

SOILLESS AUSTRALIA

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A new beneficial
insect for IPM

**Moving ahead
after COVID-19**

**BIOMASS & BIOGAS
EXPLORED**

Understanding thrips

Online events keep growers informed

While more and more events are cancelled or postponed in the face of COVID-19, some are going online with access available to all.

One of the first to make the transition from the field to the cloud was the East Gippsland Vegetable Innovation Days (EGVID2020), which ran for three days from May 5. While seed demonstrations were able to go ahead at the Maddies Paddock site at Bulmer Farms in Lindenow, Victoria, with a maximum of 50 growers in attendance, much of the information was available online.

EGVID2020 posted live happenings every hour from 8.30am-4.30pm to its Facebook and Instagram pages with frequent Twitter alerts.

A video production crew was on hand throughout the event to gather a wide range of footage and insights about the trials. Post-event, a series of videos capturing the extensive trial site will be hosted on the AUSVEG website — making it a valuable resource long after the crops are gone, an initiative made possible by Hort Innovation and a suite of industry sponsors, led by Zorvec Active from Corteva.

Paddock to cloud

Agfest, Tasmania's major agricultural field day event, is organised annually by the Rural Youth Organisation of Tasmania Inc and normally runs over three days in the first week of May. However, this year it was moved from its traditional site at Carrick in northern Tasmania to become an on-line event.

The virtual event was extended to run over 21 days in May. By going online, organisers were able to provide a platform for companies who would have exhibited to do business even though the live event was cancelled.

GreenTech Webinar brings world together

GreenTech in Amsterdam is one of the many large international trade shows postponed due to COVID-19. Originally scheduled for June 2020, it will now run in October this year.



In the meantime, GreenTech has launched online with a series of webinars open to all in what's being described as a hybrid event. The first GreenTech Webinar was held on May 7 with more than 1600 participants tuning in from 92 countries around the world. The theme was 'How COVID-19 accelerates change in safe and secure food systems'.

Despite a few technical glitches, the webinar managed to bring together input from greenhouse growers and experts around the world and included audience questions and online polls.

Taking part were Rob Baan (CEO, Koppert Cress), Mariska Dreschler (Director Horticulture, GreenTech) and Meiny Prins (CEO, Priva) all from The Netherlands. Mike Zelkin the CEO of 80 Acres Farms in the US provided the American perspective. Tom Freyberg (Director, Atlantean Media, UK) moderated the webinar and began by describing the path out of the pandemic as a "marathon not a sprint" as we come to adapting to the challenges of COVID-19 and asking how we can innovate our way out of the crisis.

Each of the panelists spoke of their own experiences during their country's COVID-19 lockdown and offered insights into how the pandemic can make a strong argument for the wider use of greenhouse and indoor growing.

Mike Zelkind said food shortages on supermarket shelves in the US showed the importance of shortening supply lines to get food production closer to cities.

"The pandemic is going to be a catalyst," Mike told the international audience. His business also reached out to their community with a program called 'Veg Out' offering customers boxes of produce to pick up 'kerbside' at farms. Mike said they are also working with chefs and hospitals providing food and meals. His message was "to survive so we can thrive in the future".

Rob Baan reported that an unthinkable million or more restaurants in Europe had been closed for three months due to COVID-19 and the pandemic had shown the need for "local for local" and for growers to concentrate together for logistics.

Meiny Prins warned that the longer the borders are closed, the "scariest" it will be for her business but she was reluctant to close down current projects as that risked losing the momentum of work under development.

She also highlighted the behaviour of banks



Meiny Prins, CEO, Priva, was part of a recent GreenTech Webinar.

during the coronavirus crisis noting that they "need to care and stick with us and not only care for their own balance sheets".

Some of the challenges she'd dealt with during the pandemic included commissioning online by providing remote help from Priva technicians as work continued at remote locations revealing "interesting and positive sides of the crisis".

All speakers stressed the need for autonomous greenhouses, bandying terms like AI, holograms and digital as future directions in the horticulture industry, which are now being accelerated by the crisis.

During the one hour online event, several polls gauged the audience's own experiences. In answer to the question "What is the main positive to come out of COVID-19 pandemic?" most participants (28 per cent of those responding) cited a more localised and resilient supply chain as the most positive benefit.

The online seminar also asked "When do you expect your business to return to 'normal'?" with normal being set at the 2019 level. Only nine per cent claimed their business had not been affected by the pandemic but most (25 per cent of respondents) said they saw things returning to 'normal' in six to 12 months.

SA

How to take part

The May webinar is available to watch online for those who register on the Green Tech website. The next GreenTech Webinar is scheduled for June 8-9-10 and will look at growing crops in protected cropping. To view past webinars or take part in future live events, register at greentech.nl where there are also details about the physical event in Amsterdam in October.

Keeping you up to date



Alternaria fungus in apples. Photo Flickr/Apple and Pear Australia Ltd

Plant pathogens set to increase with climate warming

Research published in *Nature Climate Change* provides evidence that rising temperatures are likely to increase crop losses as warmer soils favour the growth of pathogenic or damaging soil fungi species.

Researchers led by the Global Centre for Land-Based Innovation at Western Sydney University sampled more than 235 locations with ecosystems that range from forests and croplands to deserts. They found that as air and soil temperatures progressively rise, the types of fungi likely to damage food plant species are also projected to increase over the next three decades.

“Soil-borne plant pathogens already cause hundreds of billions of dollars in crop losses each year,” said Professor Brajesh Singh, a lead author of the research program.

“Our study suggests that common plant pathogens such as *Fusarium* spp. and *Alternaria* spp. will become more prevalent under projected global warming scenarios, which adds to the challenges

of maintaining world food production alongside other climate change-driven crises and a burgeoning human population,” Professor Singh said.

The study provides important evidence of not just the prevalence of plant pathogenic fungi, but was also able to use modern DNA sequencing techniques to determine the response of plant pathogens to rising temperatures at a global scale.

This has enabled the development of mapped regions that connect project climate change to crop and ecosystem type to pinpoint where the greatest food security impacts are likely to occur first.

“Combining multiple layers of data offers a very powerful means for pinpointing priority regions,” said Professor Singh. “Since most soil-borne plant pathogenic fungi are difficult to control with chemicals, we can now focus our adaptation and resilience efforts more precisely by targeting the most at-risk regions.

“We can advocate for strategies that promote plant and human health, build healthy soils and use non-chemical methods to win the battle between crops and pathogenic fungi.”

For more pest and disease updates turn to page 34.

Rural Women’s Award and dinner postponed



Tissue culture producer and PCA member Karen Brock has been announced as the Tasmanian state winner for the AgriFutures Rural Women’s Award now extended until 2021.

Due to the uncertain environment brought about by COVID-19 and the ongoing social distancing protocol that is in place, AgriFutures Australia has decided to postpone the 2020 AgriFutures Rural Women’s Award Gala Dinner and National Announcement.

The event was due to be held on September 15, 2020 at Parliament House in Canberra. The 2020 AgriFutures Rural Women’s Award State/Territory Winners, will remain as their State/Territory Winner until September 2021 when the National Winner and Runner Up of this cohort will be announced at a gala event at Parliament House.

This means that the AgriFutures Rural Women’s Award will not open applications in September 2020 for the 2021 program. Instead applications will open again following the gala event in September 2021 for the 2022 program.

State and Territory winners include Tasmanian tissue-culture grower and PCA member Karen Brock of Brocklands. Other winners are: Cressida Cains (NSW/ACT); Elisha Parker (QLD); Kelly Barnes (Vic); Stephanie Schmidt (SA); Cara Peek (WA); and Amy Kirke (NT).

“Providing the finalists with the recognition and the acknowledgement they deserve and the platform that the AgriFutures Rural Women’s Award Gala Dinner and National Announcement offers has been our main focus throughout this decision making process and we will do everything we can to ensure that the negative impact of COVID 19 on their experience is minimised,” promised John Harvey, AgriFutures Australia’s Managing Director.

As 2020 marks 21 years of the AgriFutures Rural Women’s Award, AgriFutures Australia is also developing a book to celebrate the Award’s 21st birthday and to showcase the inspiring women who have participated in the Award since its inception. The book will feature state and territory winners from 2000 to 2020 and will be available digitally in September 2020.

For more information on the AgriFutures Rural Women’s Award visit agrifutures.com.au/RWA.



Hydrogen-fuelled tractors power up

New Holland introduced a hydrogen-fuelled tractor to the world more than a decade ago. By 2012 the pollution-free vehicle was in service on European farms but is yet to power up in Australia due to the limited availability of hydrogen fuel here.

That situation may change with the building of the Arrowsmith Hydrogen Project, which is planned for Western Australia. The project at Dongara is expected to produce 25 tonnes of green hydrogen a day, which could provide the fuel required for tractors and other hydrogen-powered vehicles.

Infinite Blue Energy (IBE) has announced it has raised \$300 million for the first phase of construction and expected to be operational by the end of 2022. IBE General Manager Tim Hodge said the project would allow hydrogen-powered tractors to be trialled in the Australian environment.

IBE's proposed green hydrogen plant will use solar and wind energy to split hydrogen off water. Traditionally hydrogen production facilities are powered by coal.

Although hydrogen can be co-injected with diesel, it is its use in hydrogen fuel cells that offers the best option for powering tractors.

The more efficient way to use hydrogen in tractors, trucks and buses is through the use of fuel cells," said IBE's General Manager Tim Hodge speaking on ABC radio in May. "A fuel cell is a chemically driven battery, that would power the tractor.

"The tractor would be refuelled via a delivery of compressed hydrogen, which would be transported from the plant to an on-farm bullet tank.

"The farmer would then use the hydrogen to fill the tractor's hydrogen tank as required."

Tim Hodge said a locally produced hydrogen fuel source would have economic and energy security benefits.

"The biggest advantage of a locally produced



Hydrogen fuel cells provide a way to power tractors.
Photo Adobe Stock Photo

energy source is it's not being shipped half way around the world and not subject to the vagaries of international markets that are controlling the price of crude oil," he said. "So the regional generation of a fuel that displaces diesel has huge implications in terms of energy security for Australia generally.

"The transportation of vast quantities of crude oil around the world has a cost, and as end users we see that cost. Anything that results in fuel being generated locally has got to be a win," he concluded.



These images are free to download to include in social media posts from the Eat Yourself to Health website.

Eat yourself to health

Growcom's new national campaign, Eat Yourself to Health, encourages all Australians to "Eat Up and Branch Out". The timely campaign comes as people around the world turn to improving their diet in a bid to maintain a strong immune system in the face of coronavirus while also discovering new foods to enjoy in isolation.

As part of the Eat Yourself to Health campaign individual growers are challenging consumers to their own unique COVID Cooking Challenge, encouraging creativity in the kitchen with fresh produce while highlighting how the product's nutrients and vitamins can boost one's immune system.

A website, www.eatyourselftohealth.com.au, has been established with a variety of resources and information for consumers, including ready-made social media graphics and ideas on how to boost health through increased intake of fruits, vegetables and nuts.

The graphics can be downloaded for free.

According to the Eat Yourself to Health website only four per cent of Australians attain the recommended daily intake of vegetables, just three in 10 people eat the recommended amount of fruit and only two per cent are consuming the 30g per day target for nut consumption.

Adults are recommended to consume at least five serves of vegetables (75g per serve), two serves of fruit (150g per serve), and 30g of nuts per day.

To inspire variety, the campaign is also setting shoppers the challenge to buy fruit or vegetables that are not normally in their shopping bag.

The campaign also has a hashtag, #eatyourselftohealth, to allow anyone posting about fresh food on social media to get on board with the campaign.

The Growcom campaign is supported by Health + Wellbeing Queensland and AUSVEG.