development program was extended to April 2022 and during this period the project had a specific focus that included the establishment of a Project Reference Group (PRG), and undertake an industry needs

analysis and extension study as well as a few key tasks. The needs analysis study would assist in providing industry sentiment for the direction of a project to replace the National Market Development Project. This gave the project a clear focus for the final period and worked closely with the PRG to obtain grower feedback and direction.

The program logic model established at the beginning of the project included end of project outcomes of:

- 🌀 Influence the influencers to increase the value of turf
- 🌀 Identification of industry gaps and potential for R&D projects
- 🌀 A united turf industry
- 🌀 Increase of resource material for turf market development and turf production profitability.

Program Logic Model – Appendix 1

Results and discussion

The National Market Development set out to create an army of advocates for natural turf and following extensive engagement and promotion throughout the project, it is estimated that around 4.4million people were engaged with or influenced on the value and benefits of natural turf.

The end of project outcomes included:

1. Influence the influencers to increase the value of turf

The process of determining key influencers was a challenging one and was regularly reviewed throughout the project. Establishing relationships with organisations that could provide efficient and effective access to influencers was the key to the project and this was done at both national and state-based level. Some opportunities provided very strong impact whilst others not so, but the process of ongoing evaluation was important for the success of the project.

2. Identification of industry gaps and potential for R&D projects

This process was determined early on in the project with the Researchers Forum and shared and reviewed with many other groups throughout the project. The initial findings were agreed to by all groups and were a focus of the project direction and annual workplans.

The five key gap areas include:

Identified Industry Gap	Details	Achievements
Collaboration	Knowledge and resource sharing, working together to resolve issues, have a stronger united voice.	The core of the project focused on collaboration and engagement and establishing stronger relationships. Some key results of collaboration include: <ul style="list-style-type: none"> • Turf Researchers Forum • Turf Industry Associations Forum • Greenspace Alliance formations, NSW & National. • Collaboration of turf industry events in WA, NSW and QLD
Sustainable Industry	Water security, climate control, synthetic marketing, investment.	<ul style="list-style-type: none"> • Four different videos • Thermal imaging video comparing heat of natural v synthetic • Turf Industry video and 2 animated style videos on turf benefits and R&D. • Working with water authorities for water restriction strategies in all states. • Funding study on sports ground usage to debunk synthetic marketing misinformation. • Fact sheets • Social media material • Editorials • State based programs promoting benefits of natural turf compared to synthetic surfaces.
Weeds, Pests & Disease	Resistance, insect and disease control, turf approved chemical use	Recommendation and support of research on couch smut and buffalo yellows disease. Dissemination of research and development of fact sheets. Turf QLD working with state authorities on Red Fire Ant and Yellow Crazy Ants.
Employment & Education	Low wages, concerns with current education/training system, lack of recognition as a profession, succession	Discussions continued with Skills Impact on the requirements to establish a Turf Production training program. Consultation with the industry, including the NxGen cohort reviewed what a program could look like but also what would support the wider horticulture and sports turf industry. WA Turf Industry Graduate awards. WA/UWA collaboration of inclusion of turf in curriculum and farm visits.

	plans for the future of the industry.	VIC presentations to students on career opportunities and importance of turf in the landscape. Engagement with TAFEs, Universities and educators at a state level.
Industry Best Practice	Certification programs, Standards, professionalism	Discussions were held throughout the project on whether development of certification programs would assist the industry. As turf industry groups AusGap and TurfPlus had both developed certification and WHS programs, it was assessed that this was sufficient for the size of the industry.

3. A united turf industry

With collaboration identified as a key gap for the industry, work undertaken in this area support the process of uniting the turf industry. At a production level, the state groups regularly supported each other by sharing knowledge and experience and resources. At a wider turf industry level, the Researchers Forum, Turf Associations Forum assisted in bringing different areas of the industry together. A robust effort has assisted in creating changes within the industry, but this continues to a work in progress.

4. Increase of resource material for turf market development and turf production profitability.

The project has developed some valuable resources that have been shared extensively and will continue to do so.

Videos:

- 1 Thermal imaging video produced by Skymonkey
- 1 Turf Industry video featuring experts from turf production, sports turf, soil science and landscape architecture, developed by M45 Video Productions. (Delivered in 3 different variations)
- 2 animated videos highlighting environmental and health benefits of natural turf R&D, developed by M45 Video Productions.

[LINK to videos](#)

Fact Sheets: Working in collaboration with the Turf Industry Communications project, with the team at Cox Inall and Grant Nelson Graphic Design, at least 11 facts sheets were developed and disseminated through the National Market Development Project.

Marketing

Material: Social media tiles or R&D outcomes were developed for a number of different subjects during the project and utilized in both the Turf Communications and National Market Development project. The project also developed pull up banners to be utilized for events and industry activities and focused on R&D outcomes.

The Intermediate Outcomes of the project included:

1. Engagement with Stakeholders and key influencers

The National Market Development project had many different aspects to its engagement program which was both successful and challenging. Reviewing the project and the level of extension has shown a significant level of engagement whether that be through running events, presentations, publications, social media or direct engagement.

The results of the project include:

At least 28 events or activities were undertaken during February 2018 – May 2022 that supported the outcomes of the project.

Project Engagement Data*

Engagement to Growers	31,441
Influencing the Influencer	718,585
Promoting to the General Public	3,646,720
Total	4,396,746

* These figure does not include engagement through the Turf Industry Communications program or other turf R&D projects. These figures do not take into account increased extension of external publications through websites and social media.

2. Improved consistency of national messaging through regional industry networks


Collaboration and meetings for Annual workplans and project progress supported good communication at a national and state level throughout the project.

3. R&D resources for the Australian Turf Industry Communications Program

An important factor of the success of this project was seen in the collaboration between this project and the Turf Communications project and this results in strong and regular content for the comms program.

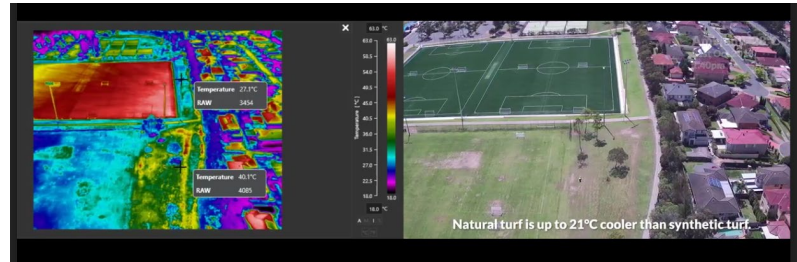
Outputs

Output summary

Output	Description	Detail
Identify Industry Gaps	Identifying the gaps within the turf industry was a priority of the project to create a roadmap for the project.	<p>To identify the gaps for the industry, the initial process started with a focus group of turf researchers. The Turf Researchers Forum was held on 7th - 8th May 2018 to unpack the state of play for the industry and determine the top 5 industry gaps. Each researcher involved provided a report on their views of the industry gaps and that information was then collated into key areas.</p> <p>The result of the Forum determined five top industry gaps:</p> <p>Collaboration: resources, knowledge, research & data, associations, a united industry.</p> <p>Employment and Education: low wages, poor staff retention, struggling education system, lack of recognition as a profession.</p> <p>Industry Best practices: Accreditation programs, standards, fit for purpose, reality vs perception</p> <p>Pest, Disease & Weeds: Herbicide resistance, controls, research.</p> <p>Sustainable industry: Water security, climate change, plant breeding, succession plan for future workers across all levels of the industry.</p> <div style="text-align: center;">  </div> <p><i>Turf Researchers Forum May 2018.</i> <i>L-R Back row: Chris Lambrides, Mick Battam, Phil Ford, Bruce McPhee, Robert Prince (Turf SIAP & MC), John Neylan.</i> <i>L-R Front row: Peter McMaugh, Jenny Zadro (Turf Aust), Percy Wong, Don Loch.</i></p> <p>Results determined at the Researchers Forum were then shared with over 20 different turf industry organisations, including state and national sportsturf and golf associations, commercial turf production groups, social media turf professional groups. In addition, this information was presented at the 2018 Australian Turfgrass Conference. Throughout the process of sharing the findings, all groups agreed that the top five key areas identified were correct for the current state of the industry. This information assisted in developing tasks and resources for the project.</p>
Disseminate Market Research and Research findings	(a) Tailored resource material focusing on key project targets in conjunction with the state associations.	<p>Development of new resources such as fact sheets, and marketing material for dissemination to turf growers, specifiers, and end users of turf.</p> <p>TURF AUSTRALIA WEBSITE</p> <p>The Turf Australia website was upgraded during the project, in collaboration with the Turf Communications project, to provide a more modern and user-friendly platform. This was a great opportunity to attract many of the contacts developed throughout the project to the site to explore an extensive collection of research projects, information, and fact sheets specific for growers as well as specific for end users and specifiers.</p> <p>Key focus areas were developed on the website such as turf professionals page and a natural turf v synthetic page. There was a strong demand for information on natural turf v synthetic and a page is dedicated to sharing research, articles and documents on this process.</p>
		<p>VIDEOS</p> <p>Thermal imaging video developed in October 2018 comparing temperatures of natural turf compared to synthetic turf. Mitigation of urban heat island was becoming a key topic in cities across Australia and internationally. This led to a levy funded project (TU18000) Conveying the benefits of living turf – mitigation of urban heat island effect. Prior to this project, Turf Australia were approached by Skymonkey who identified the cooling effects of</p>

natural turf while working on new housing development sites. Turf Australia contracted them to undertake a thermal imaging video at a sporting venue showing the variation of temperatures with both natural turf and synthetic grass. This video was distributed widely across the industry and is housed on the Turf Australia website and YouTube channel. In addition, this video supported the concerns of the impact of synthetic surfaces being felt all over the country. This video was very valuable and marketed through the engagement process extensively.

<https://www.youtube.com/watch?v=sVJIM4qL9iQ&t=2s>



Turf Videos

As Covid19 interrupted planned events in 2020 and the state associations unable to hold gatherings or undertake their planned events, a decision was made to allocated funds to the development of video material to promote the benefits of turf.



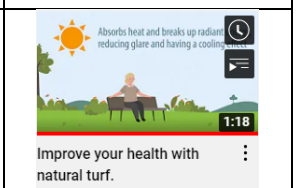
The strategy for the videos was to develop material that is emotionally led, rationally backed, appeal for natural turf over other ground cover, underpinned with R&D contact. The key benefit pillars:

- Environment (TU16000, TU17008, TU18000)
- Health and wellbeing (TU18000, TU16000)
- Erosion Control - Turf research and demonstration facility (TU12022)



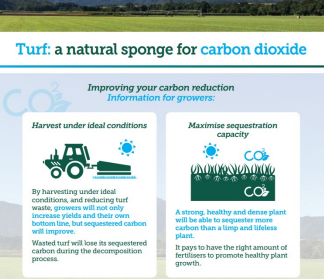

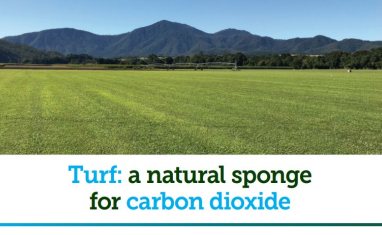

Three videos promoting the benefits of turf and R&D outcomes were developed during the period. Video 1 features turf growers and industry experts sharing their expertise on the benefits of natural turf. The video included turf producers, elite sports turf managers, landscape architect and soil scientist. One hero piece and two short versions were developed and released at the end of June 2021.



Video 2 and 3 were animated style videos highlighting turf R&D, from Australia and international research from Turf Producers International, for benefits to the environment (video 2) and the community and personal health (video 3).

A marketing strategy was developed to ensure good extension of the videos. This process included direct emails to at least 63 key industry contacts within the wider turf industry, greenspace industries, stakeholders, state turf associations etc. In addition, a small budget was allocated to extension via social media over a two-week period. The videos were shared widely throughout the industry contacts and received strong results on the Turf Australia Facebook page, as shown below.

<p>Video One “Why Wouldn’t You Choose Turf” June 2021 Release. Facebook Reach achieved: 78,000</p>	<p>Video Two “Natural turf and the environment” August 2021 release. Facebook Reach achieved: 80,000</p>	<p>Video Three “Improve your health with natural turf” October 2021 release. Facebook Reach achieved: 70,000</p>
		

The videos are available on the Turf Australia website and YouTube channel.

		<p>https://www.turfaustralia.com.au/resources/videos/ https://www.youtube.com/channel/UCv6AwXQys2jFPcEuA_KyTnA</p>
		<p>Fact Sheets</p> <p>Throughout the project the Market Development Manager worked closely with the Cox Inall Communication, Turf Communications Project (TU16004) to develop several fact sheets to provide resources of R&D outcomes and extended to growers and the specifiers via the National Market development Project. These fact sheets were promoted widely at a national and state level.</p> <div> <p>Project TU18000 - Conveying the benefits of living turf - mitigation of the urban heat island effect. A fact sheet was developed titled 'Turf is the key to keeping our cities cool'. Appendix 2</p>  <p>Turf is the key to keeping our cities cool</p> <p>What is an urban heat island? Urban heat islands form in cities where heat accumulates, due in part to the lack of urban greening and replacement with hard, impermeable surfaces that absorb and store heat. Cities around Australia have observed heat islands as they have changed from rural to built landscapes, reducing cooler green open spaces and trees with impermeable materials that store heat.</p> <p>Why is it a problem? Urban heat islands can reduce the health and well-being of people living in cities and towns and are expensive.</p> </div> <div> <p>Project TU17008 - Turf as a Bushfire Retardant reports were developed into usable resources – Appendix 3</p>  <p>Bushfire protection benefits of turf</p> <p>A history of turf as a bushfire retardant In a country where the risk of severe bushfires has increased in recent years, green turf appearing in natural areas across the country will stop the spread of surface fire from bushfire prone vegetation to the vulnerable assets. Live turf does not burn under fire pressure.</p> <p>Even where turf is dead and very dry, the low biomass of mown turf means that to be ignited it has to be exposed to sustained fire for only a very short time and it is readily controlled and extinguished.</p> <p>Turf as a strategic component of bushfire prevention Living turf has long been recognised by the agencies as a desirable component of landscaping to prevent or reduce damage from bushfires. Turf has the further benefit of providing a sustainable space from which firefighters can work to control properties.</p> </div> <div> <p>Project TU16000 An Environmental Assessment of the Australian Turf Growing Industry. A fact sheet titled 'Turf a natural sponge for carbon dioxide' was developed, because of this project Appendix 4</p>  <p>Turf: a natural sponge for carbon dioxide</p> <p>Improving your carbon reduction Information for growers:</p> <div> <p>Harvest under ideal conditions By harvesting under ideal conditions, and reducing turf waste, growers will not only increase yields and their own bottom line, but sequestered carbon will increase. Wasted turf will lose its sequestered carbon during the decomposition process.</p> <p>Maximise sequestration capacity A strong, healthy and dense plant will be able to sequester more carbon than a limp and lifeless plant. It pays to have the right amount of fertilisers to promote healthy plant growth.</p> </div> </div> <div> <p>Project TU16000 An Environmental Assessment of the Australian Turf Growing Industry. A grower focused fact sheet was developed and titled, Improving your energy efficiency. Appendix 5</p>  <p>Improving your energy efficiency</p> <p>What is energy efficiency? Energy costs time, money and resources to produce. So naturally, as turf growers we want to be using as little of it as possible to produce our turf.</p> <p>A grower levy funded project An Environmental Assessment of the Australian Turf Growing Industry with a Report Assessment (TU16000), has produced the energy audit report on different farms and provides some insight into how to improve energy usage and thereby increase productivity.</p> </div> <div> <p>Project TU16000 An Environmental Assessment of the Australian Turf Growing Industry End user fact sheet developed, titled Turf: a natural sponge for carbon dioxide. Appendix 6</p>  <p>Turf: a natural sponge for carbon dioxide</p> <p>Photosynthesis in turf Turf farming relies on the sun to generate plant growth through the process of photosynthesis. Photosynthesis is turf's way of converting carbon dioxide from the atmosphere into plant material, using the sun's energy in the process.</p> <p>During photosynthesis in turf, light energy is captured and used to convert water, carbon dioxide, and minerals into oxygen and energy-rich organic compounds.</p> <p>That's right, the turf you see on our turf farms, on our lawns and on our sporting fields are actively removing harmful carbon dioxide from the earth and replacing it with oxygen, improving air quality for all of us.</p> </div> <div> <p>Fact Sheet - About the Levy. This document was developed to assist in reducing the confusion around the management of the turf levy. It was designed to provided growers with a clearer understanding how levy is collected and managed. Appendix 7</p>  <p>How the turf levy is collected</p> <p>Many growers will be familiar with the Hort Innovation Turf Levy. But how much do you know about the path that levy funds take from farmgate the allocation of research and development projects and the role of the key players along the way?</p> <div> <p>Turf growers Every turf grower selling more than 20,000 m² of turf in any year is required to pay the levy at 1.5cents per m².</p> <p>Collection agents Responsible for collecting levies and charges and submitting levy returns to the DAWE on behalf of levy payers.</p> <p>FACTS ABOUT THE TURF LEVY</p> <ol style="list-style-type: none"> 1. R&D contributions are matched 1:1 with funds from the Australian Government 2. Turf Australia is not the collector or administrator of the turf levy 3. The levy is not a tax – you have a say in how it is raised 4. Levy funds are used to investigate pest and disease issues, communicate the benefits of turf and improve on-farm productivity </div> </div> <div> <p>Project TU19000 – Identification and management of mosaic viruses and secondary pathogens in buffalo turf. Appendix 8</p> </div> <div> <p>Project 19002 Improved capacity for integrated disease management of couch smut (Ustilago cynodontis) in turf' Appendix 9</p> </div>

		 <h3>Management of buffalo grass yellowing</h3> <p>Yellowing is a very common disease symptom in grasses, caused by many independent agents. It is important to get good diagnostic advice before applying any treatments. Some common causes of buffalo grass yellowing are described below.</p> <p>Viruses Sugar cane mosaic virus has become very common in some turf farming districts, and all major buffalo grass varieties are susceptible to this virus. Panicum mosaic virus, the cause of St Augustinegrass Decline, is less prevalent and appears mainly a problem of specific varieties in the Hawkesbury Valley.</p> <p>How to tell if your crop is suffering from viral infection Viral infection is characterised by strong leaf mosaic patterns, narrower leaf blades and shortened internodes. Viral infections can only be properly diagnosed using laboratory tests.</p>	 <h3>How to manage couch smut</h3> <p>Couch smut is a problem for turf growers across the country, with the disease affecting the appearance of turf, its resilience against foot traffic as well as becoming a human health concern as an allergen.</p> <p>A recently concluded levy-funded project explores this ugly disease and recommends a series of management techniques to help prevent, manage and remove couch smut.</p> <p>What is couch smut? Couch smut is caused by the fungus <i>Ustilago cynodonta</i> and is one of the most concerning fungal diseases of turf in Australia. Significant economic losses can occur on affected turf farms due to the damage it causes to plants.</p>
		<p>Project TU16000 An Environmental Assessment of the Australian Turf Growing Industry plus research from Turf Producers International/The Lawn Institute. A fact sheet titled “Natural Turf Actively Fights Climate Change”</p> <p>Appendix 10</p>  <p>Living turf uses the sun to generate plant growth through the process of photosynthesis. Turf uses the sun's energy to convert water, carbon dioxide, and minerals into oxygen and energy rich organic compounds. The oxygen is in the air we breathe and the rich organic compounds are stored in the soil, reducing the carbon in the air and promoting biodiversity.</p>	<p>Understanding the true usage level so Sydney's sports fields Fact Sheet from an industry supported study by Dr Mick Battam.</p> <p>Appendix 11</p>  <p>Many Sydney councils measure the use of their fields by booked usage, the time that fields are booked for use.</p> <p>A recent study has found that ACTUAL usage across Sydney sporting fields is significantly lower than BOOKED usage. In fact:</p> <ul style="list-style-type: none"> • in some Western Sydney LGAs, booked usage was up to 2.3 times higher than actual usage. • a typical Sydney sporting field only sees between 12 and 22 hours of use per week.
		<p>Turf NSW developed a Fact Sheet as part of the project outcomes and promoted it widely to NSW end users. Titled “Creating your healthy new lawn” This document was distributed to NSW growers to provide to their customers.</p> <p>Appendix 12.</p>  <p>The benefits of healthy natural turf:</p> <ul style="list-style-type: none"> • 30°C cooler than synthetic on hot days • Captures 0.5 kg/m² of carbon each year • Can increase property prices by 1%. • Less runoff into stormwater drains • Improves mental health and wellbeing 	
		<p>SOCIAL MEDIA TILES</p> <p>Social media tiles were developed within the Market Development Project for use within the project as well as the Turf Comms project, Growers and the wider industry. All tiles can be seen at Appendix 13.</p>  	

		<p>MARKETING RESOURCES</p> <p>The project developed pull up banners to be utilized for events and industry activities and focused on R&D outcomes. The limitations of COVID19 reduced the opportunity to utilize the material during 2020 and 2021 but they were on display at the NxGen Conference in February 2022 and also at the Victorian Green Cities Fund in April 2022.</p> <p>The banners can be seen at Appendix 14.</p>
	<p>(b) Disseminate research findings.</p>	<p>Guided by the annual work plans, a mix of activities were undertaken in the four main turf producing states (QLD, NSW, VIC, WA) including field days, seminars, engagement with turf growers and industry stakeholders and the turf maintenance sector.</p> <p>Some key activities include:</p> <p>NSW Grass Roots Field Day, 30th October 2018 held at Dad & Dave’s Turf Farm, was targeted at the sports turf, landscape and lawn contractor industries. The event included presentations on soils, turf varieties, turf as erosion control and demonstrations on turf harvesting and washed turf took place. Over 50 turf professionals attended the event.</p> <p>WA Lawn Expos, 27th October 2018 and 27th November 2019, attracting over 1000 people per event. This event highlighted the value of natural turf to the general public and provided workshops on maintenance techniques, efficient watering information and equipment and product displays.</p> <p>Irrigation Australia Landscape Conference, June 2019. Following successful engagement and relationship building, Turf Australia was invited to partner for this event. This included a trade display an industry presentation by Market Development Manager and as well a presentation on the findings of turf levy project TU18000 Conveying the benefits of living turf – mitigation of the urban heat island effect, by research provider Mark Siebentritt of Seed Consulting.</p> <p>The inaugural North Queensland Turf Seminar, Townsville, 13th August 2019 attracting 40 delegates from turf producers, landscapers, sports turf managers and educators. The event provided the opportunity for presentations on levy funded projects.</p> <p>Turf WA were involved in the Perth Garden Festival from 11th – 14th April 2019 having a display area with turf varieties, showing informative videos and providing best practice information. 36,000 visitors attend the festival.</p> <p>The WA Turf Seminar & Trade Expo was held of 1st May 2019. This is a combined industry seminar with collaboration from Turf WA, and STA WA come together to promote the benefits of turf and review research and best practices. 198 people attended this event</p> <p>2019 Turf Australia Conference, 30 May – 1 June 2019, Sydney. This event was a great resource for disseminating levy funded research and activities within the Market Development Project. Approximately 120 people attended the two-day event.</p> <p>WA Turf Seminar & Trade Expo, 16th June 2021. This event was a collaboration between Turf WA, STA WA, Lawn mowing contractors, Golf Course Superintendents Association, Local Government Association, Education Department, Private Schools, Botanic Gardens and private estates. It consists of both educational presentations and trade exhibitions. Attended by over 200 turf industry, landscape professionals and local government representatives.</p> <p>QLD Cross Turf Industry Workshop, May 2019. The event held in South East Queensland saw the wider industry come together including Turf QLD, STA QLD, GCSA QLD, turf practitioners from local government, schools and sports fields. 60 people in attendance.</p> <p>Erosion Control Facility Seminar. Turf QLD supported the regeneration of Redlands research facility to showcase turf as an erosion control for an event held in July 2019. This site continues to be a great resource for promoting the Australian Standards for turf as erosion control.</p> <p>Turf QLD presented at Healthy Land and Water workshop on erosion and sediment control on 20th October 2021 at the Redlands demonstration site. The workshop was attended by 95 local council and environmental engineers and specifiers. Turf Qld attended the event and held discussions with Principal Engineer, Adrian Crocetti on future opportunities for</p>

		<p>more workshops.</p> <p>The project supported a regional trip by Turf WA visiting grower Greenhills Turf Farm in Broome, the Kimberley region of WA. This provided Turf WA with an opportunity to learn about the regional issues and share R&D information. An article was prepared for the Turf Australia magazine. Appendix 15.</p> <p>Turf NSW Getting Back to Grass Roots seminar. In collaboration with Landscape NSW, 35 landscapers and specifiers attended the day. Turf NSW gave an overview of the Market Development project and also shared the Turf Australia video comparing the synthetic turf with natural turf and the difference in temperature and the contribution synthetic surfaces make to the urban heat island effect.</p> <p>Nature Play Space – use of turf in a children’s garden. Presented at the Melbourne International Flower and Garden Show, RB Landscapes and NGIV (Turf VIC) created a first-ever feature garden, titled Green Connections: a space to connect people to nature with several interactive features. This included an elevated turf deck for group activities and discussions. This site was then replicated at a Mullum Primary School.</p> <p>Green Industries Forum, Melbourne, March 2019 & 2020. This event brought together Turf production, sports turf, landscape architect and landscape design managers for a presentations and networking.</p> <p>Horticulture Showcase Victoria. Turf had a strong presence on the day and the growers present were introduced to all ministers and MPs from the Victorian State Government. The event was a terrific success with many discussions post the event with current Ministers and advisors on how to increase green space in Victoria. https://www.youtube.com/watch?v=mTWuqxh-WXo</p> <p>The Victorian School Garden Awards event provided a great showcase for the turf industry in Victoria. Managed through NGIV (Turf VIC). The Nov 2020 event hosted by Costa Georgiades, presenting the awards on the day to the winning schools, with an installation turf package worth \$4,500 donated by Victorian producers. This program engaged with over 3,200 in the education sector. This program was again held in 2021 with over 500 people, the awards night held in December and the event was hosted by Costa Georgiades, Jane Edmanson and the education minister/Deputy Premier James Merlino, presenting the awards (online due to COVID) to the winning schools. Multiple articles were shared with the education sector on natural turf benefits.</p> <p>Extension of levy research was arranged at the Turf QLD grower meeting showcasing the results of TU18000 Conveying the benefits of living turf – mitigation of the urban heat island effect, by research provider Mark Siebentritt of Seed Consulting. (17th October 2019).</p> <p>Turf Qld presented at the Pumicestone Catchment Convergence 17th February 21, run by Healthy Land and Water organisation. His presentation was about the turf industry in Queensland and the benefits of turf from recent R&D projects. In addition, Turf QLD was part of the open forum section of the conference.</p> <p>AILA / Lawn Solutions Aust invited Turf Australia and Turf NSW to be involved with one of their partner webinars with the Australian Institute of Landscape Architects (AILA) providing content on turf research. Turf Australia approached Mark Siebentritt, Edge Environment to review the outcomes of the Conveying the benefits of living turf Mitigation of the urban heat island effect (TU18000). Attended by over 60 landscape architects.</p> <p>The Market Development Manager presented and engaged with STA NSW members at the National Diesel, Dirt and Turf Show in 2021. In addition, a presentation was undertaken at STA ACT conference in 2021. Both presentations provided information on the turf production industry, 2021 floods and levy project research.</p> <p>Promoting natural turf over synthetic turf in NSW was a key focus for the project in 2021 and 2022 particularly with the industry represented at Department of Planning meetings as well as online webinars and community consultation.</p>
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<p>National engagement with influencers and key stakeholders</p>	<p>This key area would focus on developing new relationships and working with existing networks for influencers and stakeholders to create opportunities to engage and inform, resulting in an increase in the perceived value of turf by consumers and the community. Influencing the influencer and creating an army of advocates that promote the many and varied benefits of turf</p>	<p>Stakeholder engagement plans were developed as part of the milestone reporting process at the beginning of the project. In addition to the plan, each year the project team would establish an engagement plan which was then reported on throughout the year. This process reviewed opportunities to connect and engage with influencers and stakeholders and in what format would be the most efficient and effective.</p> <p>At a national level this was mainly focused on other national organisations such as the Australian Institute of Landscape Architects (AILA), Sports Turf Association Aust (STAA) and the Australian Golf Course Superintendents Association (AGCSA, later change to Australian Sports Turf Managers Association ASTMA). Additionally, the formation of a national Greenspace Alliance was established working with Greenlife Industry Aust (nursery and garden), Landscape Associations and Turf Australia. The Market Development Manager also attended and engaged with turf producers at both Lawn Solutions Australia and Turfbreed Conferences. These events created strong opportunities to speak directly to growers from across the country.</p> <p>Developing a strong relationship with the Turf Producers International (TPI) CEO and staff created a strong path for sharing research, industry information and event details. TPI through the Lawn Institute have undertaken international research to determine how much oxygen is produced by natural turf. This included research undertaken in 5 cities in Australia. TPI have worked with Turf Australia to ensure the language and material developed is suitable for the Australian audience. This material has been shared through this project and the Turf Communications project. Including social media posts and sharing the fact sheet developed by TPI.</p> <p>Throughout the project regular engagement was undertaken with Greenlife Industry Australia (formerly NGIA). Whilst this industry group supports the nursery and garden industry, it has been a mutually beneficial collaboration. Several meetings were held to discuss current industry issues, research projects and general industry information. This relationship also assisted in connecting with other industry groups, such as the National Farmers Federation, contacts for project managers of the 2020 Vision etc. This</p>

		<p>engagement also led to the development of a national greenspace alliance, with Turf, Nursery and Garden and Landscape industries, working on joint approaches for responses to the Homebuilder Grant program together. This also created good opportunities to share articles, reports and research on the turf industry.</p> <p>Following the project Conveying the benefits of living turf – a bushfire retardant (TU17008), Turf Australia shared the information with the National Greenspace Alliance group, and it was shared widely. The various Landscape associations shared the information through their membership. Turf Australia approached Greenlife Industries Australia to collaborate for a press release on bushfire resilient gardens, potentially creating more opportunities for exposure.</p> <p>Working with our Comms team at Cox Inall a press release was developed and distributed widely. This resulted in securing several articles appearing in agriculture, local, national and international news sources:</p> <ul style="list-style-type: none"> •Tony Fawcett: New study examines lawn’s fire barrier credentials, The Weekly Times •Rewriting our gum-tree fantasy to fire-proof the future, Fairfax (Syndicated national and appearing in print) •Templeman discusses turf’s natural bushfire protection benefits with local farmers, Hawkesbury Gazette •Outdoor Design Source, online magazine •Overflow magazine •LawnSite (USA) online magazine <p>Appendix 17</p> <p>In addition to the above exposure, the outcomes of TU17008 were distributed extensively to every local council, bushfire entities, landscape industry organisations, nursery industry, sports turf associations and all growers.</p> <p>Extension of the bushfire study (and other turf R&D) was undertaken directly with the Landscape Contractors publication. Appendix 18. Utilising the collaborative press release and fact sheets an article was developed for this production. Circulation of 10,000 including landscapers, construction and maintenance contractors, local government, parks and gardens, TAFE’s etc.</p> <p>The information has been shared extensively by organisations such a Lawn Solutions Australia, Landscape industries, Nursery Industry Victoria with a story produced for their Groundswell magazine, promoted through Aust Local Government Association.</p> <p>Turf Australia was involved in two Parks and Leisure Australia (PLA) Conferences, one in Melbourne (2018) and Perth 2019 and took up sponsorship to promote the turf production industry and benefits of turf to over 600 delegates in the parks, garden and local government management.</p> <p>Turf Australia had engagement with the Australian Garden Council on ways to incorporate the turf industry in their projects to improve turf as a career path.</p> <p>COVID representation on behalf of growers. At both a National and state level the turf industry responded with immediacy to ensure that the turf production industry was included in the governments list of essential services and could remain operating during the challenges of the COVID period. This approval was granted, and turf production businesses worked hard to adapt their business to be non-contact. Regular information was shared with growers and the website was updated regularly during the COVID pandemic.</p> <p>Turf Australia was invited to present at an online Associations Forum National Conference in 2021 to discuss the industry, research and levy system. The conference was attended by around 200 representatives of a wide range of industries, increasing the exposure of the turf industry.</p> <p>Turf Australia was approached by Smart Approved WaterMark (SAWM) CEO to provide feedback on their proposed guidelines for turf in the approval system for the SAWM. In addition, TA distributed the guidelines to growers and the wider industry for feedback. The outcome of this work will see other turf plant breeders be able to apply for the SAWM as</p>
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		<p>was done by Lawn Solutions Australia on the TifTuf branded turf and meet the necessary requirements to be classified as a water smart product.</p> <p>In late 2021 and early 2022 Turf Australia along with Turf NSW and STA NSW supported a research project by Dr Mick Battam on sportsfield ground usage data to clarify the myths and misinformation from synthetic marketing. This research provides significant data and was shared through a number of networks. Fact Sheet on the study is shown in Appendix 11.</p> <p>The state engagement plans were developed for the specific needs and experiences of each individual region with a focus on engagement with relevant groups to address local issues. Throughout the project each group varied their approach based on experience and outcomes.</p> <p>Turf WA were particularly efficient and resourceful with their approach to engagement with influencers through a number of avenues including the WA Greenspace Alliance group which saw many key influencers at round table meetings regularly, to review the local issues impacting greenspace in WA particularly with water restrictions. The meeting addresses inhibitors and deterrents for turf installation with the outcome to develop a best practice soil amendment specification.</p> <p>In addition, Turf WA were very successful in engaging with UWA landscape and design architecture lecturer that not only saw a complete turnaround on their approach, understanding and support of natural turf but, also including it in their teaching syllabus as well as undertaking research on the benefits of natural turf.</p> <p>The success of this engagement included:</p> <ul style="list-style-type: none"> • Landscape and Urban Ecology students visiting a turf farm • A new unit on Landscape Management and Maintenance where turf culture and maintenance will be one of the important topics. • Recommendation to include common turf species in the list of plants, which LA students should learn this semester (first time ever in the program). • Commenced work with experimental project next to campus building with turf for new benches. • Requests to be part of any planned events for the turf industry. <p>The continued consultation with UWA saw very successful visits to turf farms during 2021. Turf WA had a strong presence on local media, particularly radio, providing very high level of engagement with consumers.</p> <p>Turf WA Worked closely with the WA branch of Australian Institute of Landscape Architects (AILA WA) throughout the project and that included an event held 8th November 2019 highlighting best practice turf installation. It was a very successful event with speakers including John Forrest, a highly respected turf consultant, who engaged the audience with insights into irrigation techniques. Other speakers included Susan Worley from the Department of Water and Environmental Regulation, Adrian Pitsikas from Greenacres Turf Group and Darren Kirkwood, West Coast Turf, Chairperson of Turf Growers Association WA. Attendance included 35 members of AILA WA.</p> <p>The WA Turf Industry assisted in the development of the research project proposal of Lawn as a Living Lab. The site for this living laboratory will be for an ongoing research project “Lawn as a cultural and environmental global phenomenon in Perth, WA. Searching for sustainable solutions in most vulnerable times of climate change and pandemics” running at the UWA School of Design. The foundation of this project is an interdisciplinary collaboration between researchers and landscape architecture practitioners, the turf industry, and state and local governmental departments. This experimental site demonstrates the complex character of lawns as plant communities and shows the aesthetic parameters of different lawn species traditionally used in WA such as buffalo, couch, and kikuyu grasses.</p> <p>Turf QLD focused on the local councils and allied turf organisations such as STA and Golf as well as landscapers for their engagement program through events and communication. Strong engagement was undertaken with the local authorities including water authorities, Department of Agriculture and Fisheries as well as Queensland Farmers Federation.</p> <p>Turf QLD worked closely with Landscape QLD who regularly distributed turf resources</p>
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		<p>through their newsletters including Conveying the benefits of living turf – a bushfire retardant (TU17008), “Four Reasons to Choose Turf” document.</p> <p>Turf QLD are working closely with the Queensland Farmers Federation to establish opportunities to promote the industry and share R&D and work with other industry groups in the region. This has seen regular sharing of information including levy project - TU18000 Conveying the benefits of living turf - mitigation of the urban heat island effect, in their social media.</p> <p>In NSW there was a solid connection with the local STA group as well as the Aust Institute of Horticulture. An important focus in NSW was the impact of synthetic sportsfields being introduced in Sydney and working closely with Dr Mick Battam of AgEnviro Solutions was a great aspect of sharing information on the benefits of turf. Dr Battam became the voice of natural turf within the media, community groups and government officials and his research and experience created an important collaboration throughout the project.</p> <p>Turf NSW worked closely with the Department of Roads and Maritime Services Architects to share information on the benefits of turf for erosion control. This engagement assisted in redirecting plans that the Department had to move away from natural turf in their project work.</p> <p>In Victoria the growers were represented by Nursery and Garden Industry VIC (NGIV) and were fortunate to be part of very strong campaigns to promote the benefits and value of natural turf directly to local government and influencers making decision on future developments and greenspace, through the Horticulture Showcase at Victoria’s Parliament House. https://www.youtube.com/watch?v=mTWuqxh-WXo</p> <p>In addition, NGIV are the organisers of the Melbourne International Flower and Garden show, and turf displays, and partnerships increased immensely over the period of the project creating great exposure for natural turf to tens of thousands of visitors to the internationally renowned event.</p> <p>Groundswell Magazine provided a great source of extension of turf R&D and industry news. The Victorian publication, managed by NGIV, included the magazine with a distribution of 1000 as well as eNews reach of 7000.</p> <p>Turf VIC worked with the Victorian School Building Authority, East Gippsland Bushfire Recovery Fund and the broader green industry to coordinate the development of a healing nature play space for the town of Buchan (east Gippsland Victoria) affected by the 2020 bushfires. Incorporating and extending the knowledge learnt of natural turf’s bushfire mitigation properties and applying that to the design and the installation.</p> <p>Turf VIC worked closely with the Landscape Architect and Designer students at Victorian universities and TAFE’s to create awareness of benefits of turf and inclusion of turf in curriculums. The included regular discussions and online presentations to students. In addition, Turf VIC worked closely with building developer MIRVAC with a focus on increasing and highlighting greenspace, including turf in new developments.</p> <p>Not only were annual workplans developed for the running of events and activities, this also included attending industry focus events to represent the turf industry, present at the events and engage with many different influencers from many different industries.</p> <p>This project faced the challenges and disruptions of COVID-19 restrictions and the impacted lockdowns, travel restrictions throughout 2020 and 2021. During this time a focus was placed on development of videos, online communication and local contact where possible.</p>
		<p>The concept of a turf specifiers resource was raised by the State Associations. This concept was reviewed in detail with a goal to have one location for all turf information that could be one-stop-shop for anyone specifying turf for projects. The first process saw Turf Australia undertaken a Turf Specifiers Survey.</p> <p>The survey developed in February 2021 and reviewed with the State Turf Associations the released to a range of turf specifiers and end users including:</p> <ul style="list-style-type: none"> •Landscape Industry associations in QLD, VIC, NSW, SA, WA and VIC.

		<ul style="list-style-type: none"> •Sports Turf Association Australia •Australian Landscape Architects Association. •The State Association’s also shared the survey with their contacts. <p>A survey of the landscapers, landscape architects, sports turf managers and parks coordinators was completed in mid-March. 53 responses were obtained and whilst a small survey it did provide some good outcomes. When asked where they currently source information on turf, 74% were directly from growers and 36% from the internet. Difficult information to find was confirmed as 53% soil profile pecs and 37% fit for purpose turf were the 2 top answers. The results of the survey were shared with the state associations, Turf SIAP and Hort Innovation to assist in guiding future direction for this toolkit in scoping the future extension projects. The full survey is at Appendix 19.</p> <p>During the final 6 months of the National Market Development project the PRG and Turf Australia reviewed the options available to the industry and Turf Australia to either engage with an existing site or develop their own. It was felt that development of a new site would be cost prohibitive to the project and the challenges of ownership with working with an existing site created uncertainty in the long term. The PRG resolved that this wouldn’t be pursued.</p>
<p>Provide relevant R&D information for Industry Communications (TU16004)</p>	<p>Collaboration of the Turf Industry Communications project to ensure a strong synergy for project planning, concept creation and development of material for both projects.</p>	<p>Throughout the project, the Market Development Manager worked closely with the Turf Communications contractor, Cox Inall Communications, to develop material, resources and project updates for the quarterly magazine, monthly digital newsletter and social media posts. Each edition of the Turf Australia magazine had a Market Development Project update. This collaboration also saw the development of fact sheets for a range of turf levy projects. In addition, the Market Develop Manager created marketing resources such as social media tiles for use within the Comms program as well as within this project. The state representatives contributed to the Turf Communications program providing quarterly state updates on activities for the Turf Australia magazine.</p>
<p>Support regional industry networks</p>	<p>State meetings to enable national collaboration and co-operation.</p>	<p>Meetings were undertaken during the project, including annual meetings to establish state and regional workplans. Updates of resources and activities were also held throughout the project.</p>
	<p>Develop a clear understanding of state-based issues:</p>	<p>Understanding issues for growers in different regions of the country was an ongoing process, through communication with the state industry representative as well as grower and industry meetings, farm visits and attendance at state and national conferences. Throughout the project, the issues for some locations changed depending on climatic conditions such as drought and floods and programs and responses were adapted accordingly.</p> <p>The collaboration process also saw sharing of resources, advice and experience from the WA turf representative who supported growers deal with drought issues in the North Queensland and regional NSW. Additional support of a regional NSW grower was provided with provision of material for display and brochures of the benefits of natural turf during heavy water restriction periods.</p> <p>In addition to grower sentiment, the state industry representatives were very engaged with issues at a stakeholder/end user level. This knowledge was utilized when developing local annual workplans and responding to matters as they arose. Encroachment of synthetic on sportsfields and homes was a significant concern in Perth and Sydney and working with the state representatives assisted in development of targeted resources.</p> <p>Regular engagement with the different states representatives, individual growers and the wider turf industry, identified issues such as pest and disease problems in both QLD and NSW which lead to Turf Levy funded R&D projects (TU19000 & TU19002).</p> <p>Meetings and correspondence with South Australian growers was undertaken during the project. This created a better understanding of the structure and processes of turf production sales and marketing in South Australia. This further lead to the levy funded NxGen program being held in Adelaide in 2019. To support the growers in this area, advertising was undertaken in the local SA Life Gardens and Outdoor living magazine with has a reach of 80,000 each publication. Appendix 20</p>

		<p>The ongoing water restrictions in WA were a strong focus for Turf WA and extensive collaboration with local authorities, the Greenspace Alliance and decision makers created some successful in roads to ensure greenspace and turf specifically was front of mind. The Market Development Manager worked closely with Turf NSW and growers throughout 2019 to the end of the project in May 2022 as they experienced significant climatic challenges. With 40% of the industry based in NSW and about 60% of the NSW growers located the Hawkesbury, the impact to industry was significant.</p> <p>In 2019 NSW growers were surveyed to gauge the impact of the water restrictions on Sydney homes and businesses and on average there was a reduction in sales of 60% compared to the same time the previous year and some growers were impacted by more than 80%. Two growers had already reduced staff numbers and others were considering reductions. Both Turf NSW and Turf Australia worked closely with Sydney Water and members of the NSW Green Alliance (Nursery & Garden Industry and Landscape Industry) to develop suitable water restriction exemptions.</p> <p>Victoria and Queensland also had challenges during the drought period and worked closely with their local authorities to ensure the voice of the local industry was heard and appropriate action taken to establish industry supportive water restriction decisions.</p> <p>This project supported a trip by Turf WA representative to visit a regional based grower in WA, in October 2019. This trip created the opportunity to support regional grower Greenhills Turf Farm in Broome, the Kimberley region of WA. This trip provided great insight into the challenges of growing and maintaining turf in unique climatic regions. An article was prepared for the Turf Australia magazine.</p> <p>Turf QLD undertook visits to regional growers between Cairns and Hervey Bay in late 2020 to better understand their local issues and look at opportunities to support them.</p> <p>March-April 2021 saw extensive flooding in areas in NSW that had a devastating impact on turf growers. During this period Turf Australia and Turf NSW worked closely to support the growers and understand the needs of the industry. This period created immense challenges for the growers, in particular in the Hawkesbury and North Coast of NSW. For a period, the focus of the project turned to assisting growers with information and resources for support during this period. In addition, a lot of time was allocated to working with state and federal authorities to ensure the industry was identified as highly impacted and therefore supported. This included working with growers to understand the financial and production impact of loss turf.</p> <p>Unfortunately, twelve months on in March 2022 both Queensland and NSW were impacted by more floods. This period was crippling for many turf producers and again Turf Australia was strong in representing the industry and responded quickly to understand the financial and production impact. This was acknowledged by many levels of government who approached Turf Australia for information, and we were invited into national emergency recovery meetings for industry as well as being identified as an industry for resilience program funding. Whilst this situation wasn't identified in the project planning, the ability to support and represent growers was well received by growers and provided opportunities to work closely with many growers.</p>
	<p>Turf Certification Program</p>	<p>During the final six months of the project a task identified for investigation was the options for a turf certification/education project such as a Cert III in turf production. This has been a program considered by Turf NSW and the Market Development Manager back in 2017/2018 but hadn't progress to any formal level. This project allowed for further discussion and considerations for what could be possible. The Market Development Manager worked with Skills Impact, the government approved organisations for training programs, to review the options available and processes required. Discussions were held with the state associations about the pros and cons of a new training program and its implementation. This topic was also raised at the NxGen conference (TU 19002) in February 2021 to gauge feedback on the topics for a training program as well as general thoughts on the program. The concept was received well and has done throughout the years of discussion but consideration on the possibility of collaboration with other turf or horticulture programs is required. This subject will require a lot of industry engagement</p>

		<p>before any formal application process can proceed and this is recommended for the next Turf Industry Development and Extension program.</p>
	Needs Analysis Study	<p>A requirement of the final period of this project required an undertaking of a turf industry extension plan and needs analysis study to develop a clear understanding of the views and expectations of Australian turf growers for levy investment for a new project from 2022. The development of the <i>Turf Industry Extension Plan and Needs Analysis project</i> was led by Turf Australia and included consultation from the Project Reference Group (PRG) and guidance from Dr John James from Enablers of Change. The project is aligned with the Turf Industry Strategic Investment Plan 2022-26 (SIP).</p> <p>The study included a multi-pronged approach to engage growers including an online questionnaire, phone questionnaire and focus groups. Following a four-week program of engaging with growers and industry representatives, the results saw the completion of 63 online surveys, and 9 focus groups conducted with a total of 32 growers attending. The total number of growers consulted was 95, representing 43% of the Australian turf production industry.</p> <p>The needs analysis study developed a strong understanding of grower sentiments for past, current, and future projects allowing for better strategic planning and ensuring grower levy and Australian Government investments meets the direct needs and wants of the industry. The completed report was provided to Hort Innovation and reported to growers at the end of 2021.</p> <p>The full report is shown on the Turf Australia website and shown at Appendix 21.</p>
Provide feedback to Hort Innovation on R&D opportunities	Provide quantitative and qualitative feedback on R&D opportunities	<p>Engagement with the different states representatives, individual growers and the wider turf industry, identified issues such as pest and disease problems in both QLD and NSW which was delivered to Hort Innovation and led to Turf Levy funded R&D project TU19000 – Identification and management of mosaic viruses and secondary pathogens in buffalo turf and project TU19002 Improved capacity for integrated disease management of couch smut (<i>Ustilago cynodontis</i>) in turf.</p> <p>Turf WA lodged the request for the bushfire study which continues to be incredibly significant research for the industry.</p> <p>Regular meetings were held with Hort Innovation project and industry managers to keep up to date on industry and project matters. This assisted in building strong relationships and good understanding of grower sentiment. On occasions Hort Innovation staff were introduced to growers, visiting a number of farms.</p> <p>Throughout the project, Turf Australia engaged with Hort Innovation Marketing team and Bite Communication on turf specific matters for the turf levy marketing program (Lawnspiration). This collaboration ensured that the project managers had a good understanding of the industry and grower sentiment. In addition, Turf Australia utilized its industry contacts to support the Lawnspiration social media competition which saw Toro Australia donate products. In addition, a turf grower donated turf for the Lawnspiration turf ambassador.</p>
A united Turf Industry		<p>The Market Development project identified a goal of developing a united turf industry. Prior to the project, there wasn't a lot of collaborate at a national level between the production industry and other key factions of the industry, namely sports turf association, golf course superintendent's association and turf researchers, and this created missed opportunities to share and promote research amongst the industry and connect to identify and work on industry specific topics.</p> <p>Early in the project the first significant achievement was coordinating a tour group to attend the 2018 Australian Turfgrass Conference in Wellington NZ, supported by the turf levy (TU17007). This was the first time this event had been taken outside of Australia and provided a great opportunity to not only connect with the sports and golf course cohorts but also understand the New Zealand turf industry. The Market Development Manager presented at the conference on the 'state of play' of the turf industry specifically the content from the Researchers Forum as well as awareness to the turf production industry. 800 people from the Australian and New Zealand turf industry were in attendance.</p>

		<p>Regular contact between Turf Australia and turf production commercial entities – Lawn Solutions Australia, Turfbreed and the Greenspace Turf Co-op, assisted in sharing ideas, issues and solutions and R&D. Throughout the project Turf Australia has worked with both Lawn Solutions Australia and Turfbreed to provide content for their publications and electronic media. Articles have included specific turf research or industry activities.</p> <p>Turf WA lead with strong collaboration with the wider turf industry throughout their workplans, that included events and award nights with the sports turf and golf industries. This collaboration would be the strongest ongoing program across the country and was model off in other states.</p> <p>On 4th December 2019 Turf Australia invited members of the wider turf industry to a Australian Turf Industry Associations Forum in Sydney. This was acknowledged as a very important meeting for the turf industry and reduced the feeling of segregation felt from some groups. The meeting had a focus on determining the key issues for the industry and discussions were held on how to make changes to improve the issues. It was agreed that quarterly meetings be held and the initial focus be on promotion and awareness of the industry. A further meeting was planned for Mar/April 2020, but unfortunately COVID-19 interrupted that plan.</p> <p>Representatives from the following associations attended the December event: Turf Australia, Turf NSW, Turf WA, Sports Turf Association, Australia, Sports Turf Association, NSW, Sports Turf Association, VIC, Sports Turf Association, WA, Sports Turf Association, SA, Sports Turf Association, QLD, Golf Course Superintendents Assoc, Vic, NSW Bowling Greenkeepers Assoc. Apologies were received from 7 other organisations.</p> <p>The collaboration of NSW Green Space Alliance, modelled off the success of WA, continued during the period in review. The Market Development Manager’s role in this group has been to assist with development of the alliance and support of specific projects, including developing a water restriction strategy. This group also saw the benefits of collaboration with the development of a submission for the NSW Government Architects Draft Greener Places Design Guide as of August 2020, the group formalised the collaboration with a MoU for the members of the Alliance.</p> <p>Researchers Register / Turf Specialists Register: To increase the exposure of turf industry experts, Turf Australia established a Researchers Register which was then later updated to a Turf Specialist Register. The purpose of this register is twofold, to improve communication with researchers to have a better understanding of projects being undertaken and discussions around what is needed within the industry, as well as a central location for specifiers and endusers to find industry approved turf experts. The initial development of the register, built into the Turf Australia website, has been developed and the marketing and publication will be developed during the Turf Industry Development and Extension project (TU21001).</p> <p>Ongoing work with STA Australia has resulted in the Turf Australia magazine being electronically distributed to over 1200 STA Aust members each quarter. Increasing the reach of R&D project outcomes and industry news.</p> <p>Turf QLD developed strong engagement with a number of local organisations to develop opportunities for collaboration including, QLD Landscape Association, QLD Nursery and Garden Industry, Healthy Land and Water, Sports Turf Association, QLD.</p>
Database	Develop a database of key stakeholders and influencers	<p>Throughout the project at both a national and state level, the project team developed an extensive data base of turf stakeholders and influencers. These data bases were utilized for disseminating industry information on a regular basis. The categories of contacts include but not limited to; local, state and federal government, sports turf maintenance groups and individuals, golf course groups and individuals, bowling greens groups and individuals, researchers and turf specialists, government departments and authorities, turf supplier organisations, open space and parks and garden groups, landscape associations, water authorities, educators and more.</p>

Outcomes

Outcome summary

Outcome	Alignment to fund outcome, strategy and KPI (2022-2026 SIP)	Description	Evidence
<p>End of Project Outcomes: Influence the influencers to increase the value of turf</p>	<p>Outcome 1: Demand Creation. Strategy: 1. Increase domestic consumer demand for quality Australian grown turf through improving knowledge, attitudes and purchase intent. 3. Develop and implement plans to ‘influence the influencers’ such as specifiers, councils, landscape architects and key social media people. 5. Disseminate market research and research finding to growers and consumer and encourage the use of research finding sin industry based marketing, R&D programs as well as in production businesses.</p>	<p>Over 4.4 million engagements or exposure to the project or benefits of turf was provided by the project, creating stronger awareness of R&D.</p>	<p>Observation, feedback and change of practice were the main areas of evidence. The NSW Talking soils webinar provided a follow up survey showing that an increase in understanding and awareness of specific areas from 34%-46%.</p>
<p>Identification of industry gaps and potential for R&D projects</p>		<p>Identification of industry gaps were undertaken initially at the Researchers Forum in May 2018 and extended to over 20 different groups for feedback.</p>	<p>Extensive review across many levels of the turf industry to confirm the findings from the Researchers Forum.</p>
<p>A united turf industry</p>	<p>Outcome 1: Demand Creation. Strategy: 3. Develop and implement plans to ‘influence the influencers’ such as specifiers, councils, landscape architects and key social media people. 5. Disseminate market research and research finding to growers and consumer and encourage the use of research finding sin industry based marketing, R&D programs as well as in production businesses.</p>	<p>The extensive work undertaken to create a more united industry commenced from the very beginning of the project with the tour of growers to the Australian Turfgrass Conference. Efforts to bring together the industry were acknowledged at both the Researchers Forum and Turf Associations Forum.</p>	<p>Regular engagement with key turf industry organisations and collaboration in events and publications.</p>
<p>Increase of resource material for turf market development and turf production profitability.</p>	<p>Outcome 1: Demand Creation. Strategy: 1. Increase domestic consumer demand for quality Australian grown turf through improving knowledge, attitudes and purchase intent. 3. Develop and implement plans to ‘influence the influencers’ such as specifiers, councils, landscape architects and key social media people. 5. Disseminate market research and research finding to growers and consumer and encourage the use of research finding sin industry based marketing, R&D programs as well as in production businesses.</p>	<p>Professionally developed videos and fact sheets were produced to support the goals of the project and disseminate turf R&D. This created many opportunities for extension of R&D and were used in many different formats across the project increasing exposure to R&D and improving opportunities for growers to share the material.</p>	<p>Observation of extension of material and sharing of social media etc.</p>
<p>Intermediate Outcomes: Engagement with Stakeholders and key influencers</p>	<p>Outcome 1: Demand Creation. Strategy: 1. Increase domestic consumer demand for quality Australian grown turf through improving knowledge, attitudes and purchase intent. 3. Develop and implement plans to ‘influence the influencers’ such as</p>	<p>The project produced strong engagement, in differing formats, throughout the project. Concentrated and targeted engagement as well as broad sharing of information and resources.</p>	<p>Observation and feedback.</p>

	<p>specifiers, councils, landscape architects and key social media people.</p> <p>5. Disseminate market research and research finding to growers and consumer and encourage the use of research finding sin industry based marketing, R&D programs as well as in production businesses.</p>		
Improved consistency of national messaging through regional industry networks	<p>Outcome 1: Demand Creation.</p> <p>Strategy:</p> <p>5. Disseminate market research and research finding to growers and consumer and encourage the use of research finding sin industry based marketing, R&D programs as well as in production businesses.</p>	Regular communication and development of nationally focus material for dissemination.	Feedback at meetings.
R&D resources for the Australian Turf Industry Communications Program	<p>Outcome 3. Extension and capability</p> <p>Strategy:</p> <p>1. Deliver communication and extension capability to create positive change, through use of business insights in the areas of demand creation and industry supply, productivity and sustainability.</p>	Consistent collaboration for opportunities to develop material, extend project outcomes and share resource across both the Turf Industry Communication program and the National Market Development Program	Consultation, observation and feedback.

Monitoring and evaluation

Key Evaluation Questions

Key Evaluation Question	Project performance	Continuous improvement opportunities
<p>Effective:</p> <p>To what extent has the project achieved its expected outcomes</p>	<p><i>To what extent has the project increased engagement with turf industry specifiers and stakeholders?</i></p> <p>Engagement with specifiers and stakeholders and dissemination of information was the core of the project at with an estimated 4.4 million people reached, this exceeded the project expectations, consider the challenges of COVID-19 restrictions.</p>	A focus on targeted industry specifiers where a strong commitment/relationship could be established would provide more in-depth monitoring of opportunities rather than trying to be everything for everyone.
	<p><i>To what extent has the project improved consistency of national messaging through regional industry networks?</i></p> <p>Good relationships and regular meetings supported this outcome.</p>	Strong project planning and guidance early in the project and developing M&E reporting processes and guidelines across all project members.
	<p><i>To what extent has the project improved resources for stakeholders, specifiers and growers?</i></p> <p>A large number of resources were produced for the project including videos, fact sheets and marketing material.</p>	Budgeting for state-based needs for resources could assist across the project. Not all regions require the same information.
<p>Relevance:</p> <p>How relevant was the project to the needs of intended beneficiaries?</p>	<p><i>Has the project delivered outputs relevant to the turf industry? I.e. Has the project influenced the influencer?</i></p> <p>The project had a very wide scope of targeting influencers and with resources produced and utilizing R&D project managers to present outcomes provided great opportunities. Local focused issues saw strong results.</p>	A focus on targeted industry specifiers where a strong commitment/relationship could be established would provide more in-depth monitoring of opportunities rather than trying to be everything for everyone.
<p>Process appropriateness:</p> <p>How well have intended beneficiaries been engaged in the project?</p>	<p><i>Are the recipients of the project outputs aware of these outputs?</i></p> <p>As the project reach and scope was very large and wide, it was challenging to monitor and evaluate the results of the engagement.</p>	Strong project planning and guidance early in the project and developing M&E reporting processes and guidelines across all project members.

<p>To what extent were engagement processes appropriate to the target audience/s of the project?</p>	<p><i>Are the project outputs delivered in a way that promote engagement and continued dissemination of project material?</i> Strong relationships are the key to ongoing engagement and dissemination of project material. This was demonstrated as other industry groups and organisations would come to Turf Australia and the state groups seeking information and inclusion in their events and publications.</p>	<p>A focus on targeted industry specifiers where a strong commitment/relationship could be established would provide more in-depth engagement.</p>
<p>Efficiency: What efforts did the project make to improve efficiency?</p>	<p><i>Are the project outputs being undertaken efficiently and achieving the best possible outcome?</i> Collaborating and utilizing strengths and expertise of different members of the project team provide good efficiencies. This included utilizing R&D project managers to present at stakeholder events and extend the findings of R&D. This project worked closely with the Turf Comms team and that created strong collaboration and effective and efficient outcomes for resources and shared information.</p>	<p>Regular review of efficiencies across the project team, throughout the project is key.</p>

Recommendations

The Turf Industry Extension and Needs Analysis study (Turf Industry Census) was undertaken in 2021 involving 43% of the industry and provided strong grower sentiment of current and future levy funded projects. These outcomes were presented to Hort Innovation to develop a new Turf Industry Development and Extension project from 2022 and beyond. Analysis of the study recognised some gaps in levy funded projects over the past several years having either seen reduced engagement with end-users or reduced engagement with turf growers and when asked how growers would like to see a future project structured, their responses were varied. Whilst the results from growers show they are more motivated to extension to end-users, the fact that 63% of growers indicated they are planning to improve their efficiency through systems, staff training and on farm operations indicated that investments could be more effective with on-farm industry development and extension. Discussions in the focus groups all led to having a balance of more tangible projects for turf business profitability and sustainability.

Communication and extension of information to growers was reviewed and the value of workshops and seminars was very strong. Growers expressed a desire to connect with other growers and learn from each other. The study confirmed that there isn't any one specific preference for communication medium with growers and it requires a multi-pronged approach to reach as many growers as possible. There was very strong support of local turf representatives being supported to deliver extension to growers and support local issues.

As the National Market Development project was very end user focused, growers didn't feel as engaged as they may have in past projects. Despite significant extension to growers through the Turf Communications program, growers commented that they didn't easily recognise the benefits or feel as engaged in this project. The challenges of the pandemic and lockdowns increased the inability to connect easily with growers.

In planning for a new national focused levy project, it is recommended that the first two years of the project be structured with a split of 70% on-farm industry development and extension and 30% focused on extension to end-users. A review of the outcomes and needs of the industry to be assessed during the second year of the project to plan the structure in the remainder of the project.

During the project a small turf specifiers survey was undertaken to establish the needs for increased specifier information. One clear result of that survey was that 74% of the respondents obtain information when choosing turf, directly from turf growers. This confirms that R&D knowledge and resources extended to turf production businesses is vital not only for their own business but that of the industry.

The National Market Development project was a very wide-ranging project with many facets that made the management and achieving all outcomes challenging. In addition, the monitoring and evaluation process for a very end-user focused program was also challenging. Improved guidance and direction from Hort Innovation project managers assisted in the latter stages of the project. A lot of changes incurred at Hort Innovation during this period as well as the challenges of COVID-19. Strong support and direction from Hort Innovation is vital to ensure project expectations and goals are well

managed and achieved. It is recommended that future projects are developed with more specific targets and outcomes that have systems in place for measuring and monitoring the outputs and outcomes.

Refereed scientific publications

Intellectual property

No project IP or commercialisation to report

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Grant Nelson of Grant Nelson Graphic Design

Appendices

Appendix 1	Program Logic
Appendix 2	Fact Sheet – Turf is the key to cool cities
Appendix 3	Fact Sheet – Turf as a Bushfire retardant
Appendix 4	Fact Sheet – Turf: a natural sponge for carbon dioxide, improving your carbon reduction.
Appendix 5	Fact Sheet – Improving your energy efficiency
Appendix 6	Fact Sheet – Turf a natural sponge for carbon dioxide
Appendix 7	Fact Sheet – About the Levy
Appendix 8	Fact Sheet – Buffalo Yellows
Appendix 9	Fact Sheet – Couch Smut
Appendix 10	Fact Sheet – Natural Turf fights climate change
Appendix 11	Fact Sheet – Understanding sportsfield usage levels
Appendix 12	Fact Sheet – Creating your healthy lawn
Appendix 13	Social Media resources
Appendix 14	Marketing resources - banners
Appendix 15	Article – Regional WA tour
Appendix 16	NSW Event “Talking Soils”. Post event survey
Appendix 17	Turf as a Bushfire retardant press release and articles
Appendix 18	Landscape Contractors magazine articles
Appendix 19	Turf Specifiers Survey
Appendix 20	SA Life magazine advertising
Appendix 21	Turf Industry Census (Industry Extension and Needs Analysis Study)