

COMMERCIAL HORTICULTURE

MAGAZINE OF THE NURSERY INDUSTRY

OCTOBER / NOVEMBER 2022

**NZPPI Napier
Conference
report**

**IPPS field trips
back with
Christchurch tour**





Yep, that's cold all right . . .

"Most snow we have ever had – let alone in Spring!" said Sally Brown, who sent us these pics of Blueskin Nurseries and Café in

Waitati, 19km north of Dunedin. This blanket of snow came down in the ultra-cold snap that hit NZ on 5-6 October.



Auckland hosts National Rose Show

AFTER A hiatus of two years, the 2022 National Rose Show and Convention will be hosted by the Auckland Rose Society at the War Memorial Hall in Dominion Road, Mt Eden, in November.

The show will be open to the public on Saturday November 19, 12 noon to 5pm and on Sunday 20, 10am to 4pm. Entry is \$5 adults, Gold Card holders \$4, under 12 free with an adult.

Exhibitors from around New Zealand will be competing in a range of classes with the show theme being 'All that Jazz.' There will also be floral art, trade exhibits, sales table and raffles. The show will be officially opened on

Saturday 19 November at 2pm by the Governor General, the Rt Hon Dame Cindy Kiro.

Any enquiries can be directed to the Convention Convenor, Janene Alexander, Ph 027 562 4320 or email aucklandrosesociety@gmail.com - Hayden Foulds

News or Views?

Tell Comm Hort
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Warning for garden waste businesses over 'spare bags'

THE OWNERS of three related businesses operating garden bag waste collection services in Auckland, the Waikato and Rotorua have received a warning from the Commerce Commission.

The warning was for "potentially creating the impression that customers were required to pay for additional garden bag services they did not request."

The warning came after 40,000 existing customers of the companies were sent a spare garden bag between October 2020 and January 2021 and told an annual rental fee would apply unless the bag was returned before a certain date.

The five garden bag brands warned were Gabco Garden Bags and Bins, The Garden Bag Company, Manukau Garden Bins, Clippa Garden Bags and Bins and Greenfingers Garden Bags.

The Commission said it understood more associated brands owned by the same three companies also offered the 'Spare Bag' trial and has provided subsequent compliance advice to them.

They are Auckland Garden Bins, North Shore Garden Bins, Counties Garden Bins, Waitakere Garden Bins, North Harbour Garden Bags, GardenBags.co.nz, GardenBins.co.nz, Baycomp Garden Bags, Waikato Garden Bins,

Rotorua Garden Bins.

The Commission said:

"As the customers did not request the bag, or any additional services, the product was therefore 'unsolicited'. It is illegal under the Fair Trading Act for any business to ask for payment or expect a customer to take any action to avoid a payment, on an unsolicited good or service."

Must not mislead on opting-out

"It's important when marketing products and services in new ways, that businesses still understand their obligations under the Fair Trading Act.

"They should not expect payment from customers if they deliver a good or provide a service that has not been requested, and they must not mislead customers into thinking they need to opt-out of a payment."

The Commission said it understood that no customers were charged for the trial and that the brands have since reviewed their marketing material and internal sign-off processes to help ensure the conduct does not occur again.

IPPS seeks Conference Four Pack

THE IPPS NZ is seeking applications for people to become part of the Four Pack to help out at its Conference from 20-23 April next year at the Parnell Hotel and Conference Centre in Auckland.

"We're after four enthusiastic, passionate and motivated people to apply for this great opportunity," says Trevor Allan who coordinates the Four Pack scheme.

"If you have been in the industry less than five years and are studying, or have recently completed studying some form of horticulture, then get your application in today."

The Four Pack team will assist with the running of the Conference and are introduced to IPPS. They also learn more about the industry and meet people in-

involved in various aspects of the industry from around the world. "It's a good thing to put on your CV," adds Trevor.

Successful applicants have their transport, accommodation and Conference registration provided free. They also get to keep their Four Pack clothing and receive free membership to the IPPS for the following year.

For further information or an application form, contact Trevor Allan 027 459 2126 email trevor@advancedmedia.co.nz.

Applications close 2 December.



Delegates gathered at the Napier War Memorial Conference Centre

NZPPI Conference back after a two-year Covid lay-off

AROUND 100 delegates from the nursery and associated industries gathered in a foggy, drizzly Napier in early October for the NZ Plant Producers organisation's 'annual' conference, the first since the start of the pandemic.

The theme of the conference was sustainability, which many of the speakers addressed in their presentations.

"Every industry sector has a sustainability issue or a social licence issue to deal with," said the NZPPI CEO, Matt Dolan. "Ours to me is about materials and plastics and water. They are the ones for us to solve."

Dame Juliet Gerrard, the Prime Minister's Chief Science Advisor, agreed about plastics, saying there is a "huge consensus" of opinion that plastics are a major issue for New Zealand.

Since the 1950s the world has made 8.3 billion tonnes of plastics, she said, "then wondered

why we are stuck with it; it just won't go away. So we have got an astonishing global problem."

79% of plastic waste still goes to landfill.

Juliet said promoting and creating "circular economies" where a high proportion of materials used to make products is recycled to make more products, is one of the key answers to the problem going forward.

Sandy Botterill, who has spent some years with plastics industry body, Plastics NZ, went into more detail on what other industries are doing to adopt the circular economy model and also covered the just-announced introduction of nursery plant pots made from

New study shows radiata pine more invasive than thought

NEW RESEARCH shows radiata pine is more invasive and spread more widely across New Zealand than previously thought, with modelling showing that up to 76% of the country's land is climatically capable of supporting populations of the trees.

The authors of the research, led by Dr Peter Bellingham of Landcare Research, say although radiata pine has naturalised since 1904, there is a general view in New Zealand that it has not invaded widely.

Their findings, however, the first comprehensive review of where radiata pine is growing in NZ, demonstrate a "pervasive and ongoing invasion of radiata pine outside plantations" and show that it occurs far more widely across New Zealand than previously thought.

Outside of controlled plantations it has invaded mainly grasslands and shrublands, as well as some forests. It has also invaded ecosystems mostly below 1000m altitude, including revegetating landslides, down to sea level, where it was historically planted to stabilise sand dunes.

Notably, it has often invaded areas of lower-statured vegetation, and at least three classes of 'naturally uncommon' ecosystems - geothermal, gumlands, and inland cliffs.

Stricter regulations and a levy recommended

The researchers say that because of its rapid growth rates and its flammability, radiata pine is likely to alter naturally uncommon ecosystems, and could drastically alter forest regeneration.

They say more work is needed to manage current invasions and prevent future ones and recommend a levy on new non-native conifer plantations to offset costs of managing invasions, along with stricter regulations to protect vulnerable ecosystems.

continued overleaf

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NZPPI Napier conference

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lined the smart water control system offered by technology company Knode.

Klaeri Schelhowe from the Trust Alliance spoke on the benefits of storing and sharing data on the cloud.

Professor Clive Kaiser from Lincoln University spoke of his 10 years working on research projects with growers in the US.

Michael Bassett-Foss from the Hawke's Bay Regional Council spoke on how that organisation is successfully working with farmers to re-establish native trees on marginal or degraded land on their farms.

Michael Jamieson spoke about the Government's recently-established Native Afforestation Programme and its efforts to reset the native plant market so more of the larger native species are produced. See story on page 6.

On the second day of confer-

ence there were workshops where Professor Kaiser gave advice on best practice for nurseries to use when running in-house plant trial programmes, primary industry leadership coach, Sue Pickering, took attendees through the qualities that make good leaders in modern business; Alistair Mowat outlined the services available from laboratory chain Eurofins, and Nathan Hewson detailed the processes his Advanced Hort company takes clients through when choosing and installing automation.

We have more on some of these presentations in this issue of Comm Hort.

The conference ended with the NZPPI's AGM but only full producer members were permitted to attend, partnership members, of which Comm Hort is currently one, being asked to leave, so nothing to report from there.

News or Views?

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The more time people spend at home the more they will spend on plants and landscaping, says Dr Charlie Hall – and proved it himself by spending \$3000 establishing this garden “to have something nice to look at” while working from his home during the pandemic

Sustainability – opportunities for the garden industry

“I ALWAYS enjoy my conversations with my fellow Kiwis,” Dr Charlie Hall told delegates at the NZPPI Conference in Napier, as he beamed in via Zoom from his home in the US.

“I was there with my wife four years ago and without a doubt it was the very best holiday that we have ever had. So I wish I was there in person but this (Zoom) is the next best thing.”

Dr Hall is Professor of Horticultural Sciences at Texas A&M University and an economist specialising in the nursery and garden industry. He is in demand as a speaker at nursery industry functions across the US.

Speaking to the theme of sustainability at the NZPPI Conference, he told delegates sustainability is a worldwide movement and it is starting to bring benefits and opportunities to the garden industry.

“But does this make any difference to the consumer? The fact that, if we produce plants more sustainably or if we make our cities more sustainable, if we utilise green infrastructure versus grey infrastructure, do people even care? And obviously the answer to that is yes.”

People are prepared to pay more for products they believe to be produced sustainably, he said, and there is much research coming through pointing out the mental benefits to people in having green life around them as well.

Charlie Hall believes there is a new recognition among city planners worldwide of the value of green infrastructure as opposed



Dr Charlie Hall

to the solely grey infrastructure they have concentrated on in the past.

“Without a doubt, thriving cities are going to be those that incorporate both grey and green in their development and in the everyday life of where people live, work, worship, and play. So this is going to be an important concept.”

New skills for urban landscaping

Also, the horticultural trade has in recent years developed new skills and knowledge in being able to pick up some of these opportunities with things like balcony planting on multi-storey buildings, green walls and urban forests. “Now we are seeing this type of planting more and more frequently.

“We are using green infrastructure to solve the problems of urban environments, particularly in terms of stormwater mitiga-

tion. Cities spend a lot of money putting in redundant piping to handle stormwater run-off and this is worldwide. Well, research shows that cities save millions of dollars in terms of the cost of mitigating storm run-off if they incorporate urban tree forests, green infrastructure, swales, green walls.

“These are tools within the green infrastructure movement that are now giving us a voice, giving us a terminology with which we can talk to municipal leaders. We can describe the benefits in monetary terms.

“For many years that was the Number One thing that we were lacking. Sure we could talk about the benefits of plants, about the benefits aesthetically of enhancing the beautification of our cities and local communities but it was very difficult to talk in terms of dollars. And what will move people, particularly local leaders, municipal and city leaders to invest in flowers, shrubs and trees versus redundant stormwater piping is when you start talking about monetary things.”

The outlook for New Zealand

“It's been a long time since you in New Zealand have seen inflation at its present level and your central bank of course is raising interest rates as a means of combatting that, to try to slow down the economy enough to try to generate a soft landing – cut back on consumption just enough, cut back on production just enough, to bring inflation under control and then you can take off on a growth pattern again.

“So your consumer price index is higher, the cost of inputs is higher. My own research shows that in 2021 everything that you used to produce plants – containers, media, the propagation materials, fertiliser, labour – all that increased 10.1% from 2021 over 2020.

“I have forecast for this year an 8% increase in input costs over last year and then for 2023 I am forecasting another 3.6% increase.”

“What is the likelihood of a recession in New Zealand? Well, it's pretty high. It's pretty high in the rest of the world too and all the

developed countries are in the same boat – high inflation, the central banks raising rates, adjusting the balance sheets, and there is the likelihood of recession in many parts of the world.

“So there will be a recession. How deep? I don't think it is going to be as deep as the great recession. There are too many things for you there in New Zealand; there are too many economic indicators that are positive.

“Your housing market is cooling off and as mortgage rates continue to increase with interest rates, it is going to cool off even more. Why is that important? Because every new house requires flowers, shrubs and trees. It is the law of Nature. You have got to put flowers, shrubs and trees in. But people will buy fewer if there are fewer houses.”

Charlie said there is a proven link between the amount of time people spend at home and what they spend on plants and landscaping.

“Worldwide we sold more plants during 2021 than I think we had ever seen before. It was the perfect storm in our favour in terms of people staying at home and doing more gardening and landscaping.”

But, he said there are now some questions he is struggling with:

“Is the consumer going to pull back on their lawn and garden spending because of inflation cutting their budget? They have got to pay the rent, buy food, put gas in the car and with inflation the way it is there are fewer disposable dollars that they can spend on plants.

“Are they going to spend more on lawn and garden in the midst of a recession? History says they will because any time they are staying at home more, they will buy more plants.

“But have consumers pulled those purchases forward in time? Did they buy so much during the pandemic that they are not going to buy as much during the next two or three years? I don't know the answer to that.

“Will certain plant categories, like mixed containers, be in demand even if a recession starts? Because people need to have planters and so forth on their pa-

The garden trade has had to learn new skills in recent years to be able to cash in on the worldwide green movement – like how to establish urban forests, build green walls, and do balcony planting like this on high-rise buildings



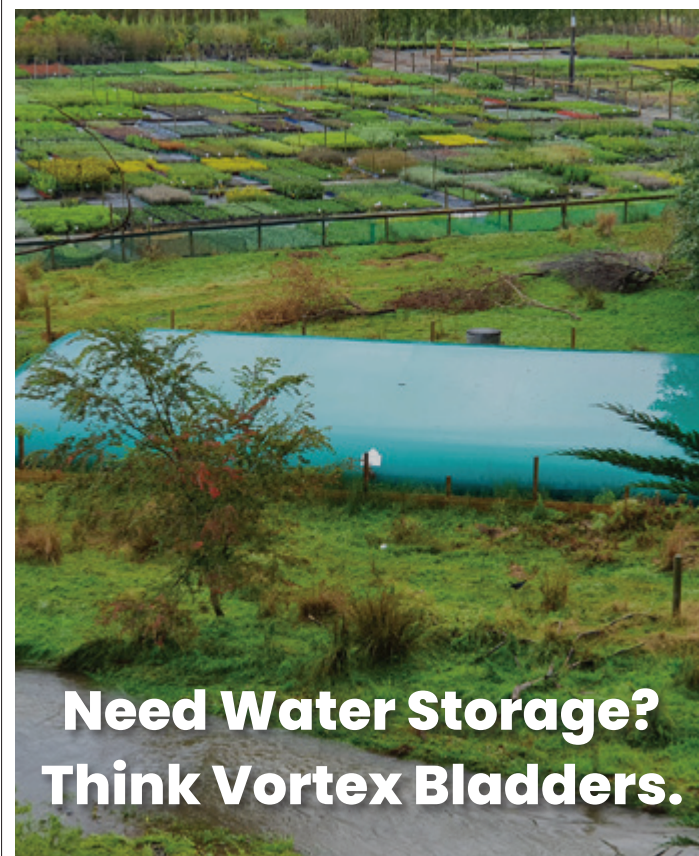
tios, they need some sort of luxuries to make themselves feel better.

“So are we going to be better off when all this occurs, or are we going to be worse off? As an economist I see there are positives and there are negatives. I really don't know for sure but I do know this – every business in this room has got to do three things:

“Stress test your supply chain. You have got to have back-up suppliers. You have got to make sure that you are executing efficiently and that you are providing the highest level of service so that those repeat customers keep repeating their purchases.

“Second, you have got to offset those input cost increases with value-based pricing. You have got to lead with the value proposition, why it is that people buy plants to begin with and why it is that they should buy from you. You have got to start with ‘why.’

“Then lastly, you have got to explore some cost alternatives. You have got to find some lower cost alternatives and lower cost resources and develop capabilities in the midst of all this sustainability opportunity.”



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A new Native Afforestation Climate Change Programme, announced in the last Budget, is going to be looking for huge numbers of the larger species of NZ native trees over coming years, but for the moment it isn't planning to place orders for them. Programme leader, Michael Jamieson explained the current plan to the recent NZPPI Conference

What happened to the One Billion Trees programme?

DID YOU know? The One Billion Trees programme, announced with such fanfare in 2018, has quietly been put to sleep with almost no fanfare, not even being reported by the news media.

Applications for funding under the scheme have been closed but grants already approved will continue to be honoured so the scheme will limp along until its planned cut-off date of 2028.

Ironically, it was not that far off meeting its target – as of September more than 470 million trees, counting both government-funded and not government-funded, had been planted since it started.

One of the schemes replacing One Billion Trees is the Native Afforestation Climate Change Programme, a \$145 million initiative announced in the last Budget.

Heading this programme is Michael Jamieson, who addressed the NZPPI Conference in Napier in October.

Michael comes from a background in the private sector where over 20 years he became a specialist in 'upscaling' businesses, even including the likes of Nike and Ice Breaker.

And his central role at the Native Afforestation Climate Change Programme, he told the NZPPI Conference, is to upscale the native plant sector in New Zealand.

"The Climate Change Commission has put together a pathway suggesting we might have up to

300,000 ha of new native planting over the next number of years, which is pretty significant. So that is a rate of 25,000 ha a year for 12 years.

"Obviously ramping up to get to that from where we are today is going to be a big change."

Michael said the Native Afforestation Programme is not like One Billion Trees "where we funded people to plant trees" and "if we went on at the cost to plant this many trees we would be into multiple billions of dollars and it wouldn't work.

"So that has been taken off the table at this point and the focus is now on getting the barriers to planting down and getting incentives to planting in place.

"When we are talking about planting natives we are talking about planting at scale, really big-scale planting operations, which is different to what native planting is today."

The problem is, said Michael, the 2019 industry survey done with the NZPPI showed most native plants currently being produced "are in that riparian plant, beautification, roadside category, small shrubs, grasses, etc. And then in the trees category it is largely manuka and kanuka and as someone pointed out they are "the toothpicks" of the carbon industry, fast growing and probably not the answer in terms of carbon sequestration.

"So the big boys, the big podocarps, are probably the ones that are going to do the big job in car-

bon sequestration," but the 2019 survey showed only 4% of native trees being propagated were in this category.

That category of the market will be where the new Programme will initially focus "because if we don't have those big trees we are never going to get close to the carbon targets that we are looking for."

Michael said the Afforestation Programme is a multi-year one, "around four years to try to crack this."

The three major requirements will be finding: somewhere to plant, something to plant, someone to plant.

"The actual planting side of things is a real constraint at the moment. Our planting capacity is pretty full with exotics."

No big orders for nurseries

Michael told the Conference that native plant nurseries should not expect big orders from the Government under the new Programme.

"This Programme is not about that. We are not going to be purchaser and we are probably not going to be the planter. We are the ones who are going to try to fix the market settings.

"This is a really important distinction between what this programme is intended to do and what it isn't intended to do. The settings in the native plant market aren't working to do things at scale and what we have to figure out is how we can get it to work so that it can work, under its own steam, with a bit of stimulus.

"But at this stage it is not the Crown turning up with an order book saying we would like to buy 300,000 trees please. That's kind of what we tried to do under One Billion Trees."

In answer to a questioner at Conference saying that unless the Government is prepared to make commitments to nurseries, giving them certainty to start investing to produce natives, "you are never going to get traction," Michael said:

"The demand side of the equation worries me. If we can't get those settings right, there is no amount of government money

that will fix it. These are your tax dollars and we have to be really careful about how we re-allocate spend and focus.

"So the intent isn't to set nurseries up with initial big orders because terrible things can happen. I've been reminded by nurseries about this. A lot of people in this room are survivors of what happened in 2008 and earlier times when people got reliant on government money coming in, and then it stopped.

"There is a danger in building a business model on that. That's not to say it (ordering from government) will never happen but the intent in the initial stage is to try to fix the market settings."

Michael said however that "we may have direct investment in automation from the Crown because we know this (native plant) sector can't necessarily afford to put in the kind of investment that the private sector in the exotic market does. We may have to put in that kind of investment to get things rolling."

The Afforestation Programme would also be commissioning research that would help the native plant sector.

Smaller nurseries not in the focus

Asked if the Afforestation scheme would also 'incentivise' small-scale production of native trees, or the planting of native trees in home gardens or as farm shelter belts, Michael said "probably not."

"Small scale is not what we are doing. Small scale consumer stuff is the smaller nursery market. You don't want the Crown interfering with that really. Consumers want to buy natives, and they are, and they are planting them, which is great.

"But what we can help with is demonstrating technology and automation etc so the smaller guys get to see it and feel it and

improve their businesses, reduce overall costs and improve quality."

The roadmap going forward

Michael's immediate plan is to work with the NZPPI and others to run a new survey of the native plant industry sector, starting in November this year, to see how much has changed since 2019 "because we know there are a number of people who have put automation into their businesses and I am quite keen to understand what that means for capacity in the sector and what else we need to do.

"If we can have a good response to that, that is incredibly important

because it will be a very important evidence base for where we need to apply funding, effort and time. So if you want government support and help in this sector in some areas we need to know through that survey. We will also be running some consultations between now and Christmas and a lot more post-Christmas.

"Early discussions will be around the native seedling supply chain and post-Christmas there will

be more on that survey and sector engagement" and the hope is to have a paper ready by April to go before Cabinet setting out a plan for the future.

The long term strategy and action plan will be around "how we start to build demand for natives and reduce the obstacles. Those obstacles might be regulatory obstacles, they might be tax obstacles, they might be all sorts of things that are in the system at the moment that stop people moving forward on things."

FOOTNOTE: Michael said he welcomed input and suggestions from nurseries on where they thought the problems in the native plant sector are and what should be done. His contact is michael.jamieson@mpi.govt.nz

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The site experiences extreme conditions of rain, drought, wind, harsh afternoon Summer highs, hoar frosts and snow . . .

Remote lakeside landscape voted the best at Landscape Awards

BRYCE COULTER and his team at Green Therapy Landscapes of Christchurch was the Landscapes of Distinction Supreme Winner at the Registered Master Landscapers Association 2022 annual awards.

Guillaume Chabbert from Natural Habitats, took out the coveted prize of 2022 Prebbles Turf World Young Landscaper of the Year.

Green Therapy won the Supreme Award for its landscaping work over five years at Bob's Cove Retreat, a residential home build at Lake Wakatipu.

Bryce Coulter says the project, embracing native planting alongside supporting local wildlife, was unique due to the extreme climate conditions of the site.

"The site experiences extreme New Zealand climate conditions with extremes of rain, drought, wind, harsh afternoon Summer highs, hoar frosts and snow. Hardiness and plant species selection was critical to success.

"Our clients wanted a relaxing retreat in harmony with the grandeur of Lake Wakatipu and surrounds, a place to reconnect with nature and enhance the local environment.

"The site meant something to everyone who worked on it, including the homeowner and all the trades and professionals."

The awards competition judges said that despite the site being a difficult place for plant es-

tablishment due to the water channels coming off neighbouring sites, Green Therapy had managed to create "a sense of playfulness" through its use of chionochloa, astelia, red beech, mountain beech, manuka and cabbage trees.

They called the placement of the soft tussock grasses "a masterstroke" due to the way they appear to lap at a person's feet, while standing in the lounge and looking through the floor-to-ceiling windows.

An exemplary project

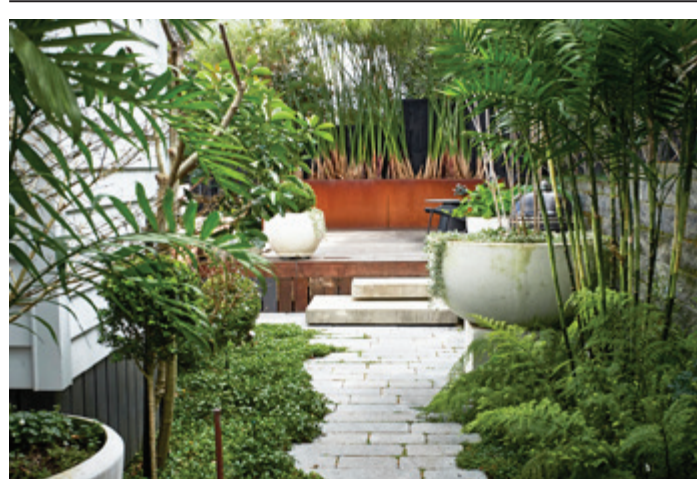
Janine Scott, CEO of Registered Master Landscapers, said that Bob's Cove Retreat is a special project that deserved the industry recognition.

"Registered Master Landscapers are proud to support the landscaping industry through our Landscapes of Distinction Awards.

"Bob's Cove Retreat is a truly stunning garden and exemplary landscape project demonstrating significant ecological contribution to its wider environment.

"Well done to Bryce and the team at Green Therapy."

Guillaume Chabbert is Young Landscaper of the Year 2022



Damian Wendelborn's garden from the 2019 Auckland Garden Festival

Designer line-up for garden festival

EIGHTEEN PRIVATE gardens designed by 15 professional landscapers will be on show at this year's Auckland Garden DesignFest over the weekend of 26-27 November.

The designers selected for 2022 are: Adam Evans (Urbis Landscapes), Alex McClew, Andy Hamilton, Barbara Garrett, Damian Wendelborn, Dan Mackay (Ministry of Ground), Geoffrey Marshall, Jenny Pullar, Joanna Hamilton, Rachael Farthing (Babylon Gardens), Rachel Thomson (Gardenia Design), Richard Neville, Trish Bartleet and Sal Gordon, Trish Bartleet

and Pip Cheshire, Val Puxty, Xanthe White Design.

The gardens are located in Takapuna, Freemans Bay, Ponsonby, Pt Chevalier, Avondale, Mt Eden, Remuera, Parnell and Kohimarama and the designers will be on site to meet visitors.

For more information see www.gardendesignfest.co.nz or follow Auckland Garden DesignFest on Facebook and Instagram.

Mitre10 recycling scheme collects 1m pots

MITRE 10 has announced that by the end of October its pot recycling scheme will have recycled one million used plant and seedling pots through its stores, less than a year after the scheme was introduced.

That equates to about 19 tonnes of plastic diverted from landfills around the country, it says.

The scheme, Pot Recycle, under which customers clean and return used pots, punnets or trays

to Mitre 10 stores, is a collaboration with Zealandia Horticulture, supported by recycling partners that process the pots ready for remoulding at Zealandia's Auckland nursery.

More funding for research on low fertility Japanese cherries

THE NZ Plant Producers industry organisation has received further funding from Auckland Council to extend its investigations into identifying low fertility ornamental cultivars of the Japanese flowering cherry (*Prunus serrulata*).

Japanese flowering cherries were due to be banned from sale in the Auckland region from 1 September under the Auckland Council Regional Pest Management Plan.

However, last year NZPPI successfully advocated for the exemption of *Prunus Kanzan* and *Shimidsu Sakura* from the plan because the two cultivars were proven to be sterile.

A joint project

This proof was the result of a joint research project between NZPPI, Plant & Food Research, Landcare Research scientists, and the Hamilton City Council.

Several other cultivars were given temporary exemptions while further research was undertaken. These are *P.Ukon*, *Shiro-tae*, *Amanogawa*, *Tai Haku* and *Kiku Shidare Sakura*.

With this latest funding, the NZPPI says it can continue the



research work. The next step is the hand cross-pollination of these five cultivars with the wild-type pollen found across Auckland to assess female fertility. For those that set seed, germination trials will follow, using a cold stratification regime appropriate for a cold site in Auckland.

Flowering cherries are a popular street tree in urban subdivisions and developments, as well as home gardens. The NZPPI says it hopes the research commissioning will ensure the trees can continue to be cultivated and sold in the Auckland region.

Kahikatea seed – 2000 years old?

WHEN THE Hayes family removed willow trees and other growth encroaching on Lake Kaituna on their Horsham Downs dairy farm, north of Hamilton, they noticed kahikatea seedlings started growing in a peculiar ring shape.

Andrew Hayes told news service Stuff that university experts said kahikatea seeds couldn't last longer than about seven years, but "I said nah, you're wrong, there's something wrong here. And then DoC said, oh, birds fly around in circles, dropping the seed."

But eventually the surprising truth dawned, said Andrew – he reckons the centre of the ring was the remains of an ancient kahikatea stump and the seedlings were growing from seeds dropped

Kahikatea trees – could peat preserve their seeds?

from that original, long-departed, tree "that had gone in the Taupō eruption 2000 years ago," said Andrew.

"What the university and DoC were not realising [was] peat's a preservative. It was sitting there all that time, all that seed."



Ben Pratt, Tasman Bay Roses

THE TRADE will be saddened to hear of the passing in October of Ben Pratt of Tasman Bay Roses in Motueka, aged 57.

The family-owned Tasman Bay rose nursery was founded by Ben's parents, Judith and Nigel Pratt in 1966. Ben and his elder brother George took over in 1996 and ran the nursery until George's death in 2011. It produces several hundred varieties of modern, Austin, climber, old fashioned and standard roses.

"My first experience with roses was helping my parents in the budding season during the Summer school holidays back in the 1970's," said Ben in an interview with Comm Hort in 2011. "Upon leaving Nelson College in the ear-

ly 80's I joined the business full time."

Ben also spent several years gaining experience in the UK.

"I worked for Peter Beales Classic Roses for six years and Blooms of Bressingham for two years, gaining a wealth of knowledge of a wide range of plants and growing techniques.

"During this time I met Ruth; we married in the early 90's, and returned to NZ to help manage the family business, which we now own."

Ben is survived by Ruth and children Amy, Robert, and Alice.

Tulip farm expands in Southland

IN JULY, the Overseas Investment Office granted consent for Dutch company Horizon Flowers to buy 115 hectares of farming land adjacent to its existing tulip bulb plantation and factory in Mabel Bush, Southland, run by Horizon Flowers NZ Ltd.

Horizon Flowers NZ manager Roy Smak said it would be investing a further \$1 million into its operations where it currently plants and processes up to 45 million tulip bulbs for export annually. The new land is expected to increase that to about 70 million bulbs.

The company plans to plant on one-sixth of the newly acquired 115 hectares on a rotational basis over six years, leasing the remainder to a neighbouring dairy farmer.

It currently employs 100 full-time and seasonal staff in its Southland operations.

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AUSTRALIA COAST TO COAST



A new report on gardening trends puts climate change and environmental concerns top and centre in the minds of gardeners.

Jennifer Stackhouse reports . . .

Climate change proves to be a driver of gardening

GREENER SPACES Better Places, an organisation funded through the Australian Hort Innovation Nursery Fund using nursery industry levy money, has just released its Trend Report for 2022.

The Report explores how, in the face of extreme weather conditions, Australians have been turning to their gardens, big and small, to take tangible steps for the planet, build back habitats, save spending on energy bills, feed their households, and reap the mental health benefits of connecting with Nature.

The Report reveals that many Australians (60 per cent) are concerned about climate change and our environment, and how they can use plants to do their bit for the planet in everyday life.

This and other figures quoted throughout the Report have come from a research study conducted with 1600 plant-buying Australians. The Report's compilers also spoke to representatives from the nursery industry and handpicked media and gardening personalities.

The forecast trends are titled 'Wet & Wild', 'Resilient Roots', '3D Greening' and 'Green In and Zone Out'.

'Wet & Wild' looks at a trend to including more flowering, insect-attracting and native plants in gardens and replaces earlier trends for foliage.

It is reported that 37 per cent of plant buyers are looking for colour when they purchase a new

garden plant. The creation of ponds, pools and wetland habitat is also put forward as a way gardeners can have a more wildlife-friendly garden.

'Resilient Roots' takes gardens beyond the craze for edibles that featured during the lockdown years of the pandemic and looks at how gardeners can have a more low-maintenance garden.

Low maintenance a top priority

For 58 per cent of gardeners surveyed, low maintenance was a top priority. There is also greater realisation that creating good soil is the basis for growing a good garden with more gardeners interested and aware of the need for compost, mulching and recycling organic matter.

'3D Greening' is about extending the green canopy above the garden and into the neighbourhood to provide climate control.

Earlier industry research shows that leafy streets with 50 per cent or more tree coverage increased the median house sale price by 5.4 per cent.

A broadleaf tree in front of a home can increase its price by about A\$17,000.

While large trees may take up too much space in many gardens, gardeners are being encouraged to plant green walls and ceilings.

with JENNIFER STACKHOUSE

The final forecast trend in the industry report is 'Green In and Zone Out', which looks at the psychological benefits of living in a greener environment.

The Report also includes information from a program called 'Which Plant Where', developed at Sydney's Macquarie University in consultation with the nursery industry. This forecasts how climate change, including warming, will affect different species and suggests the best planting choices to make now to accommodate climate change of the future.

The 'Which Plant Where' program is available as a paid app. For more information see <https://www.whichplantwhere.com.au/>.

Tim called to task for guerrilla planting trees

The psychological benefits of green get the thumbs up from garden centre owner Tim Pickles of Tim's Garden Centre at Campbelltown in southern Sydney.

Tim has a passion for shady trees and has been known to do some guerrilla gardening to make sure that there are new trees that will cast their shade well into the future, growing in his part of Sydney.

Recently Tim posted a photo of Chinese elms casting welcome shade over cars in a carpark. He said he was thrilled to see the cars parked in the shade as he and his children had planted the trees.

"I planted these Chinese elms when my children attended St Peter's Primary School," admits Tim. "I parked my car in this tree-

less carpark every morning, when I dropped them off. They helped me plant them.

"I couldn't believe that a 30-plus year-old carpark wouldn't have shade trees planted around it, in a hot place like Campbelltown. So one day I planted these Chinese elms. It's a variety called *Ulmus parvifolia* 'Todd' that doesn't weep like regular Chinese elms."

Tim didn't stop with the elms. "Later I went back and planted some native trees on the other side of the carpark. These *Waterhousia floribunda* have grown beautifully too," he adds. "The world needs more shade."

Despite the need for more trees, Tim says he's been called to task for his tree planting.

"I've found out recently that I'm not supposed to plant trees. I was surprised to learn that you can't even plant trees on your own nature strip. There's no way councils can plant all the trees we need to keep the world cooler. They are going to need our help. They can't pick up all the papers either. We need to all help."

Tim Pickles has more than 16,300 followers on Facebook and posts regularly, sharing his ideas on plants as well as what's looking good in his garden centre.

Indoor plant images on social media used on labels

Enliven Plants, a specialist indoor plant grower in Sydney, has discovered that sharing photos on social media sites such



Chinese Elms guerrilla-planted by Tim Pickles to shade a carpark

as Instagram can work in more ways than one.

When Mark Tyler from Enliven saw the quality of some of the photos taken by customers of his plants and shared online, he decided to use them on plant labels for his Enliven Collector Series.

"The label thing started on Instagram and Facebook," Mark explains. "Many customers were tagging me in their posts on Instagram or Facebook. Some of their pictures were quite amazing, better than images I had previously used on some of the labels, so I just asked them if they wanted to have the image on a

label, that's it." Mark has even featured a label from Craig Miller-Randle, a high-profile indoor plant grower, TV presenter and author of 'Green Thumb', a book on indoor plants.

"I'm extremely happy with the results," says Mark.

Check them out for yourself on Enliven's Instagram feed at:

https://www.instagram.com/marktyler_enliven/

Enliven Plants focuses on the less common lines at affordable prices. "Anything variegated or with fenestrations is always a hit; plain green is now classified as boring," he adds.

Some of the plant labels created from social media pics



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Rosarians Kelvin and Melanie Trimper were keen to have the stamps ready for the World Rose Congress in Adelaide in October



A \$1.3 million research project is investigating whether drones can effectively pollinate tomatoes and strawberries in greenhouses



Polybee Chief Executive, Siddharth Jadhav

protected cropping environments.

Polybee Chief Executive, Siddharth Jadhav, said the micro-drones, which are about 15cm x 15cm in size, hover over each cluster of flowers for up to 15 seconds in a glasshouse setting. The turbulent air from the drone vibrates the flowers to disperse pollen, before the drone moves on to the next plant.

Trials will be conducted in protected cropping environments at Western Sydney University and at Perfection Fresh farms in South Australia.



Some of the 1000 blooms in Fitzroy, Melbourne, on 1 September

Australian-bred roses feature on stamps

While social media and emails have replaced traditional methods of communication, such as letters, there's still a fan club for snail mail, particularly when it arrives bearing a pretty stamp.

A recent stamp release from Australia Post is more than just pretty. These new stamps depict roses bred in Australia for Australian gardens. There are four stamps in the series and each has a story to tell.

Rosarians Kelvin and Melanie Trimper are the champions behind the stamps. They made the submission to feature Australian-bred roses on stamps to Australia Post in 2018 but their concept wasn't selected until early last year.

The Trimpers then worked with Australia Post in Melbourne for 18 months to get the stamps designed, printed and on to our letters. As well as wanting to see roses honoured on stamps gener-

ally, the couple were also keen to have them available for the World Rose Congress, which is being held in Adelaide in late October.

The featured roses represent the work of rose breeders past and present.

'Lorraine Lee', is a pink fragrant tea rose released in 1924. It was bred by the late Alister Clark and recently inducted into the Australian Bred Rose Hall of Fame. Almost a century later, it remains a garden favourite.

In 2018 'Lady of Australia' became the first Australian rose to receive the top honour of a gold medal at the National Rose Trial Awards. It was bred by Victorian Bruce Brundrett, an award-winning rose breeder whose family has been growing and breeding roses for 130 years.

'Lady of Australia' is a yellow-flowered, disease-resistant Floribunda rose. It was named to honour the wives of the governors-general of Australia and is a charity rose for Australian War Widows.

The third rose in the stamp collection is a strong-performing pink Floribunda rose named 'Governor Marie Bashir'. It was bred by Queensland rose breeder Paul Hains and named after former New South Wales governor and long-time rose society patron Marie Bashir.

The Trimpers' fourth choice for the rose stamps is a shrub rose

called 'Dusky Moon'. It was named the Australian Bred Rose of the Year in 2020 and was bred in New South Wales by breeders Richard and Ruth Walsh. Its fragrant flowers are a dusky mauve with white colouring on the back of each petal.

If that's not enough to send you rushing to the post office for stamps, included in the range of



The River Red Gum, widespread across Australia, provides shade along inland waterways

Gums top the poll as favourite tree

IN A poll conducted by the ABC as part of National Science Week in September, the Red River Gum (*Eucalyptus calyculata*) was named Australia's favourite tree.

It received more than 31,000 of the 270,000 votes cast for a group of 33 trees picked to be finalists by a panel of experts in consultation with botanical groups.

Taking second place was the Snow Gum (*Eucalyptus pauciflora*), a native to eastern Australia, its trademark twisted trunk and limbs the result of

harsh alpine conditions.

The Glorious Ghost gum (*Corymbia aparrrerinja*), found in open woodland areas of inland Australia came in third.

The Moreton Bay Fig was a close fourth and the Mountain Ash, the world's tallest flowering tree - and the expert's choice of favourite tree - finished fifth.

collectables is a rose-scented stamp pack, which is also available online.

As well as championing roses for stamps, Kelvin and Melanie grow lots of their own. Their half-hectare garden in Adelaide boasts more than 2000 roses. As well as growing, studying, exhibiting and arranging roses, Melanie loves to photograph her favourite flowers.

Micro-drones pollinate flowers in glasshouses

A \$1.3 million research project is investigating whether small autonomous drones can effectively pollinate tomatoes and strawberries in protected-cropping environments.

Hort Innovation together with Singaporean technology service provider Polybee, Western Sydney University and major Australian grower, Perfection Fresh, hope to use drones to improve labour and production efficiency in glasshouses.

Speaking about the project, Brett Fifield, CEO of Hort Innovation, said pollination of tomatoes in glasshouses is often done by hand, mimicking 'buzz' pollination.

He said strawberries represent an industry currently exploring the benefits of moving from typical field conditions to glasshouse production.

However honeybees, which are vital for strawberry production, do not cope well in a greenhouse environment and alternative methods need to be explored to help these industries succeed in

Flowers light up Melbourne street for Spring

TO HELP Melburnians celebrate the first day of Spring this year, Interflora Australia festooned street signs, trees and Council bins on Fitzroy's Rose Street, marking the start of the new season.

A thousand brightly-coloured blooms, from gerberas to jonquils, Australian natives, and roses, were used in the display which ran from 7am until 4pm on September 1 and afterwards the flowers were handed out to passing pedestrians.

Interflora Australia CEO Gerry

Gerrard said, "Spring is without a doubt the best time of year to be in Melbourne. After enduring another long, grey Winter, we want to inject the colour and joy of Spring back into our streets from the very first day of the happier and most colourful season."

Spring is also one of the busiest

times for Australian florists. Mr Gerrard said Interflora Australia typically sells upwards of 60,000 floral bouquets between September and November.

The most popular blooms include orchids, tulips, and carnations - but the most popular flower is still the humble rose.

"Interflora Australia has already sold 1.5 million roses this year," said Mr Gerrard, speaking at the start of September.



Above: one of the gardens and NGIV ceo Craig Tabener, left, with a group of Victorian State politicians



Display gardens set up in Parliament House

AT THE start of September the Nursery & Garden Industry Association of Victoria set up its third annual Horticultural Showcase in the Queens Hall area of Victoria's Parliament House.

The display gardens, which were on show for one week, along with presentations from industry members, are designed to draw

the attention of local Members of Parliament to the garden industry and its importance to the State.

"Specifically, NGIV is encouraging every Member of Parliament to discover the size, scale, and scope of Victoria's \$2.5 billion horticulture industry and the essential role it plays in growing healthier environments, communities, and economies for Victorians," the Association says.

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Australia's nursery industry continues to expand

THE AUSTRALIAN nursery industry is currently valued at approximately A\$2.8 billion, according to the newly released Nursery Industry Statistics 2020-21 Report.

The industry has grown in both value and total production for four consecutive years. As a result, there is widespread confidence in the industry's future – despite some uncertainty over the past few years.

The following are some key indicators from the report:

Sales were A\$2.8 billion, up 4.5% year on year.

There were 2.3 billion plants sold, also 4.5% up.

88% of growers are confident in the future of the industry.

The industry employs 23,472 people either full or part-time.

Production breakdown

62% of businesses in the nursery industry grow perennials, trees and shrubs.

- 32% are in plant propagation.
- 27% produce indoor plants.
- 25% produce fruit trees, nut trees and vines.
- 19% produce bedding and potted colour.
- 19% herbs and vegetables.
- 12% other.

Vale: Ralph Groves 1937-2022

Well-known Australian nurseryman, Ralph Groves passed away in September.

Ralph was a past President of the Nursery and Garden Industry Australia, now Greenlife Industry Australia. He served as President of the Nursery Industry Association of Australia in 1989, and the Australian Nurseryman's Association in 1985. Ralph was also a past President and Life Member of Nursery & Garden Industry NSW & ACT (NGINA).

In a tribute to her father, Bronwyn Groves said that his contribution and life-long dedication to the nursery and garden industry saw him bestowed the highest honour of life membership with both NGINA and NGIA.

Ralph was born in 1937 to Cyril and Florence Groves. He attended Earlwood Primary School and Newington College. In 1961 he married Catherine Hindmarsh and together they created a family of six children.

In the early years Ralph joined Gordon Morling and Geoff Offord at Five Dock Nurseries, growing the business with a chain of retail outlets, a production nursery at Springwood and a large landscape business.

Ralph and Catherine worked together building the wholesale arm of Five Dock nurseries which in the 1970-80s was the largest wholesale business of the time supplying plants to most nurseries on the Australian eastern seaboard.

Vale: Roy Schirmer 1952 - 2022

Roy Schirmer, owner of Karinga Nursery, passed away suddenly on 7 September 2022.

Roy was involved in the nursery sector for over four decades beginning as a student and eventually establishing his Keysborough nursery, Karinga in 1974. The original one-hectare site produced about half a million pots a year specialising in poinsettias, chrysanthemums, and miniature roses.

The Nursery and Garden In-

dustry Association of Victoria said Roy's hallmark was his progressive outlook and his many changes to traditional growing methods and adoption of automation.

"Roy was an innovator where in the early 90's he installed a greenhouse complete with controlled atmosphere, conveyors, and the first, fully automated ebb and flow irrigation/fertigation system in Australia.

"The 1000 square metre house represents a milestone in Australian horticultural production."



Cowell's GC, Newcastle, Garden Centre of the Year 2022

UK Garden Centres of the Year

The UK Garden Centre Association announced in September that its Garden Centre of the Year for 2022 is Cowell's Garden Centre of Woolsington, Newcastle

upon Tyne. Its Destination Garden Centre of the Year Award went to the Barton Grange Garden Centre in Preston, Lancashire.

UK to ban retail sales of peat

ALL SALES of peat to amateur gardeners in England will be banned by 2024, the UK Government announced in August.

Bagged retail growing media accounts for 70% of the peat sold in the UK.

The announcement follows extensive public consultation which received more than 5,000 responses, with over 95% in favour of the Government taking action to ban retail peat sales.

In making the announcement, the Government also pledged to continue to work closely with the professional horticulture sector on speeding up their transition to peat-free media alternatives ahead of a ban for the professional horticulture sector, recognising that this sector faces additional technical barriers that will take longer to overcome.

It is estimated the UK horticultural industry has been using around 1.7 million cubic metres of peat per year.

The nursery industry's Horticultural Trades Association said of the decision: "We have provided hard data and practical solutions to Defra (the UK's Department for Environment, Food and Rural Affairs) from across our industry. However, it is disappointing that today's decision does not appear to be based on the evidence available."

"The industry is developing new products and alternatives to peat and is making real progress on this journey. It has voluntarily committed to removing peat from growing media in retail as early as 2025 and last year made real strides, removing 30% of peat from compost in one year alone."

The HTA said government red tape and barriers to securing at-scale alternative materials to peat to use in potting mix, like wood chip and wood fibre, were still a problem.

"Defra's announcement does not support progress, and we repeat our ask to the Government that it put its energies into addressing the barriers to alternatives rather than unnecessarily legislating."

RHS to research alternatives

Meanwhile, the Royal Horticultural Society in October announced a new £1 million five-year research project to work with industry and government to develop new peat-free growing media alternatives and best practice for using new products coming on the market.



Barton Grange GC, Lancashire, Destination Garden Centre of the Year

Orchid Festival back at Kew

If you're planning to be in the UK in February, you might want to drop into Kew Gardens to catch the return of their much-loved Orchid Festival which is set to run from Saturday 4 February to Sunday 5 March 2023.

For the first time the Festival will celebrate an African nation by highlighting the landscapes and native wildlife of Cameroon

in the ten different climatic zones of Kew's state-of-the-art Princess of Wales Conservatory, replicating a series of global ecosystems under one roof.

Planned are flower and orchid displays around larger-than-life sculptures including towering giraffe sculptures, a troop of gorillas, roaring lions and wallowing hippos.

A display from last year's Orchid Festival, which featured Costa Rica



Peat ban adds to tough times for Scottish garden centre

"EVERYTHING IN the garden centre is not rosy" reads the heading of an article in The Scotsman newspaper, written by Ken Cox, Managing Director of Glendoick Garden Centre near Perth.

Glendoick was one of the first garden centres in Scotland when it opened in 1973, but Ken says in 50 years of trading, conditions have never been as tough as they are now.

"Like every other business we are facing rising energy bills, high inflation and spiralling costs for raw materials, while our customers are trying to work out how they are going to afford to heat their homes this Winter, put food on the table and meet mortgage payments that in some cases will have quadrupled."

Customers now want a wide leisure experience

"Gardening falls into the category of 'discretionary spending' and the Covid gardening boom has not been sustained now that people are free to travel and socialise again, which means that this sector is having to work very hard for every pound that it brings in the door.

"Those garden centres which are thriving tend to be the ones that, as well as a strong offer in gardening, include a wide leisure experience, offering catering, interesting gifts and accessories and creating the sort of place where people want to linger."

Ken says Glendoick is also concerned about the planned banning of peat use by growers by 2024 because Glendoick isn't just

a garden centre, it is also a specialist nursery which has built an international reputation for breeding rhododendrons and azaleas.

"Until very recently 30% of its mail order sales were to customers in Scandinavia, France, Germany, Italy and Ireland, but Brexit has put an end to all that. Ironically, the export of plants grown into the EU is now acceptable only for plants grown in peat, which we are no longer allowed to use.

"The issue of the proposed peat ban for Glendoick is that we are specialists in acid-loving plants. These are plants such as rhododendrons, blueberries and heathers, which grow naturally on peat in the wild.

"Glendoick has spent many years reducing the peat content of our growing material to the absolute minimum but as yet there is no peat free compost suitable for commercial growing of these plants."

Ken says Glendoick and other ericaceous plant growers have approached the UK's Department for Environment, Food and Rural Affairs for an exception to allow peat to be used to grow certain plants.

"Without this dispensation, commercial production of some plants will move to Europe."

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Left: *Styrax japonica* 'Nightfall Snowbell', chosen as the Best in Show winner in the 2022 US Farwest Show's New Varieties Showcase. Above right: an Award of Merit went to Pretty Parasols Coneflowers (*Echinacea* 'JS Engeltje'), introduced by Concept Plants



Floral industry in US growing and looks set to continue

THE PAST two years the floral industry in the US, which includes bedding, perennial and potted plants, has seen exponential growth, according to the Society of American Florists.

Speaking at the Society's annual Conference recently its CEO, Kate Penn, said:

Average sales at retail flower shops are about US\$679,000. That average is expected to grow by 5 percent in 2023 and two percent for the next few years.

Total spending on floral products from 2020 to 2021 grew 21.5 percent to \$46.6 billion dollars.

Sales of US-grown floriculture crops grew 16 percent from 2019 to 2021, hitting the \$6 billion mark for the first time.

More than a third of that is in annual bedding plants, followed by perennial plants and potted flowering plants, with about \$1 billion in sales each. Cut flowers comprise \$360 million in sales and cut greens are \$105 million.

There's been an 8 percent increase in the number of growers, and that number doesn't include the increase in flower and plant growers doing less than \$100,000 in annual sales, which Penn said is significant.

Imports to the US also increased. Year to date, there has been 28 percent increase in dollar volume and a 15 percent increase in product volume of imported cut flowers, totalling \$1.19 billion.

Kate Penn went on to suggest strategies retail florists could employ to build on the momentum created from Covid:

Don't underestimate what the consumer will spend

"It's worth noting that while inflation may be influencing the consumer and what they spend, most florists are encountering little to no resistance to higher prices during the last year," Penn said.

Go above and beyond with your customer service

In a recent survey about three



Kate Penn – the floral sector has hit US \$6 billion for the first time

quarters of customers said they would continue to buy from companies that increase their prices so long as they get good customer service and the company makes them feel valued as a customer.

Invest in online marketing and sales

The pandemic-era draw to shop online isn't going away, and customers expect an easy, seamless online shopping experience.

Sell plants

Growers have amped up production, and plants have significant potential to draw in a consumer that retail florists may otherwise not attract.

Tout the benefits of flowers and plants

Many retailers are building a wellness message into their marketing and capitalising on various studies that show flowers improve emotional and physical health.

Find operational efficiencies

"What many owners and managers have discovered is that they can do more with fewer people," Kate Penn said, "and they have no intention of going back to previous staffing levels, even if there were the labour pool to support it."

– Source Floral Industry News

Second Court rules in favour of hydroponic being organic

IN SEPTEMBER this year a three-judge panel in the Ninth Circuit Court of Appeals in San Francisco upheld a 2021 District Court decision in favour of the US Department of Agriculture's continuing policy of allowing plants grown hydroponically to be labelled 'organic' and carry the coveted USDA official organic logo, so long as other criteria are also met.

The three-member panel comprised Senior US Circuit Judge Susan Graber, a Bill Clinton appointee, Circuit Judge John Owens, a Barack Obama appointee, and International Trade Judge M. Miller Baker, a Donald Trump appointee.

This is the latest development in an on-going battle where traditional organic soil-based growers argue that edible and other plants grown hydroponically, aquaponically, or in soil-less substrates in containers, cannot be certified organic because their method of production does not 'build and maintain fertility in the soil,' which they say is one of the immutable requirements of the original organic movement.

Most countries around the world currently do not allow hydroponic production to be certified organic, although some make

allowances for certain crops and container systems.

In the US, traditional organic growers have been working mainly through the Center for Food Safety (CFS) to press their case while their opponents have been working through an organisation called the Coalition for Sustainable Organics.

Devaluing the brand

The US Department of Agriculture has permitted plants grown in hydroponic and other soil-less systems to be labelled organic since 2000 in spite of increasing opposition from groups who say it is devaluing the organic brand.

Traditional growers are also concerned at the rapid growth of the hydroponic, aeroponic and aquaponic sectors and say allowing the products of those sectors to be certified organic is allowing



Traditional organic growers in New England have held rallies against hydroponic plants being certified as organic



big corporate agriculture interests into the US \$50 billion organic market, having done nothing to build it.

The Centre For Food Safety and a group of organic growers petitioned the USDA in 2019 to change its policy, among other things asking that:

- Organic certification of aeroponics, aquaponics and hydroponics be prohibited.

- Allowing container production of plants, other than transplants, ornamentals, herbs, sprouts, fodder and aquatic plants, to be certified organic only if 20% or less of their nitro-

gen comes from liquid feeding and if 50% or less of the nitrogen is added after the crop has been planted.

The USDA did not acquiesce to this petition so the Centre For Food Safety and the growers then sued it but a District Court in 2021 granted USDA's motion for summary judgment in its favour. The CFS then filed the appeal to the Ninth Circuit Court of Appeals which has just been turned down.

Is this the end of the matter? Probably not.

Not surprisingly, the Coalition for Sustainable Organics has praised the latest decision saying "The court stood up for our efforts to make organics more accessible to consumers and not limit them to only the wealthy," and added hopefully "We look forward to the organic industry coming together in the wake of this court decision to help

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Hydroponic growers applauded the decision saying “The court stood up for our efforts to make organics more accessible to consumers and not limit them to only the wealthy . . .”

Court rules for hydroponics

continued from previous page

strengthen the organic community, continue to enhance the cycling and recycling of natural resources, and promote ecological balance.”

The Centre for Food Safety had not commented at the time of this writing but commentators say going forward it may either make another petition to the USDA or take its case to the US Supreme Court, a process which could take years.

Private certification schemes possible

Some traditional organic growers are also looking to form their own organisations, outside of the USDA, and run their own certification schemes which they say will give the public confidence that produce labelled organic really is organically grown, according to the original rules.

One of these organisations is called the Real Organic Project, started by a group of growers in New England. It was among the plaintiffs in the recent court appeal and a spokesman, Dave Chapman, did comment after the ruling was announced:

“We lost (again) in our lawsuit against the USDA on the certification of hydroponic crops as soilless organic,” he said, adding that the rest of the world is watching what is happening in the US with dismay and disbelief.

“When I say ‘we’ lost, I mean that ALL of us in the organic

movement lost something today. We lost a bit more trust in our government, in our courts.

“The USDA never wanted to run a National Organic Program. They never believed organic was a better way of farming.

“As former Ag Secretary Dan Glickman said, ‘The Organic label is a marketing tool.’

“It was not seen by the USDA as superior in any way to chemical farming, despite the obvious problems with chemical farming.”

Dan Chapman said there could be problems for people currently employed as USDA certifiers.

“What this week’s legal decision will mean to the good certifiers who refuse to certify hydroponic production as organic is unknown. Certainly, all of us will need to come together to protect them. If we lose these respected certifiers, who knows how long the USDA Organic seal will have ANY relevance to the world?”

FOOTNOTE:

Comm Hort approached Chris Wilson, Chairman of industry body Organics Aotearoa NZ, for comment.

He replied: “OANZ is working through the issue of hydroponics. But we do not have a position on this at present.”

Asked then whether NZ had a national, government-backed policy on this matter he said: “Not at present. There is an Organic Products Bill going through Parliament at present. Related to that will be a set of regulations and standards.”

A Winter of discontent for the horticulture industry in Europe

IT LOOKS like the horticulture industry across Europe is in for some miserable months as the northern Winter sets in.

Fresh out of Covid disruptions and lockdowns, it then faced droughts in many regions, inflation, and now soaring energy prices because of gas supplies being cut from Russia because of the Ukraine war.

The situation is so dire industry sources are predicting big drops in production of all edible and ornamental crops, especially those grown under cover, as growers say there is not enough profit from the plants they grow to recover the costs of heating their greenhouses.

Garden retailers also fear severe stock shortages as the Winter rolls on.

There are likely to be many business failures as well.

One in four expect losses

A survey of high-energy user members of the Confederation of Netherlands Industry and Employers, the largest employers’ organisation in the Netherlands representing more than 185,000 enterprises, found that a quarter expect to make serious losses this year due to the rise in energy prices and another third expect to plunge heavily into the red next year.

Most (84%) claim they cannot pass on all of their increased costs for fear of either pricing them-

selves out of the market, or because they have long-term contracts, or their prices are imposed by their clients.

Commenting on the survey, Dutch plant pot producer, Desch Plantpak, said:

“The dramatically high gas and electricity prices are having a huge impact on horticulture, and we are already seeing the first bankruptcies and/or growers leaving their greenhouses empty or planting much less.”

Demand drop sees plant pot sales down

“So that means they need far fewer pots and trays. We are selling much less volume and are therefore now putting the brakes on our production. In two factories, half of the machines are already at a standstill. This is having a huge impact on our results.”

The company said that over the past eight months, energy costs for its four Dutch factories have increased by 150% compared to last year, more than doubling and nearly triple what it paid in 2020.

Steven van Schilfgaarde, CEO of the big Dutch flower auction Royal FloraHolland, has outlined how the situation has been affecting their flower growers:

“What is happening with energy prices is very serious. Many

Some of the stock at Plantise, an early casualty of the crisis in Europe and described as “an important part of the plant production industry in the Netherlands and Western Europe”



Trucks lined up but going nowhere – one of 15 cold stores operated by the Kivits Logistics Group across Europe. “As things stand, we’re well on our way to bringing the economy to a grinding halt . . .”

growers already know that at the current price, the cost of production will be much higher than the current yields.

“Royal FloraHolland is receiving cancellations from growers who have therefore decided to stop their business. Others are choosing to skip a crop this Winter. And, unfortunately, there are also reports of bankruptcies. The energy crisis is taking its toll on our beautiful sector.”

Minimum wage lift an added factor

One of the early business closures has been that of Plantise, a large Dutch producer of golf and young plants and described as “an important part of the plant production industry in the Netherlands and Western Europe.”

The company announced in early October it was ceasing operations because of “an expected extreme increase in energy costs compared to last season.” It also said a sharp increase in wages and the increase in minimum wages announced by the Dutch government in January were too high to be able to be passed on to customers.

Industry groups and individual businesses across Europe have been calling on their governments to intervene in the energy market, but so far without much success.

Rob van Opzeeland, whose Kivits Logistics Group operates 15 large cold stores in Europe says: “Someone has to do something about the energy market, before things get out of hand.

“As things stand, we’re well on

our way to bringing the economy to a grinding halt.”

He highlights how volatile the energy market currently is:

“On January 1, 2021, not that long ago, electricity cost €50 per megawatt. A year ago, that price had doubled to €101. Last week, it peaked at €693, and yesterday, we were back at €359. During the peak, the price was generally 14 times higher than a year earlier. Presently, we’re at a sevenfold increase compared to January 1, 2021.”

One country that has moved on the energy crisis is Britain and growers there may now find themselves at an advantage because the UK Government in September introduced an Energy Bill Relief Scheme.

Under this the Government will provide a discount on wholesale gas and electricity prices for all UK businesses, horticulture included, meaning their energy bills will be cut by around half their expected level in the coming Winter.

Horticulture is big in Europe

Horticulture is one of the major industries of many European countries and especially so for The Netherlands, Spain, Germany and France.

The Netherlands supplies a quarter of the vegetables that are exported from Europe and is the Number One exporter in the world of live trees, plants, bulbs, roots and cut flowers. It has a 44% share of the worldwide trade in flowers and floricultural products.

The nursery trade also has economic significance in Germany where statistics show some €10.2 billion was spent on flowers and ornamental plants in 2021. More than 125,000 people are employed in the retail trade of flowers and plants, ornamental plant cultivation and tree nurseries.

Costs and drought see harvests down

In September the German Landgard marketing co-operative, which has more than 3,000 grower members, summed up the situation in Germany:

“The entire German economy and population are suffering from the sharp rise in the cost of energy and raw materials. In parallel, high inflation, rising energy prices, and a general sense of insecurity due to the war in Ukraine have led to a noticeable reluctance to consume among consumers. All of this is also having an impact on the member companies of the Landgard producer co-operative.

“In addition, especially in the fruit and vegetable sector, har-

vests are down, in some cases significantly, as a result of the recent Summer drought in large parts of the country.

“In the production of flowers and plants, the consequences of the current crisis are particularly evident in the energy-intensive greenhouse cultivation of ornamental plants.

“As in many other sectors of the green industry, the production costs for our growers of ornamental plants had already skyrocketed long before the start of the Russian war of aggression on Ukraine, partly due to a sharp rise in energy prices and the CO2 tax.

“In addition, there have been massive price increases for packaging, plastic, cardboard boxes and pallets, seeds, pesticides, and fertilizers, as well as enormous increases in transport and freight costs due to the lack of freight space and drivers.

“With energy costs continuing to rise at an incalculable rate, the situation could come to a head. Already, the combination of im-

continued overleaf

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A Winter of discontent

continued from previous page

menently increased production costs on the one hand and reduced demand due to consumer restraint, on the other hand, means that our member farms are no longer achieving the prices that would be necessary to compensate for the increased costs and maintain their operations.

“As a result, family farms, some of which have been established and successful in horticulture for generations, tell us of existential fears and a lack of prospects.”

The picture is much the same in France where industry leaders are also predicting food shortages and price hikes following a troublesome Summer.

Throughout 2022, France ex-

perienced four heatwaves and a drought and one of the crops badly affected has been potatoes.

The harvest for 2022 has been deemed ‘catastrophic’ by the National Union of Potato Producers, which estimates nearly 1.5 million tons could be lost, a drop of at least 20 percent compared to the average of the last 20 years.

The Légumes de France Federation has also estimated losses of between 25 percent and 35 percent in the production and yield of vegetables.

Its President, Jacques Rouchaussé, said that some sowings have also been postponed to prevent the seeds from burning due to the heat:

“We are therefore likely to have delays in the production of turnips, carrots, and radishes.”

All in all, it looks like Europe could be heading for a Winter of discontent.

Fertiliser prices begin to drop

A POSSIBLE PLUS from the energy problems facing growers in Europe and elsewhere could be a worldwide fall in fertiliser prices.

Even though global nitrogen prices are still trading at nearly five times historical averages, Bloomberg reports fertiliser prices overall have been dropping.

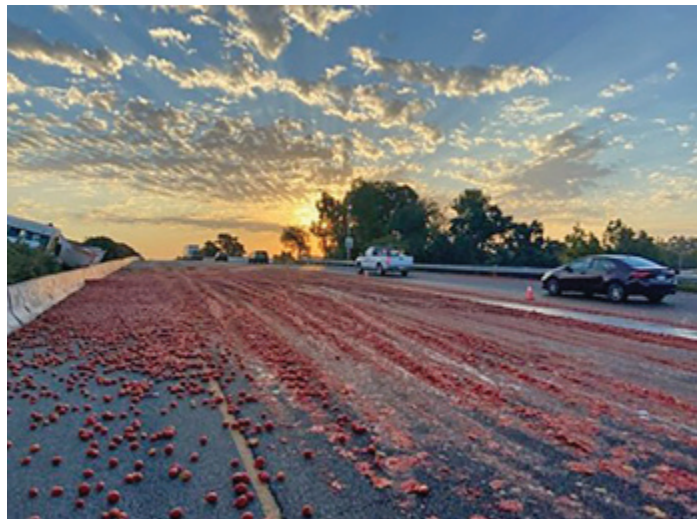
Aside from greenhouse growers cutting back production or closing down, farmers in Europe and the Americas have been holding off on fertiliser purchases, driving down demand and causing gluts.

“Fertiliser prices soared to record highs earlier in the year after sanctions against Belarus, a major producer, and Russia’s war in Ukraine fuelled soaring prices for

crop nutrients. That prompted global fertiliser firms to boost purchases and transport massive amounts of product to avoid supply chain issues,” says Bloomberg.

“These moves have led to bloating fertiliser inventories in some key regions, and farmers just aren’t buying, a situation that’s now weighing on the market. The turnabout is playing out in both the US, a major fertiliser-buying nation and the world’s top corn exporter, as well as agricultural powerhouse Brazil.”

150,000 tomatoes hit the road



A truck caused chaos on a California highway in August when it overturned in an accident, spilling a load of 150,000 tomatoes over the road. Cars slipped or got stuck in the ‘tomato paste’, causing multiple chain collisions which closed the highway for almost a day.

Research project targets rose rosette disease in the US

THE US Department of Agriculture in October announced a \$4 million grant to a team of 21 researchers in nine universities and research institutions across the country to develop rose cultivars that are resistant to rose rosette disease.

They say this is one of the most serious diseases of ornamental plants in the US and has devastated healthy rose collections in botanical gardens, public parks and private landscapes.

It causes roses to grow deformed stems, leaves and flowers and is spread by eriophyid mites.

In their research, the US researchers will be combining traditional plant breeding with molecular genotyping to double the speed of the breeding selection process to try to create new, resistant cultivars.

Comm Hort asked NZ Rose Society President, Hayden Foulds, whether rosette disease was a problem in New Zealand.

“No, we don’t have this in New Zealand or Aus,” he said. “New Zealand doesn’t allow direct imports of Rosa from the US. I suspect Australia is the same. Also we don’t have the insect that transmits it here.”

“I get the odd email from people thinking they have it; rather they have spray damage on their roses which can look similar.”

Roses showing symptoms of rose rosette disease Pic Texas A&M



Customer sues Lowe’s after garden tool chops finger

IF THE situation described below happened in New Zealand, ACC would probably take care of things and there would be no lawsuit – although Worksafe might have something to say.

It does show however, how easily bizarre accidents can happen and how careful retailers have to be with the goods they display:

This report was in the Washington Examiner in mid-September:

“A South Carolina man is reportedly suing home improvement store Lowe’s two years after part of his finger was cut off by a pair of the store’s garden shears.

“Mark Johnson was shopping for children’s garden supplies with his son when his son got hold of ‘unguarded’ garden shears.

“While attempting to retrieve the shears, Johnson’s ring finger got caught between the blades and was severed from the rest of his hand when his son inadvertently closed the shears.

“Johnson was subsequently transported to a hospital for emergency surgery to salvage what was left of his finger, according to a report.

“The lawsuit claims that the store hadn’t properly displayed the shears, instead leaving them out in the open in a dangerous position. This display has yet to

change, which sparked the lawsuit, according to Johnson’s lawyer, Roy Willey. He also claimed Lowe’s has denied its liability.

“We know that’s not true because there are other products, Craftsmen and other brands, that protect the blades on the product,” Willey reportedly said. “And it’s not expensive, but they just flat out refused to do it.”

In calling the offending tool “garden shears” the Washington Examiner probably means what would be called hedge clippers in New Zealand, not secateurs, because it goes on to say:

“I would lay at night thinking, ‘What if it took the whole finger? What if it took four fingers? What if it took my hand? What if it hit my wrist?’ Johnson said of the incident. “I just kept playing it over and over in my head.”

Lowe’s had not responded publicly to the lawsuit at the time of writing.

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New Guide on managing pests

THE 2023 US GrowerTalks Magazine Insecticide, Miticide & Fungicide Guide, sponsored by BASF, is now available for free download.

The new Guide contains up-to-date lists of herbicides, fungicides, insecticides and miticides,

organised by target pests, and currently available in the US.

Some products may not be registered for use in NZ, but there is plenty of other information of interest in the Guide, including how to use beneficial nematodes for pest management, how to set up rotation programs for major diseases and pests, and the importance of pre-emergent herbicides in nursery weed control programs.

The online copy of the Guide is available free at www.growertalks.com/pdf/2022_IMF_Guide.pdf



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Scientists reach the Amazon's tallest tree on fifth attempt

AFTER A two-week 250km trip by boat, up rivers with treacherous rapids, then a 20km trek through dense jungle and mountainous terrain, a group of scientists in September finally reached what they say is the tallest tree in the Amazon jungle.

This is a giant angelim vermelho (*Dinizia excelsa*) in the Iratapuru River Nature Reserve in northern Brazil. It soars to 88.5 metres tall and has a trunk circumference of 9.9 metres.

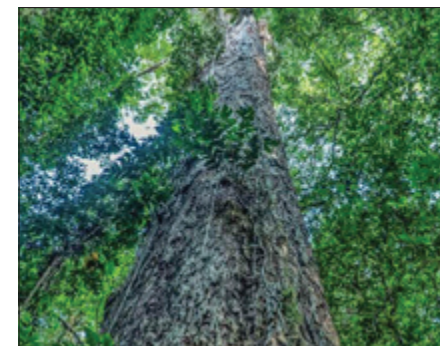
The tree was first identified in satellite images during a mapping project in 2019 and a team of academics, environmentalists and local guides mounted an expedition to reach it later that year. But after a 10-day trek, exhausted, low on supplies and with a team member falling ill, they had to turn back.

Three further expeditions also failed to reach the giant tree, until it was finally visited by the latest expedition in September this year.

One of the nineteen expedition members, forest engineer Diego Armando Silva of Amapa Federal University, told *Agence France-Presse* "It was one of the most beautiful things I've ever seen. Just divine."

- The world's tallest known trees are California redwoods, which have been measured at up to 115.7 metres tall.

The Amazon tree is an 88.5m tall Dinizia excelsa



How our minimum wage compares

NEW ZEALAND'S minimum wage is \$NZ 21.20. How does that compare with other countries?

The figures shown here emerged during a presentation at the International Garden Center Association annual Congress in The Netherlands in early September. They showed the national minimum wages in euros in 13 of its member countries, converted here into NZ dollars at the exchange rate on 26 September:

Australia \$23.13
Netherlands \$18.44

UK \$18.12
Ireland \$17.71
Germany \$17.63
Spain \$15.18
Canada \$14.44
USA \$12.23
Italy \$11.81
Japan \$11.30
Czech Republic \$5.38
China \$5.14
South Africa \$2.27.

Floating solar power system

The water storage pond at the Rob van Vegchel vegetable and flower in The Netherlands, has been entirely covered with 810 floating solar panels to produce its own electricity.

The installation was a joint venture between flexible water storage company Albers Alligator Special Projects and solar energy

and battery supplier Centrica Business Solutions.



Floriade Expo 2022 closes but posts a loss of €46.6 million

THE 2022 edition of the much-anticipated international horticulture exhibition, Floriade, held every 10 years in a different part of Holland, closed its doors in mid-October leaving its host city, Almere, with a loss of €46.6 million.

Its organisers budgeted for two million visitors over a six-month period but only 685,000 came through since the show opened on 14 April. Almere's city council's mayor and its six aldermen, all resigned over the issue.

The show spread over 60ha with participants from 32 countries joining 40 from Holland to stage 400 exhibits and feature gardens along with countless performances, events, displays and competitions. The show's marketing research suggested infla-

tion, Covid, and rising energy prices have changed the way Dutch people want to spend their leisure time. There is apparently no lessening of interest in gardening or horticultural shows but Dutch people are now less inclined to visit day-trip attractions compared to the pre-pandemic era, preferring to take part in social activities with friends or family.

The show's entry ticket price was also seen as high by some target groups.



Artist's rendition of the garden planned by previous Gold Medal winner, Tom Massey, for Chelsea next year

Sustainability theme for next Chelsea

Sustainability and wellbeing will again take centre stage at the RHS Chelsea Flower Show, taking place from 23-27 May 2023.

Restorative gardens, in particular, will be a key theme among show gardens announced by the

Royal Horticultural Society in October. The Show itself will also be more sustainable than ever. Every display garden must be afterwards relocated in some form, whether in full or in parts, and single use plastic will be banned.



Above left: Hebe Wiri Mist – “Although one of the first cultivars I named, it remains in my view the best,” says Jack. “It is attractive year-round and especially stunning when smothered with white flowers in late Spring.” Above right: Hebe Wiri Charm, pictured here in Auckland’s Ayrles Gardens, is an F1 hybrid that has proved especially popular with gardeners

The story of the Wiri Series Hebe

Auckland Botanic Gardens Manager, Jack Hobbs, recounts the long, patient, painstaking journey he followed that led him eventually to introducing plants that have grown to become staples of the New Zealand garden landscape

SHORTLY AFTER starting at Auckland Botanic Gardens I was allocated responsibility for developing the new New Zealand Native Plant Collection.

I think it was in about 1980, and only a few rudimentary plantings had taken place.

Most of the site was barren apart from a few mature tōtara and lots of weeds such as gorse and sheep sorrel.

Over the years this collection has undergone a few transi-

tions, and today we know it as the New Zealand Native Plant Identification Trail.



I was delighted with this opportunity as I was very keen on native plants, with hebes being my favourites.

The collection was organised in the traditional botanical gar-

Jack Hobbs



Hebe Wiri Charm



Hebe Wiri Grace

den taxonomic manner, with plants arranged according to genera, so there were groupings of Coprosma, Phormium, Olearia, Pseudopanax, etc. The hebe collection was at the southern end, not far from where the Friends Building is today.

Gathering a comprehensive collection of hebes was a priority for me, and gradually I assembled a diverse collection of cultivars and species from all over the country.

As much as I loved them, their susceptibility to diseases such as septoria leaf spot and downy mildew made me realise that many were not great garden subjects in Auckland’s warm humid climate. This frustration led me to start a breeding programme in 1982.

We were growing large numbers of Hebe stricta (now Veronica stricta) for revegetation programmes but they were typically riddled with septoria black spot, so I raised large numbers of seedlings of this vigorous species until I found one that remained relatively free of disease.

I named it ‘Wiri Spears’ and we grew it in large numbers for planting in Regional Parks. Ecologists today will shudder when they read this, but eco-sourcing was an unknown concept back then.

Similarly, I raised large numbers of the beautiful but disease-prone H. speciosa (now V. speciosa) until I found one that remained healthy and named this ‘Wiri Jewel’.

I decided to use a common prefix when naming cultivars from our programme so they would immediately be associated with the Gardens.

I toyed with using “Tui” but the registrar for Hebe cultivar names, Laurie Metcalf, declined this request as Tui had already been used in a Leptospermum cultivar name.

I then thought of using “Wiri” which is, of course, the name of a nearby area that was waning in its common usage, and this was accepted. Also I thought “Wiri” had a nice ring to it, so applied it to all the Hebe and Leptospermum cultivars produced at the Gardens.

My objectives when breeding ‘Wiri Spears’ and ‘Wiri Jewel’ were focused entirely on producing healthy offspring. I gave little thought to changing their appearance as I thought hebes were lovely just as they were.

However, I did notice that interesting seedling variants were appearing, and this influenced me to begin crossing selected parents to capture the best aesthetic qualities of each.

This required hand pollination of flowers rather than just collecting open pollinated seed as I had done with H. stricta and H. speciosa.

The process involved removing the corolla from the seed parent with tweezers which also removed the stamens, thus preventing self-pollination.

Also, without the petals insects were not attracted and therefore unwanted cross pollination was avoided. Then I would transfer pollen from the pollen parent to the stigmas of the seed parents. This is a slow process requiring much patience, not my best attribute.

I aimed to produce as many seedlings as possible, and any that developed any disease symptoms would be culled immediately.

For every 100 seedlings raised often only a couple would eventually be planted out to be trialled. Of those planted out only a tiny percentage had the qualities I was looking for as garden subjects.

Tens of thousands of seedlings were raised over the years to produce the 15 Wiri cultivars I named. I should note that a few cultivars were given

the Wiri prefix by others who I believe had sneaked cuttings from our trial plants.

My next lesson was discovering that a good garden subject did not necessarily make a commercially viable cultivar.

Many that remained healthy in gardens were disease prone when grown in typical nursery conditions with plentiful fertilizer and irrigation systems that operated



Hebe Wiri Image another early hybrid that has stood the test of time



Hebe Wiri Splash is “under-rated,” says Jack. “It forms a dense mound of green foliage tinged yellow, and reliably smothers itself with lilac flowers in early Summer”

at night. The attrition rate was high, with probably only 1 in every 10,000 seedlings making it into commercial production.

Despite the challenges I did have some early success. I noted that Hebe diosmifolia (now V. di-

osmifolia) always seemed clean and healthy, and so I decided to cross a pink flowered form of this species with the striking magenta flowered H. speciosa ‘Wiri Jewel’.

The first generation resulted in

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Jack Hobbs in Denmark – “I will never forget arriving at that first nursery and seeing hundreds of thousands of hebes in 100mm pots . . .”

two named cultivars, ‘Wiri Gem’ and ‘Wiri Charm’. These two F1 hybrids have both proved popular with gardeners, especially ‘Wiri Charm’.

‘Wiri Mist’ resulted from a cross between *H. diosmifolia* and *H. albicans* (now *V. albicans*, both invariably healthy garden subjects).

Although one of the first cultivars I named, it remains in my view the best. It is attractive year-round and especially stunning when smothered with white flowers in late Spring.

I have always considered ‘Wiri Splash’ to be underrated. It forms a dense mound of green foliage tinged yellow, and reliably smothers itself with lilac flowers in early Summer.

‘Wiri Image’ is another early hybrid that has stood the test of time. It was still under trial when a well-known nurseryman contacted me to say he had plants ready to sell from cuttings he had taken (without authorisation)

and asked what its name was. I was blown away by his audacity, but luckily it proved to be a great shrub.

I observed that F1 hybrid seedlings were quite uniform in their appearance, with characteristics intermediate between their two parents (i.e., flowers and foliage roughly halfway in size and colour between those of the parents).

Broadening opportunities

This uniformity disappeared as hybrids appeared with increasing numbers of species in their pedigree. This resulted in new offspring that bore little resemblance to wild species, and it broadened the opportunity to produce novel new hybrids.

In 1990 I was invited by hebe growers in Denmark to visit their growing operations. I will never forget arriving at that first nursery and seeing hundreds of thousands of hebes in 100 mm pots.

More than two million were

produced annually and distributed around Europe. It transpired these were mainly used as house plants, displayed perhaps in a window box for a few months then disposed of.

This was quite unlike our attitude to house plants here where tired old house plants would be planted in the garden when no longer suitable for display indoors.

I was invited back to Denmark a second time in 1993 to again meet with their growers. However, when I became acting manager of the Gardens in 1996 I no longer had time for plant breeding and the programme ended.

This was a shame as I had assembled a rich portfolio of breeding material and, having also worked closely with Dr Keith Hammett on other plant breeding programmes, had accumulated extensive knowledge.

In recent years I have resumed my hebe breeding programme on



Hebe Wiri Image

a relatively small scale at home. If I can produce a few more cultivars with the performance and health attributes of ‘Wiri Mist’ in a wider range of flower colours I will be delighted.

This article and the one opposite first ran in ‘The Auckland Garden,’ newsletter of the Auckland Botanic Gardens, and is published here with their kind permission

The flowers of Hebe Wiri Charm



The re-naming of the well-known Hebe into Veronica has certainly caused confusion and some distress, says botanist Dr Ross Ferguson, who here provides this background

Why Veronica and not Hebe?

MANY GARDENERS have the unworthy suspicion that botanists enjoy changing plant names just to cause confusion.

Many gardeners have the unworthy suspicion that botanists enjoy changing plant names just to cause confusion.

The shift of the well-known Hebe into Veronica has certainly caused confusion and some distress.

Actually, most botanists would like stability in plant names but sometimes there is no option but change. Such changes in taxonomy are usually the result of increased knowledge, of a better understanding of the relationships between plants.

It also has to be remembered that plant taxonomy requires judgement, that taxonomists may differ in the importance that they place on certain morphological characteristics or in how they can keep name changes to a minimum. Changes to the boundaries of one genus can cause consequential changes in a number of genera.

The first formal descriptions of New Zealand hebes were published in 1786 by George Forster. He accompanied his father on Cook’s second voyage.

He published descriptions, very brief but sufficient, of them as *Veronica elliptica* and *V. salicifolia*. *Veronica* is a genus of mainly rather lowly herbs, lowly, that is,

compared to our hebes which are more like shrubs.

Subsequently, over the next 150 years, many New Zealand hebes were identified and named as belonging to the genus *Veronica*.

The genus *Hebe* had long been established (1789) but was not generally used until the treatment in 1921 of some South American species.

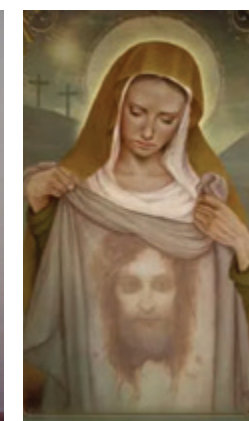
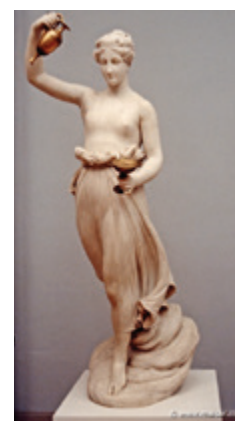
Hebe was separated from *Veronica* on the basis of capsule dehiscence, the plants being trees or shrubs, the nature of their inflorescences and the restriction of the genus to the Southern Hemisphere.

New Zealand botanists, such as Cockayne, soon agreed. In the mid-1920s, the hebes in New Zealand were shifted from *Veronica* to *Hebe*, some related genera were eventually established, and *hebe* became the commonly accepted popular name.

Until recently, morphological similarities were about all taxonomists could rely on, but now use of molecular studies involv-

The names *Hebe* and *Veronica* both celebrate women. *Hebe* in Greek mythology was the daughter of Zeus and his sister Hera.

Veronica is named for St Veronica who reportedly gave Christ her veil when he was on the way to his crucifixion so that he might wipe his face



ing DNA to look at relationships between plants is encouraging taxonomic revisions.

Such studies indicated that *Veronica*, *Hebe*, and other related genera such as *Parahebe* were paraphyletic – in other words, all

the plants with a recent common ancestor were not in the same taxon (in this case, genus). It is generally accepted that plants with a recent common ancestor should be together.

There were two main possible solutions: split *Veronica* into a number of smaller genera causing numerous name changes or put *Hebe* and related genera back into *Veronica*.

Botanists often prefer to “lump” rather than “split”, so Phil Garnock-Jones, the specialist on New Zealand hebes, believes that it is better to “lump”, to put *Hebe* and related genera (including the wonderfully named *Hebejeebie*) back into *Veronica*.

This seems to be the current

consensus between New Zealand botanists. Gardeners can be relieved that *Hebe* can still be used as a common name and in the nursery trade. *Hebe* or *Hebe ‘Wiri Mist’* is still acceptable.

The names *Hebe* and *Veronica* both celebrate women. *Hebe* in Greek mythology was the daughter of Zeus and his sister Hera. She was cupbearer to the gods serving them with nectar and ambrosia.

According to some sources, she lost this role as she could not hold her liquor, not good in a cupbearer. She was the Goddess of eternal youth and had the rare ability to restore youth to mortals. (I have not found why the plant was named for her.)

Veronica is named for St Veronica who reportedly gave Christ her veil when he was on the way to his crucifixion so that he might wipe his face. *Veronica* became a common European name for the plants and was adopted by Linnaeus, possibly because another common name was “speedwell”.

Reference: P. Garnock-Jones, D. Al-bach and B.G. Briggs. *Botanical names in Southern Hemisphere Veronica (Plantaginaceae): sect. Detzneria, sect. Hebe, and sect. Labiatoidea. Taxon* 56 (2007): 571-582.

“Gardeners can be relieved that Hebe can still be used as a common name and in the nursery trade. Hebe or Hebe ‘Wiri Mist’ is still acceptable . . .”

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Phalaenopsis orchids are one of the lines produced by Moffatts Flower Company along of course with cut flower roses



Curator of Landcare Research's NZ flax collection, Katarina Tawiri, guided the group around the collection of Maori weaving flaxes. Right: Landcare's Plant Variety Rights collection is made up of a large number of coloured flaxes that have been grown over the years



– IPPS members meet for Christchurch Field Trip –

Cancelled by Covid last year, an early Spring Field Trip to nurseries around Christchurch was a welcome return to normal for the IPPS. Hayden Foulds reports . . .

IPPS gets back on the road with a field trip around Christchurch

AFTER BEING delayed a year due to Covid, IPPS members and others met for a field trip in Christchurch at the start of September.

For many, not only was it a great chance to visit a few nurseries but also to catch up with others that they had not seen for a while.

The first visit was to **Moffatts Flower Company** where Production Manager, Lenny Arkesteyn, showed us around.

Moffatts are the largest grower of cut flower roses in the South Island with 35 varieties in production. These are regularly renewed with newer varieties from overseas breeders.

They also grow a few Phalaenopsis Orchids and in recent times, have expanded into houseplants

to capitalise on the increased interest in these. Both plants and flowers are sold from an onsite shop, through the market and to florists around New Zealand.

Manaaki Whenua **Landcare Research** at Lincoln was our next port of call where we visited the NZ Flax Collection and the Allan Herbarium.

We were guided around the flax collection by curator Katarina

Tawiri, who spoke about the three different parts of the collection.

The collection of weaving flaxes contains more than 60 different selections of Maori weaving flaxes that had been collected and donated by the late Rene Orchiston.

A collection of coloured cultivars forms the Plant Variety Rights reference collection while there is also a collection of wild flaxes from different parts of the country. This highlighted the diversity among wild populations including one that had its leaf measured at 28cm in diameter!

Dr Ines Schonberger gave us a tour of the Allan Herbarium which was a highlight of the trip. The collection contains more than 800,000 specimens ranging from plants to the likes of algae, mosses and liverworts. A range of different parts of plants are

The Allan Herbarium at Landcare Research was a highlight of the trip. This collection contains more than 800,000 specimens, ranging from plants to the likes of algae, mosses and liverworts. Below right: some of the herbarium specimens collected by Joseph Banks on Captain Cook's voyage to New Zealand in 1769



Below: Plugs of ferns growing on for larger grade sales at Fern Factor. The nursery has movable benches along with a rail system down the centre of the nursery to help cut labour costs



Below right: Crop covers are used at Ambrosia Nurseries to protect plants from the elements and have them looking their best for dispatch



Ambrosia Nurseries have invested in mechanisation including in dispatch where conveyer belts are used to process orders

also housed in the collection including seeds, fruit, wood and microscope slides.

Increasingly the collection is being digitalised and being placed online but the Herbarium is accessible to anyone who wishes to visit and use it.

It also accepts material to be preserved from around New Zealand. The oldest specimens in the collection were collected by Joseph Banks in 1769.

Ambrosia Nurseries was our next visit where we were welcomed by Greg Kitson and his staff. The nursery produces 1.3 million trees, shrubs and perennials a year for the big box stores.

In recent times, it has invested in mechanisation and this was on show in the dispatch shed. Plants were brought in by forklift on to a moving belt, then went through a conveyer belt where they were

cleaned, labelled and then packed on to trolleys ready for dispatch.

Outside, 10,000 square metres of crop cover helps to protect plants from the elements and have them looking good.

After a very busy morning, lunch at Lincoln University was a welcome break and a further chance to have a chat with others.

The final visit of the day was to **Fern Factor** where Paul Michael gave an interesting insight into propagating and growing ferns as we toured the nursery. I think we all learnt growing ferns is not for the faint hearted!

Fern Factor grows a range of native and exotic ferns ranging from ground to tree ferns for the growing on, landscape and retail markets. Growing ferns is very labour intensive and Paul said he had very good staff on board.

He has also developed ways to



Members of the field trip group take a breather on reaching the 2000 year-old totara tree at Montgomery Reserve on Banks Peninsula

tion of these has been expanded although it now seems that demand is levelling off again. Every area possible is pressed into action for growing plants in the covered houses.

Trents Nursery at Prebbleton was our next stop where Dave and Julie Sommerfield welcomed us to the nursery. Trents are a leading grower of perennials to retailers in New Zealand and also produce the Flower Carpet series of roses.

There was plenty of stock coming on for Spring, and a full dispatch shed ready for Monday deliveries was a good sign. In the nursery, automation is used with potting machines and conveyer belts delivering plants to standing out areas.

rton Bush, the group then set off for the first visit of the day, to **Clarks Nursery** at the foot of the Port Hills.

Paul and Jenny Clark welcomed us to their nursery which was started by Paul's father in 1978. The nursery specialises in houseplants, topiary and succulents plus a selection of other lines supplied to garden centres, landscapers and hire plant companies in the South Island.

In recent times with the strong interest in house plants, produc-

Left: Some of the houseplant range grown by Clarks Nursery



It was a short walk down the road to **Parva Plants** where Greg and Jenny Tod welcomed the group. Parva specialises in mail order to gardeners around New Zealand with a large customer database. Sales through their website now account for a large part of their business while, when they first took over in 2007, there were more orders coming in by phone and mail.

Mail order has its challenges as Greg and Jenny described including freighting plants. Parva uses a module system of packing plants and as demonstrated its

Below left: some of the large range of perennials produced by Trents Nurseries Below right: a section of the production area at mail order nursery Parva Plants



Kiwiflora Nurseries produces a range of trees and shrubs for the wholesale and landscape markets. Above right: a new block has recently been added to the nursery to cater for more production of large trees



cartons of plants can go upside down without any problems.

A more recent change has been to larger pots for production which has resulted in better quality plants.

We then headed to **Kiwiflora Nurseries** where Nalin Gooneratne welcome the group. Nalin

purchased the business three and a half years ago and along with his team, has been tidying up and expanding it. Now covering 7.5ha, Kiwiflora produces a range of trees and shrubs for the wholesale and landscaping markets. This includes a good range of specimen grade trees.

A retail outlet has also been developed and a strong online presence has increased sales as well. Kiwiflora currently employs 10 full time and three part time staff. The final stop of the tour was a 2000 year-old totara tree at Montgomery Reserve on Banks Peninsula which allowed every-

one to stretch their legs before dinner at the Tai Tapu Hotel brought the field trip to a close.

Thank you to Jill Reader and everyone else involved in organising a fabulous weekend and to those nurseries who opened up for the group.



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It is envisaged that looking for plants displaying the new Certified Gardening Responsibly eco-label will become normal behaviour that will allow customers to make informed decisions around their purchases, in the same way that country of origin, ingredients, and nutritional information now does for products in Australia . . .

Gardening Responsibly - a new tool in the fight against invasive plants

EXCITING NEW research will encourage stakeholders and consumers to select, grow and use environmentally safe ornamental plants.

Right back since the first Europeans arrived in Australia, settlers started introducing plants to supply a reliable food source, and pining for the homelands, to capture the ambience of the lands they left far behind.

It was not long though before some of these introduced plants started to stray into the environs. With a favourable climate, they started to reproduce at a rate they could only dream of in their native lands. This drastically affected the existing flora and fauna.

Attempts to control this invasion have been marginally successful at best.

In Australia, it is now estimated a new weed appears every 18 days and 12 of the new plants that naturalise each year have jumped the garden fence. 72% of weed spe-



cies were accidentally introduced as garden ornamentals, having a devastating effect on the Australian flora and fauna and costing the economy around \$13.6 billion per year.

Over the years, initiatives have been introduced to prevent high-risk plants from escaping the home garden and wreaking havoc in the natural environment. Until now, the

Plants classified as low risk can display the Certified Gardening Responsibly label



two most popular methods have been to ban high-risk plants and offer alternatives to certain known escapes that tend to invade the landscape.

Various government authorities from the federal to local council level have introduced lists of banned plants and the green industry has supported programs like "Plant Me Instead." Both of these methods are definitive.

The banned list says don't grow or sell this plant or you could face a fine for doing so. The Grow Me Instead booklet is a standard but limited list of common plants that states, "don't grow this plant, plant this one instead."

New Zealand has taken a similar approach with a banned list and "Plant Me Instead" booklets. Both countries have active weed control and eradication programs. But while weed control and eradication are vital, without an effective way of slowing the rate at which new plants jump the fence and try their luck at colonising the local landscape, it can look a little like the ambulance at the bottom of the cliff scenario.

What's been missing is a dynamic approach, one that assesses plants for their risk to the environment, a system that is constantly evolving and able to keep pace with new introductions. Five years ago, a consortium was

formed in New South Wales with a brief to address this problem. In consultation with more than 650 stakeholders and with the aid of the NSW Government through its Environmental Trust, Professor Michelle Leishman and her team of researchers at Macquarie University, Sydney, conducted the initial research and developed a ground-breaking "Ornamental Plant Decision Support Tool" which is used to predict levels of a plant's invasive risk. Now this has given rise to the Plant Sure scheme and a Certified Gardening Responsibly eco-label.

Making it easier to select low-risk plants

This voluntary initiative is designed to inform customers about a plant's risk to the environment. This can be done online or at the time of purchase, making it easier for gardeners, landscapers, and growers to select plants that have a low risk of becoming invasive.

Using the Ornamental Plant Decision Support Tool, each plant is individually researched to find information about its history, its biology, and its ecological impact. Those that are of low risk can display the Certified Gardening Responsibly eco-label. The Garden Responsibly Plant Sure website also supplies a portal for consumers to check their plant choices and the risk of these plants to the environment. Garden centres and growers can use the website to request a plant risk assessment for plants that are not yet evaluated.

It is expected that in time most ornamental plants grown and sold will have been assessed for their invasive risk.

The success of this initiative will be public awareness. After the official launch of the program in September this year, a media campaign aimed at educating consumers to garden responsibly began.

It is envisaged that looking for plants displaying the Certified Gardening Responsibly eco-label will become normal behaviour that will allow customers to make informed decisions around their purchases. In the same way that country of origin, ingredients, and nutritional information now does for products in Australia.

The scheme is the result of a partnership involving the Nursery and Garden Industry NSW & ACT, the Australian Institute of Horticulture, NSW Department of Primary Industries and NSW National Parks & Wildlife Service.

It is currently being trialled at select locations in NSW, including wholesale and retail nurseries, some of which supply Bunnings, but is designed eventually to go national.

It is incumbent on the whole of the greenlife industry to embrace this program and increase public awareness of the impact that invasive species have on the natural environment. Garden centres, being the main interface with the home gardener, need to be across this program so they can promote the benefits of the Plant Sure scheme and Certified Gardening Responsibly eco-label to their customers.

Footnote: There are reckoned to be around 30,000 plant varieties currently traded in Australia and some 2700 invasive species already established, with more than 20 new ones joining them each year.

1. 18 days -Sheppard A, Glanzig A (2021). Fighting plagues and predators Australia's path towards a pest and weed-free future. CSIRO, Canberra, Australia
2. 72% - Groves, RH., Boden, R., Lonsdale, WM. (2005). Jumping the Garden Fence: Invasive Garden Plants in Australia and their environmental and agricultural impacts. Ultimo, NSW (WWF-Australia). <https://ro.uow.edu.au/sspapers/4141>
3. \$13.6 billion- Hoffmann BD, Broadhurst LM (2016) The economic cost of managing invasive species in Australia. NeoBiota 31: 1-18. <https://doi.org/10.3897/neobiota.31.6960>
4. <https://www.gardeningresponsibly.org.au/>
5. I need to declare here that I am a member of the Gardening Responsibly governance group

What makes controlled release fertilisers release their nutrients?



Dr Sam Stacey

RECENTLY, COMM Hort came across an article in an overseas consumer magazine advising home gardeners on how to look after their houseplants and it contained this sentence:

"For potted plants, add a slow-release type of fertiliser to the soil mix before planting. Every time you water, a little fertiliser is released, providing a steady flow of nutrients."

Not convinced that is exactly correct, we asked one of the top authorities on controlled and slow release fertilisers, Dr Sam Stacey, to comment and explain what really triggers and governs the release of nutrients from these products.

Sam is Technical Manager Asia Pacific for ICL Specialty Fertilisers, producers of Osmocote and he kindly provided the following information:

"Yes, you are correct that nutrient release from fully coated controlled release fertiliser should not increase if you irrigate more frequently.

"Some aquatic plant growers use Osmocote, fully submerged in water, and the release rate is similar to that in terrestrial nursery pots. I read (the author of the article) Melinda's comment as a way of explaining that controlled release fertilisers supply nutrients consistently, which is correct, rather than an explanation of the precise mechanism.

"Within ICL we think of slow and controlled release as different types of fertilisers. We normally use 'slow release' to describe slowly soluble and uncoated compounds, like

methylene urea, IBDU, rock phosphate and elemental sulphur.

"They dissolve slowly because they are not very soluble in water. Their release rate is also harder to predict than controlled release because it can depend on many factors like particle size, soil pH, microbial activity, soil moisture and the solubility of the compound. For these types of slow release products it is possible that increasing the irrigation rate will also increase nutrient supply."

Coating controls the release rate in CRFs

"We use 'controlled release' (CRF) to describe a soluble fertiliser that has a resin or polymer coating. The coating controls the nutrient release rate into the soil, an example of which is Osmocote.

"Controlled release fertilisers are more consistent and predictable in their release rates because, in the case of Osmocote, once moisture is available the release rate is determined by temperature.

"Other factors that can affect slow release fertilisers, like pH, particle size, microbial activity,

etc, do not have a measurable effect on release from CRF.

"So the mechanism for CRF release is:

"Moisture needs to be present. This is effectively the 'trigger'. Water is absorbed through pores in the coating, which begins to dissolve the nutrients inside the CRF granule.

"Dissolved nutrients passively diffuse out of the granule through pores in the coating in response to a concentration gradient (high concentration within the granule to low concentration in the soil).

"The release rate is affected by the properties of the coating, which is determined during manufacture (a more porous coating will release nutrients faster). This is how we can manufacture products with different longevities.

"Release rate is also affected by temperature. Temperature increases the rate of diffusion across membranes by increasing the energy and motion of the atoms, a bit like how many chemical reactions occur faster when temperature is increased. If you Google "diffusion rate and temperature" you will find a lot of explanations about how this works.

"For further information readers could search for the online

book, 'Trenkle ME (2010) Slow and Controlled Release and Stabilized Fertilizers.'

"While written mainly with agriculture in mind, the book provides good technical explanations of various enhanced efficiency fertilisers and compares their performance and efficiency gains."





To lift the pH of your growing media you adjust the pH of your irrigation water, right? Wrong, says US growing media expert Ed Bloodnick.

Contrary to popular belief, he says, the pH of the water does not influence the pH of the growing medium. Ed posted the following article on the Premier Tech website in September . . .

How to maintain the proper pH of a growing medium

WHEN ASKED, “How do you maintain the proper pH of a growing medium?” often, the answer is to adjust the water pH to achieve a growing medium pH in the ideal range of 5.6-6.2.

This is simply not true. Many hydroponic companies suggest nutrient programs that use reverse osmosis to strip the water of all mineral elements and then use a series of fertilisers to reintroduce the elements removed and add those elements needed to maintain proper vegetative plant growth and flowering.

By doing so, the theory is that the growing medium pH should remain stable and not drift into

unwanted ranges, and proper fertility levels can be maintained.

Ed Bloodnick is Horticulture Director US-South East, for Premier Tech Horticulture, a company supplying horticultural products to growers through North America and Latin America. One of these is Pro-Mix, a range of peat moss-based growing media products it first introduced back in 1968.



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Water alkalinity

As stated above, water alkalinity is a measurement of carbonates and/or bicarbonates in the water, or another way to put it is the amount of limestone dissolved in the irrigation water.

The higher the alkalinity, the faster the pH of the growing medium climbs, regardless of the water pH).

If water is passed through a reverse osmosis unit, then alkalinity is very low, so the water does not cause the pH of the growing to rise quickly.

Reverse osmosis units are not necessary for most water sources if the fertilizer is properly matched to the water profile and the crop is grown.

Fertiliser

Quality water soluble fertilizers typically have the potential acidity or potential basicity posted on their labels to predict their influence on the pH of soilless growing media.

For example, the higher the potential acidity of the fertiliser, the more acid it is. This is often determined by the ratio of nitrogen forms.

Ammonium and urea are acidic forms of nitrogen that cause growing medium pH to drop, and nitrate is basic, which causes growing medium pH to rise. Therefore, if your water has high alkalinity, a fertiliser that has a higher ratio of ammonium to nitrate can be used to minimize pH climb in a growing medium.

Also, as a rule, most calcium-based fertilisers are alkaline and cause the pH of the growing medium to increase even if the water goes through a reverse osmosis unit.

Crop

When plants take up fertiliser elements through their roots, these elements all have either a negative charge or a positive charge. The plant has to maintain its internal electrical balance, so in order to obtain a positively charged element, such as ammonium, potassium, calcium, magnesium, etc., the plant will release hydrogen into the growing medium, which causes a slight drop in pH near the plant root.

Likewise, when a plant root

takes up a negatively charged element such as nitrate, phosphorus, sulfate, and most micronutrients, it will release hydroxide ions, which will cause a slight pH rise.

Depending on the plant's requirement for these individual elements, some use a higher ratio of positively charged fertiliser elements, so they are more efficient at acidifying the growing medium. Other plants use a higher ratio of negatively charged fertiliser elements and thus are more efficient at increasing the pH of the growing medium.

To review, the pH of the water does not influence or predict the pH of Pro-Mix or any growing medium.

Adjusting the water pH to the ideal growing medium pH of 5.6-6.2 does not mean the pH of a growing medium will remain in this range.

Often growers experience nutritional problems because the pH changes independently of the pH of the irrigation water.

For more information see www.pthorticulture.com

Biodegradable cling wrap made from potato waste

AN AUSTRALIAN company, Great Wrap, is manufacturing cling film made largely from starch extracted from waste potato peelings.

The starch is mixed with other ingredients including used cooking oil, the starchy root vegetable cassava and biopolymer additives, before being extruded into the film which the company says has similar appearance and performance qualities to petroleum-based plastic cling films.

When discarded into landfills or home composting systems, tests have certified it will break down within 180 days.

“Great Wrap breaks down the same way as food scraps, into food and energy for the microbes in your compost,” says Julia Kay, who founded the company with husband Jordy.



Jordy and Julia Kay, inventors of Great Wrap

The company recently raised A\$24 million from investors to set up a bio-refinery with the capacity to manufacture 30,000 tonnes of wrap by the end of next year.

If this target is achieved, Great Wrap will be Australia's largest cling wrap manufacturer.

The product is already available

in Australia and is currently launching in the US with plans to open a manufacturing facility there next year.

Great Wrap says its two existing facilities are on track to divert 50,000 tons of potato waste from landfill this year, with this figure potentially increasing to 300,000 next year following its US launch.



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The PolBionix pots are made from biopolymers made from sugarcane, cassava or corn, combined with a biofiller of waste organic matter. Right: two of the Scion researchers who worked on the project, Maxime Barbier and Gerty Gielen



NZ-developed biodegradable plant pots possible next year

PRODUCTION PLANT pots and trays made from a fully biodegradable material developed in New Zealand could be available by September next year.

The material, called PolBionix, is the result of four years research on plastic substitutes at Scion, the NZ Forest Research Institute in Rotorua, latterly in conjunction with commercial start-up, Wilson and Ross Ltd.

The breakthrough claimed is that the pots will behave much the same as plastic production pots in nurseries for at least 12 months but begin biodegrading when planted in the soil, becoming fertiliser for the plants in them.

The pots are made from biopolymers made from sugarcane, cassava or corn, combined with a biofiller of waste organic matter. Manufacturing is planned to scale up after production processes have been fine-tuned using funding received from the Gov-

ernment's Plastics Innovation Fund.

The pots can be produced using existing plastic injection moulding processes or manufactured with thermoforming and film blown processes.

A Scion Press Release said its polymer technologist Maxime Barbier developed various formulations in the project's discovery phase, with product testing carried out in small batches. Early results were mixed. However, the team eventually developed a prototype that showed promising biodegradation properties in 2020.

Scientist and technical lead of Scion's Biodegradation Testing Facility, Gerty Gielen, joined the project after the strong candidate was found. More in-depth analy-

sis was then done using Scion's accredited biodegradation testing facility, the only one of its kind in Australasia.

"Biodegradation is defined as the breakdown of material into carbon dioxide, water and microbial biomass. That's what we were testing for in our facility that mimics typical conditions for home composting. We found one product responded very favourably after 12 months."

Gielen says the results are extraordinary.

"People have explored the idea of creating biodegradable plant pots for at least 10 years and many companies have given up along the way. There are so many formula combinations and permutations, so to dis-

cover a formula that works feels like winning the lottery."

Wilson and Ross will be handling the commercialisation of the PolBionix pot range but details are yet to be released.

The pots are currently being tested in nurseries and Auckland City Council has trialled 100 in plantings at Waitawa Regional Park and at Anchorage Park School, part of Auckland's Eastern Busway Infrastructure project.



The man behind the new pots, Peter Wilson

In addition to private investment, funding support for the development of the material over the past four years has come from Callaghan Innovation, Auckland Council's Waste Minimisation Fund and the MPI.

Electric weed killer promising

MASSEY UNIVERSITY PhD student, Dan Bloomer, in conjunction with Professor Kerry Harrington, have come up with a device for killing weeds using very small amounts of electric current, making it safe to use across a wide range of weed types.

The device delivers its low level of electric current at a pulse rate of microseconds to targeted weeds.

"It is similar energy levels to an electric fence but multiple times a second," Dan Bloomer told Farmers Weekly. "It will jolt you, like an electric fence, but it is not as dangerous as if you were shocked by household mains."

The device has proved effective on seedlings of wireweed, fat hen, redroot, black nightshade, com-

mon speedwell, shepherd's purse and thistles.

Bloomer's work fits under AgResearch's wider project investigating weed resistance in NZ, a problem lead scientist Trevor James says is increasing at a rate beyond expectations.

He says Dan Bloomer's device has potential because it could be attached to robots which with artificial intelligence could operate at night to scout for and destroy weeds.

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