

THE FURROW



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OF SAFETY**

**DROUGHT,
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**COVID-19
RECONNECTING
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WELCOME FROM THE MANAGING DIRECTOR

Warmest welcome to our first issue of The Furrow for 2020 with a refreshed look and feel, and a renewed focus on telling the stories of the people, places and innovations which drive our great agricultural industries and regional communities across Australia and New Zealand.



As you will know, 2020 has already proven a year of highs and lows, not just for farming, but for the entire global community.

If we hark back to the beginning of the year, the drought which had devastated producers for a crippling period of time finally began to break in February, to transform landscapes and spirits. We've been delighted to speak with our valued customers across a number of geographic locations and commodities who now have a restored sense of optimism for the year ahead, with the rains having brought back some normality to their operations.

But of course, this optimism also comes amid one of the greatest global challenges of recent memory. COVID-19 has hurt our health and our economies, while placing a cloud of uncertainty over how the world will return to its normal operations. From a John Deere perspective, our most immediate response was ensuring the safety of our staff, our dealers and our customers and we acted swiftly to work with relevant governments and authorities to do so.

But with this pandemic also came a heightened awareness of the value of the safe and reliable supply of high-quality food and its importance to both our health and our economy, and recognition of the effort and dedication farmers put into nourishing the world. This was perhaps one of the most heartening things to emerge from this difficult turn of events.

What COVID-19 has also shown is how technology and innovation are now, more than ever, fundamental to the efficient operation of our agricultural production systems. Although farmers are used to working remotely at the best of times, the required changes which came with social distancing and other public safety measures brought to the forefront the importance of the tools we have to remotely support our customers to continue to source parts, equipment and other essentials to keep operations moving.

John Deere has a firm commitment to technology and innovation, and a vision to help lead the world in the smart, efficient, sustainable and profitable production of food and fibre. We foresee remote support and diagnostics as something that will only continue to grow, while the

increasing need to produce more with less inputs will also amplify the importance of Precision Agriculture and digital tools of production. With the aforementioned break in the drought, we're excited to collaborate with our customers to provide smart and efficient farming solutions that are good for the world and are producing real, profitable outcomes for producers.

In other news, John Deere was delighted to announce John May as Chief Executive Officer in November 2019 and Chairman of the Board in May 2020, replacing Sam Allen who gave the company 45 years of outstanding service. John has over 23 years' experience with John Deere across a range of leadership roles including President, Worldwide Agriculture & Turf Division, with responsibility for the Americas and Australia.

In another important appointment, Cory Reed was recently named the new President, Worldwide Agriculture & Turf Division for the Americas and Australia. Cory joined the company in 1998 and has held a variety of senior leadership roles, most recently President, John Deere Financial and Senior Vice President, Intelligent Solutions Group.

Both John and Cory share a commitment to technology and innovation and to the success of customers whose work is linked to the land, and we look forward to their leadership in the important role we play in supporting our primary industries.

However, for now, I hope you enjoy our new look The Furrow, and wish you happiness and health as we continue through 2020.

Kind regards



Peter Wanckel
Managing Director
John Deere Australia & New Zealand



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COVER STORY

South Australia's Alex Thomas is determined to make a difference to farm safety and is a firm believer rural women are at the heart of the solution

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THE NEED FOR SESAME SEED
COULD THIS BE A NEW
CROP FOR GRAIN GROWERS?

Small, but filled with flavour, a surge in demand for sesame seeds has researchers investigating ways to make it a new summer crop alternative for Australian grain growers.

The Australian market's need for sesame seed has pushed the value of imported sesame products to \$26.5 million, however the crop is not grown locally, with 100% of what we consume brought in from overseas.

But that may be about to change.

AgriFutures Australia sees a big future for the tiny seed as sesame trials begin in Australia with a view to giving farmers access to breeding, genetics and varieties that will provide a profitable summer crop option in some farming regions.

Tony Matchett, Savannah Ag Consulting, has a vital role in the AgriFutures Australia three-year project looking at on-ground variety evaluation and agronomic support.

"Sesame production in Australia has the potential to be a high-value summer cropping alternative for grain growers," Tony says.

"There is a big global market for sesame with the top importers being China, Japan and South Korea. These markets are discerning and looking for high-quality whole seed and oil.

"The northern regions are prime candidates for sesame production as it's a heat and drought tolerant crop. There are also opportunities for sesame in northern New South Wales and southern and central



Sesame seed Above: Sesame seeds will provide a new summer crop for Australian growers. Below: Sesame seed trials in Walkamin, Queensland from above.

Queensland where it can be grown as a summer crop and can tap into existing farming systems and infrastructure."

"While it's only an emerging industry for Australia, two million tonnes of sesame are traded globally each year"

Tony Matchett, Savannah Ag Consulting



Due to ongoing drought conditions the project's sesame agronomy trials were planted under irrigation in four locations across Queensland and Western Australia between December 2019 and February 2020. These trials are using new white sesame genetics from Israel and black sesame genetics from Australia.

AgriFutures Australia Senior Manager for Emerging Industries, Tom McCue, says as Australian growers move towards adopting commercial sesame production, a critical first step is to evaluate new sesame genetics and develop management practices for these new varieties.

"Australia is well positioned to take advantage of new, high-quality shatterproof white and black sesame varieties. With the right management practices, we can take advantage of high-yielding, non-shattering seed technology to capture market share and develop a profitable and market-ready Australian sesame industry," Tom says. ■

NEWS IN BRIEF

THE NEW ZEALAND DAIRY INDUSTRY'S NEW SECRET WEAPON

A \$1 million project will develop an innovative information system to help future proof the genetics powering New Zealand's multi-billion-dollar dairy sector.

With backing from the Ministry for Primary Industries, the world-leading system will be used to record and collate vital data on a range of important traits of dairy cows and will

enable the industry to have more options when selecting genetics for physical traits such as height and teat length.

Each year physical and behavioural traits of 50,000 dairy cows are assessed by breed societies to help evaluate the performance of New Zealand's top breeding bulls.

The data collected is hugely important, as it enables the sector to fast-track genetic gains for traits valuable to farmers using artificial insemination.

However, the current system is more than 20 years old and is inadequate to deal with the rise in the use of genomic technologies.

The new database is being jointly developed by the major dairy cattle breed societies and will contribute to genetic improvement which is set to positively impact the environment, animal welfare, and the profitability of the dairy sector. The data collected, as with the current service, is completely independent and impartial, and is accessible to all dairy farmers. ■



SOUTH AUSTRALIAN FARMERS ABLE TO GROW GM CROPS

SOUTH AUSTRALIANS have been given the option to grow Genetically Modified (GM) crops with the State Government lifting a moratorium which had banned commercial cultivation of GM varieties for 16 years.

Under the amendment, GM varieties must be approved as safe by Australian science-based regulators and will provide producers with the choice to consider if GM crops are a suitable addition to their farming operation.

Those in favour of the decision say the use of these technologies will assist in meeting future challenges in agricultural productivity and environmental sustainability.

Councils still have the option to apply to keep the ban in their local area with those who opposed the amendment pointing out that it gives their product a competitive advantage in international markets where GM-free is associated with 'clean and green'.

The timing of the decision will not be in effect for the 2020 canola planting season, but growers will be able to consider using the GM varieties for the 2021 winter cropping season.

GM crops remain prohibited on Kangaroo Island, off mainland South Australia. ■

DATA CODE

Modelling by the Australian Farm Institute has shown \$20.3 billion can be added to annual farm output by embracing digital technology.

As a result, the National Farmers' Federation (NFF) has released the first iteration of the Australian Farm Data Code (the Code), in a move designed to create a roadmap for how data should be used. The Code was developed and adopted by the NFF following extensive consultation with industry.

Farmers can expect the Code to inform them about the ways in which providers are collecting, using, and sharing their farm data, while increased data sharing will also lead to industry-wide improvements.

Technology providers will be given a framework to ignite discussion around data with farmers, to create a platform for data to be safely and securely shared in order to benefit farmers and the rest of Australian agriculture.

Australia is not the only country to implement such a framework with voluntary codes in place in the United States, New Zealand and Europe. ■



51% OF AUSTRALIA'S LAND MASS IS MANAGED BY AGRICULTURAL BUSINESSES



IN 2018, 79% (\$49.2 BILLION) OF AUSTRALIAN FOOD AND FIBRE WAS EXPORTED



MORE THAN 99% OF AUSTRALIAN AGRICULTURAL BUSINESSES ARE WHOLLY AUSTRALIAN OWNED



2.5% OF AUSTRALIA'S NATIONAL WORKFORCE IS EMPLOYED IN AGRICULTURE, FORESTRY, OR FISHERIES



Fast FARMING FACTS

AUSTRALIA SOURCE: FOOD, FIBRE & FORESTRY FACTS BY NATIONAL FARMERS FEDERATION
NEW ZEALAND SOURCE: STATISTA.COM



NZ DAIRY EXPORTS ARE WORTH \$19.2 BILLION



15,000 HECTARES OF LAND IS USED IN NEW ZEALAND FOR KIWI FRUIT PRODUCTION



AUSTRALIA IS THE LEADING MARKET FOR NEW ZEALAND HORTICULTURAL EXPORTS



86,700 PEOPLE WERE EMPLOYED IN AGRICULTURE IN NEW ZEALAND IN 2019

PRIORITISING PEOPLE AND SHARING SUCCESS KEY TO GROWING TUOHEY FAMILY BUSINESSES



Top: Cotton field. Bottom: Peter & Caroline Tuohey, Riverina district producers.

Producers have many types of capital they're constantly juggling to optimise on-farm results. From finances to soil and water – this balancing act is critical to efficiently growing high-quality food and fibre.

However, spend some time talking to Riverina district producer, Peter Tuohey, and it soon becomes clear one of his greatest priorities is the capital of people.

Investing in relationships and building shared responsibility have helped Peter and his wife, Caroline, build a productive irrigated cropping and agricultural contracting business over the past 25 years.

"We have a great team of good people," Peter said.

"We can't be here all the time and we can't make all the decisions on our own, so we need well-trained and confident employees and the support of service providers.

"Australian farmers face regular challenges, and we have to be nimble and adapt as a result. I think we do this very well and produce food and fibre in a way that takes care of the people and environment it comes from."

After starting out in agricultural contracting, Peter bought his first farm at Carrathool in 1995, and has since acquired two more nearby properties. All three have now been developed for irrigation from the Murrumbidgee River and artesian bores to grow cotton, corn, wheat, barley and faba beans.

And, in their downtime from managing three properties, a contracting business, seven full-time employees and up to 20 seasonal workers, the Tuoheys were part of the group of founding shareholders of the grower-owned cotton gin RivCott, where Peter remains a current Director.

Prioritising the success and wellbeing of a highly skilled and motivated team seems to be a fundamental reason the balls of this juggling act are kept in the air. This includes providing opportunities to staff to become partners in jointly owned ventures, with the couple now having interests in cotton and freight businesses which are 25% funded by staff and run as a partnership.

"We back our employees. We want them to enjoy what they're doing, and we look to see where we can advance to a partnership status in areas where their interests lie," Peter explained.



"It is a bit of a leap of faith, which is maybe why it isn't too common, but our experience is that partnering with employees makes them more motivated, gives them a new perspective of being an employer instead of an employee, and shows others working here there is a long-term career path they may not have thought of.

"We also benefit by expanding our business with a partner we know well and being able to earn more off-farm contracting revenue in dry years."

This care for employees is also evident when Peter talks about their approach to safety.

"One thing we're working on is creating a culture where people are encouraged to report near misses. If we know what causes accidents, we are more likely to avoid them, so we don't want anyone to feel they'll get in trouble for speaking up about a near miss," he said.

It's this attention farmers have to nurturing people and the environment that Peter hopes consumers will be more aware of.

"Coronavirus has been a big wakeup call to consumers who until recently have had relatively few disruptions to their purchasing routines. I hope people remember that when they were facing product supply challenges, one thing they didn't have to worry about was food availability," Peter said.

"I really hope consumers support Australian agriculture and buy Australian when they can." ■

BASIC INSTINCTS COVID-19 REINFORCES AGRICULTURE'S NECESSITY

By Chris Cosgrove

In the midst of a global pandemic, there has been a reconnection between consumers and the land - an unexpected positive impact of COVID-19.

In the first couple of months of 2020, it was easy to think we were living in a supremely sophisticated and technologically impregnable society. But, as we were so brutally reminded by what first seemed to be a simple virus, we are human – and driven by deeply fundamental needs, the most basic of which is food. Just ask the guy who stacks the shelves at your local supermarket.

A crisis has helped reconnect consumers to agriculture

While COVID-19 has wrought untold misery on the planet – and it remains unclear where it will end – an unexpected positive impact has been the reconnection of consumers to the primacy of eating.

“The nation has awoken to the importance of agriculture,” Australian Minister for Agriculture David Littleproud told an industry gathering recently. “We underpin the nation’s security through our food security. That’s something that at times has been taken for granted, but these extraordinary circumstances have highlighted the role we play – farmers, and

all the support and processing services through to a boat or plane.

“Thirty or 40 years ago Australians all had an uncle or aunty who lived in the bush and they came out and understood what we did. That’s the important role Australians have become reconnected with.”

This reconnection is something Rabobank Australia & New Zealand Agricultural Analyst Wes Lefroy thinks agriculture can take advantage of.

“One of the major trends during this crisis that I think will bring people closer to the farm and agriculture is more cooking at home and less restaurant eating. This has enabled consumers to be more aware, on an ingredient level, of what they eat,” Wes says.

“We think it is unlikely consumers will return to eating the same volume of meals at restaurants post-pandemic, at least in the short term. As a result, I think this is an opportunity for the industry to maintain a strong connection with the consumer, in their own kitchen.”

Changes coming to farms too

While strengthening consumer perceptions of farmers would be welcome, industry leaders are forecasting COVID-19 will result in real changes on farms as well.

“We saw in the supermarkets that most consumers don’t have much in their pantry, they take a just-in-time approach. Farmers tend to have that just-in-time mentality as well. We live in a world where freight is incredibly efficient and we just assume a spare part will be at the farm tomorrow, or that there will always be plenty of backpacker labour to help at the right time,” explains Brett Hosking, Chairman of national grain representative organisation GrainGrowers.

“What COVID-19 has shown us is we probably need to plan ahead better and be prepared. Working with input providers, GrainGrowers is already telling its members to forecast input requirements and place orders early this year. In future, farmers might have critical spare parts on the farm before they’re needed, or if they know labour units are needed, get backpackers on farm a week or two earlier to train them up - or even better, have people in the community trained up and ready to go. A bit more forward planning to help with farm management can only be a good thing.”

Rabobank’s Wes Lefroy sees an additional potential unexpected upside. “Many university students have headed



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Wes Lefroy, Rabobank Australia & New Zealand Analyst

back to the country to work on the farm, in a lot of cases replacing the need to hire backpackers. This may create a greater appreciation and understanding of farm practices than they had before, and even have them considering a farm or off-farm ag career, where they may not have before.”

Fundamental importance = investment fundamentals

For agriculture, these opportunities remain in the future and the immediate risks from COVID-19 are still real. A significant global economic downturn will put downward pressure on commodity prices, the availability of inputs and labour is not guaranteed, there may be disruption to processing along the supply chain, trade tensions with China (the source of 30% of agriculture export revenues, according to Rabobank), second waves of infection, or larger-than-expected economic impacts all present real challenges.

In the near-term, Rabobank says agriculture is likely to be cushioned from the worst of the fallout, although it notes there will be different impacts in different markets and sectors.

Garry Edwards, Managing Director of AAM Investment Group, points also to the return of normal seasonal conditions after two years of severe drought in key Australian production regions. The main national beef and sheep market indicators have significantly increased during the first

quarter of calendar year 2020 and remain at elevated levels.

Taking a longer perspective though, many believe the value of agriculture as a sound long-term investment has been reinforced by the pandemic.

“COVID-19 has reaffirmed the fundamentals of investing in agriculture. As equity and credit markets have come under pressure due to the impacts of COVID-19, investors are seeing agriculture as uncorrelated to most other asset classes. The way agriculture in Australia has responded to COVID-19 demonstrates how independently strong it was. We’ve highlighted this with investors, why they need to look at agriculture in Australia in a bigger way,” Garry explains.

This degree of independence from other economic drivers is supported by Wes Lefroy. “One of the major features of the agriculture land market is that it is resilient to external market shocks. We saw that during the Global Financial Crisis average reported farmland values in Australia fell only 4% before rebounding the following year. Many of the primary drivers of agriculture land prices are related to agriculture, and independent of the broader economy. As a result, prices tend not to be correlated to other asset classes. This is attractive for investors who are trying to diversify their portfolio,” he says.

“From an international perspective, Australia is an attractive, low-risk place ▶



Industry leaders are predicting COVID-19 will result in real changes on farm. Photo: Nigel Parker.

"We're already seeing investment on-farm so we don't need to do too much more to attract domestic or international investors. What COVID-19 has shown is how critical the supply chain is and the need to invest in physical infrastructure. In Australia, a more efficient, safe rail network is something that also needs investment."

Brett Hosking, Chairman, GrainGrower



to invest. Capital is safe once invested, investors are able to achieve the required scale, there is little in the way of government barriers and intervention, and we have a wide range of production types and markets. There are also sufficient development opportunities in different regions in Australia that require capital."

Brett Hosking from GrainGrowers agrees, and gives a reminder of one ultra local investor underpinning agriculture real asset values. "A main driver of land price rise is farmers buying out other farmers," he says. "Land has been continuing to rise in value for some time, and COVID-19 will support that as the resilience of the sector will be seen."

"We're already seeing investment on-farm so we don't need to do too much more to attract domestic or international

investors. What COVID-19 has shown is how critical the supply chain is and the need to invest in physical infrastructure. In Australia, a more efficient, safe rail network is something that also needs investment."

It's farmers' turn to repay the favour

It's revealing that farmers, who typically are much more involved in their community than average Australians, are recognising the need to support the broader Australian community during this time of crisis.

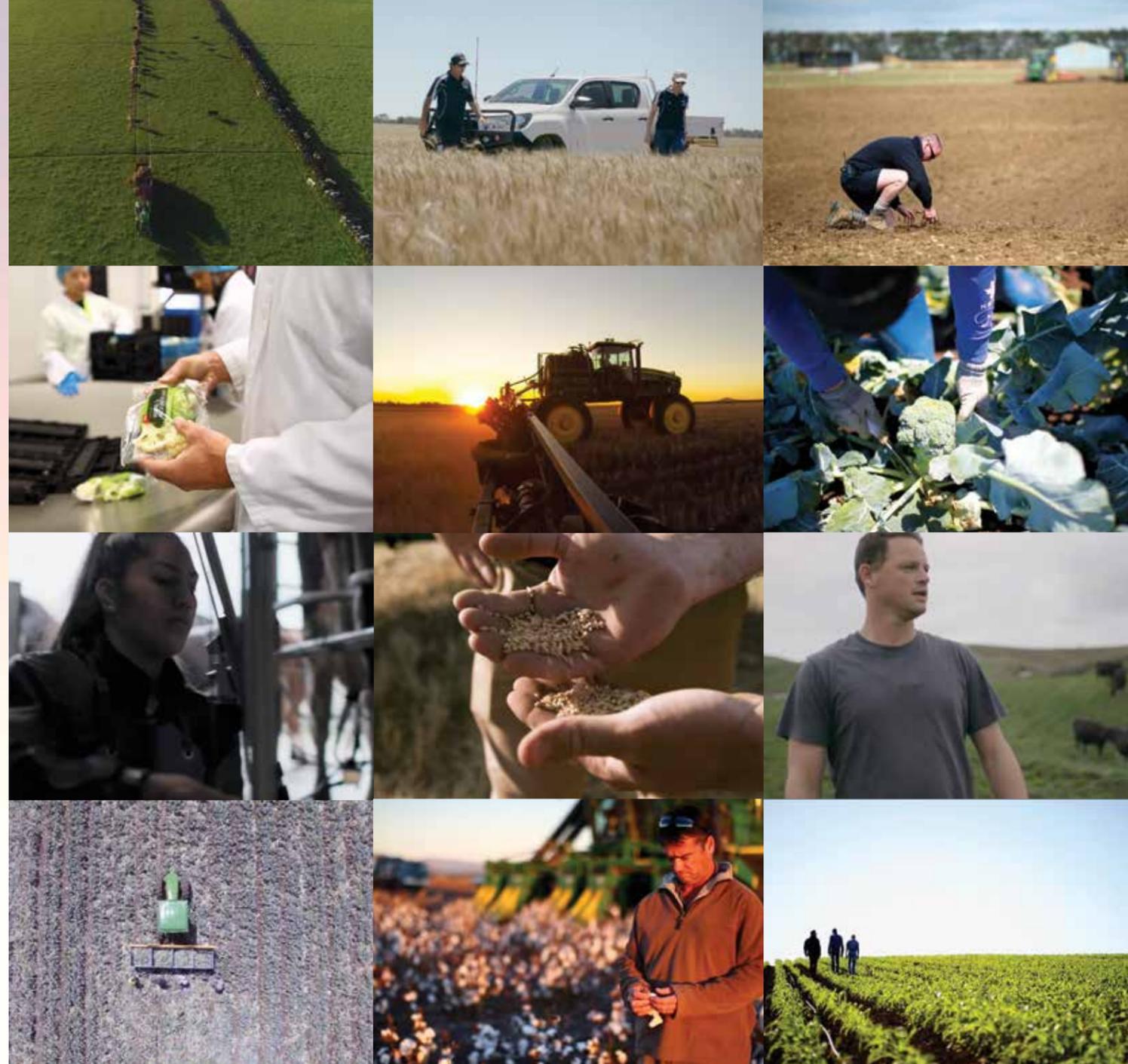
"Some farm sectors could take a hit, especially those that target discretionary purchases or have higher value products. But the majority of commodities will remain in demand, prices should be high,

and the season is better for many farmers," Brett Hosking says.

"That means agriculture is one of the few parts of the economy that will hopefully see money flow into it. I think that puts a real responsibility on agriculture to lead the country out of any recession that will come. We have been supported through the drought, and now it's our turn to pay that back by spending money if we're lucky enough to have it.

"When you get the pay cheque from your grain or livestock in a couple of months, think about going somewhere for a dinner out, stay the night, and support the wider economy."

A good chance, perhaps, for farmers to enjoy some of the premium food they produce at the consumer end of the supply chain." ■



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JohnDeere.co.nz/KeepingTheWorldRunning

WHAT REALLY IS SUSTAINABILITY?

By Chris Cosgrove



Some deem it a modern-day buzz word, others only link it to the environment. But what does sustainability really look like? We ask industry leaders and innovators from across agriculture.

If you've never met fifth-generation farmer Andrew Watson, his Twitter handle gives you a clue to his farming philosophy: @bugs_are_us.

Andrew's family has been planting trees on their cotton, grain and grazing property at Boggabri, central New South Wales, for over 50 years. Why? To create highways for beneficial insect and bird populations that prey on crop pests. The strategy has virtually eliminated the need to spray for insect pests, and in doing so has helped reduce his cotton farming operating costs by about \$900 per hectare less than the industry average without impacting yields. It's an approach Andrew likes to share.

"It has been rewarding to hear other farmers say 'Well, I listened to you at the Area Wide Management meetings about beneficial insect populations, and I decided to delay my insecticide spraying for a week or two, and the pest insect problem just went away,'" he says.

This balance of improving the health of the natural environment, boosting profitability, and reducing farm worker exposure to insecticides is one that neatly sums up the sustainability ideal. And it's the sort of practice that will increasingly be commonplace as agriculture ramps

"SUSTAINABILITY MEANS AGRICULTURE CAN CONTINUE TO GROW AND PROSPER INTO THE FUTURE. WHAT THIS LOOKS LIKE ON THE GROUND IS STRONG AND VIBRANT COMMUNITIES, A HEALTHY ENVIRONMENT, AND A PROFITABLE INDUSTRY."

Tony Mahar, CEO,
National Farmers' Federation

up its work to build a future that is both profitable and, well, sustainable.

"Sustainability means agriculture can continue to grow and prosper into the future," says National Farmers' Federation CEO Tony Mahar, who lists 'unified' and 'sustainable' as the two values underpinning the NFF's 2030 Roadmap to exceed \$100 billion in farmgate output by 2030. "What this looks like on the ground is strong and vibrant communities, a healthy environment, and a profitable industry. From a broader societal perspective, this also means farmers are recognised by the Australian community as trusted and proactive land stewards."

While the environment dominates most sustainability discussions, Tony's reference to community trust hints at its broader scope. Sustainability strategies are based on including the expectations of stakeholders in decision-making.

This concept of considering views from people from outside the industry can be challenging. But it's one the dairy industry, Australia's first major agriculture sector to develop a sustainability framework in 2012, has seen the value of.

"The push for sustainability came from outside the industry, with companies increasingly being asked about their environmental sustainability. But we quickly saw sustainability was a way to bring together people from inside and outside the industry to broaden the conversation beyond environmental



What really is sustainability?
Left: Andrew Watson.
Photo: Heike Watson.
Right: Tony Mahar.

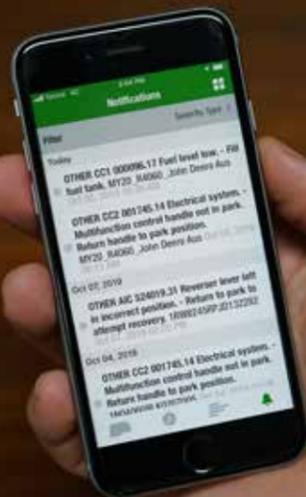


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"I am yet to meet a farmer who didn't want to improve the resources of their farm and leave the asset base in a better state, whether that is for their children or the next owners. But to do this, farmers need both the knowledge and the means to achieve these improvements,"

Michiel van Lookeren Campagne, CSIRO Director of Agriculture and Food

impacts and show dairy businesses can do the right thing, be profitable, and make a significant contribution to Australia," explains Dairy Australia Manager Sustainability, Helen Dornom. By assessing what's important both to stakeholders and to the industry, the Australian Dairy Sustainability Framework zeroes in on four commitments around economic viability, wellbeing of people, animal welfare and environmental impact. "Inviting external people from investor, retailer, buyer and Non-Governmental Organisations like WWF and RSPCA to help us map what we should be managing has showed us not to be scared of talking to external stakeholders. Involving them has been incredibly valuable for the industry. It also gives them confidence that we know what the issues are, where we are now on those issues, and that we are serious about improving," says Helen.

Sustainability = efficiency and opportunity

Just as the definition of sustainability is becoming clearer, the benefits it offers farmers are as well. "Benefit and sustainability are inextricably linked. We cannot have an agriculture sector without an eye to sustainability. Our agriculture comes from the earth and the people and society that farm it, and these must be sustained in order to see benefits," emphasises Michiel van Lookeren Campagne, CSIRO's Director of Agriculture and Food. "There is often a sweet spot here because on-farm sustainability and efficiency are closely linked. With our deep knowledge of farming systems and modelling tools, CSIRO helps farmers understand how management choices affect profit, risk and the overall environmental footprint of agriculture." These direct business benefits – as opposed to the price premiums farmers often expect for demonstrating sustainability – are top of the dairy industry's list as well. "Farmers who have good sustainability practices are likely to be profitable farmers. If you look after natural capital, human capital and animals, you're likely to be in a better position. For example, with our Fert\$mart program we encourage farmers to do soil testing, understand what they need, and then apply fertiliser ▶

"Farmers who have good sustainability practices are likely to be profitable farmers," says Helen Dornom.

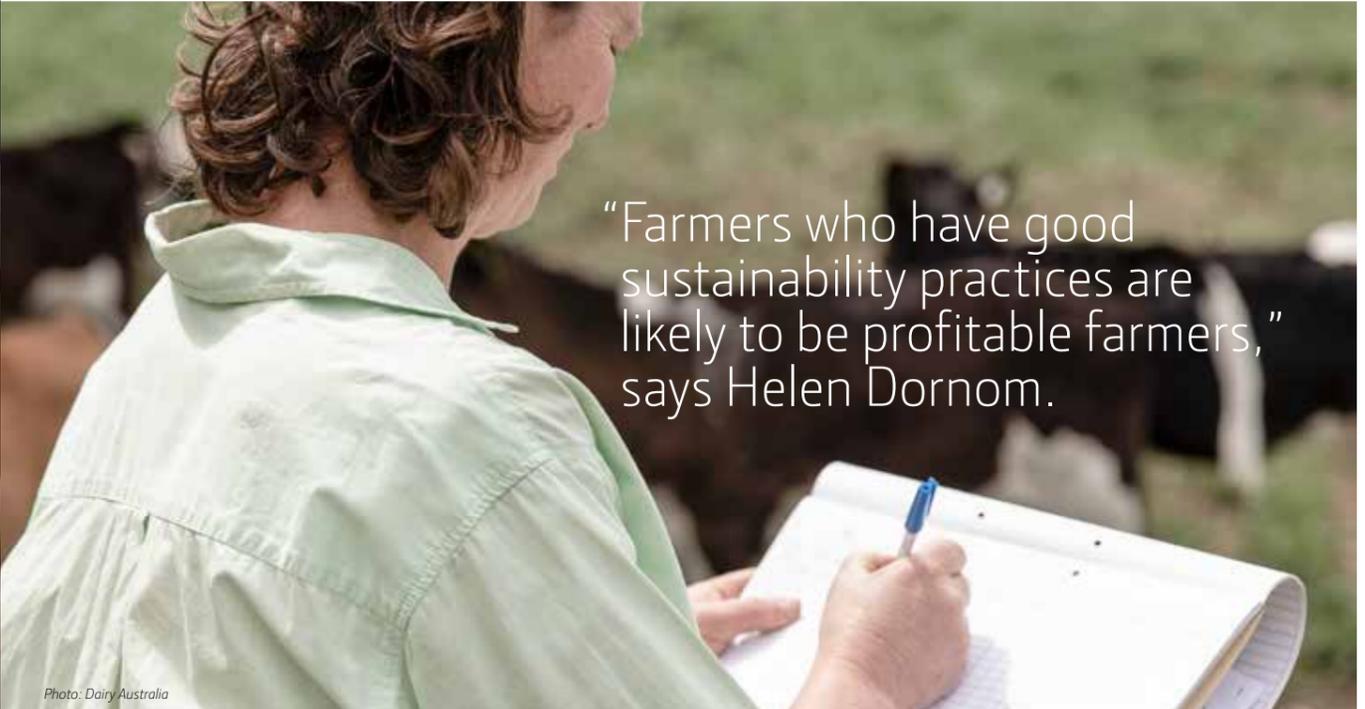


Photo: Dairy Australia

appropriately to save money and avoid runoff. It's good business practice, but it's also the right thing to do," says Helen Dornom.

"Sustainability is also an opportunity for farmers to reduce risk to themselves and the sector. Too often farmers are castigated for negative impacts, but most farmers are doing all they can to look after animals and the natural resources. Sustainability is a way of proving that, and of helping us work with farmers who can improve their practices."

Using sustainability to support market access and maintaining social licence is a theme supported by the NFF's Tony Mahar.

"If Australian agriculture can cement its place as an international leader in sustainable farming, this will provide greater confidence for Australia to access international markets and therefore economic benefits," Tony says.

"The biggest benefit to farmers from sustainability is continued access to land and water that can yield reliable economic dividends for themselves, their community and Australia. As the Australian and international community shifts to a low carbon future and there is greater consumer demand for sustainable and healthy produce, so too will the economic forces that drive the sector. If properly harnessed, there are significant economic opportunities that farmers can take advantage of."

One example which the NFF is advocating for, is the creation of a natural capital market that provides an economic framework for farmers to be



CSIRO's Dr Rose Broderick with a WaterWise sensor in tomatoes.

"WE ARE HELPING HARNESS DIGITAL TECHNOLOGIES FOR FARMERS AND DELIVERING TOOLS LIKE WATERWISE."

Michiel van Lookeren Campagne

rewarded for efforts to maintain or improve environmental assets in conjunction with improved productivity and profitability. NFF has set a metric for the net benefit of ecosystem services – like the natural pest control provided by vegetation on Andrew Watson's farm – to be valued at 5% of farm revenue by 2030. Other ecosystem services that support agriculture include nutrient and water cycling, pollination and carbon absorption.

Help is here for farmers

As awareness of the need for sustainability increases, efforts to make sustainability embedded into agricultural supply chains is also increasing.

A big part of this work is sustainability frameworks being developed by most farm sectors.

"On a farm there are so many things to be done every day, it's hard to lift your head to see big picture issues and know where to focus. That's where industry sustainability frameworks come in," says Dairy Australia's Helen Dornom. "At industry level we can lift our heads to see the big picture, and show what needs to be done at the farm level. We look at the whole dairy supply chain and set goals and targets to report on industry as a whole."

"An individual farmer can then look at each of those goals as a ladder to climb,

and see where their own business sits on that ladder. Many are already at the top of some of the ladders. If they are at the bottom of the ladder for one or two goals, that's a good place to focus. We emphasise that farmers don't need to do everything, and they're not expected to go from the bottom of the ladder to the top overnight. What they can't do is stand still. An industry sustainability framework gives them a good lens to choose the areas most important to their business to work on."

With industry bodies developing sustainability frameworks focused on what matters, a host of decision-support tools are being developed to help farmers manage what matters.

"I am yet to meet a farmer who didn't want to improve the resources of their farm and leave the asset base in a better state, whether that is their children or the next owners. But to do this, farmers need both

the knowledge and the means to achieve these improvements," says CSIRO's Michiel van Lookeren Campagne.

"CSIRO's role is to further these ambitions. We are providing tools to understand the state of the on-farm conditions that drive production and the delivery of other benefits, so farmers can be rewarded for sustainable practices and go to market with a differentiated product with high sustainability credentials."

"We are also working in partnership with farmers to understand how new innovations can support their businesses and also help deliver more sustainable practices. For example, we are helping harness digital technologies for farmers and delivering tools like WaterWise, and new and improved climate tools to ensure our scarce resources are used wisely and most efficiently by farmers." ■

"Sustainability is also an opportunity for farmers to reduce risk to themselves and the sector. Too often farmers are castigated for negative impacts, but most farmers are doing all they can to look after animals and the natural resources. Sustainability is a way of proving that, and of helping us work with farmers who can improve their practices."



Helen Dornom, Dairy Australia Manager, Sustainability

BOOSTING NATURE TO BOOST THE BOTTOM LINE

While much of the country spent Easter on the sofa during the COVID-induced lockdown, Andrew and Heike Watson's family took advantage of drought-breaking rains to plant a belt of local natives like white box and myall, mixed with other species like salt bush and bottle trees, along one edge of the farm.

Diverse tree, shrub and grass habitat provides a breeding ground for ladybeetle, damselfly and lynx spider populations to manage helicoverpa and mirids in the cotton crop, and provides habitat for bird and bat species which can consume up to 50% of pest insects in a crop.

The Watsons have also doubled water use efficiency in the 14 years to 2018, and incorporated chicken manure into their crop nutrition program to reduce nitrogen fertiliser to about 60% of the industry average.

Research has shown that while the Watson's yields are consistent with other local farms of a similar size, their operating costs were 20% lower than the cotton industry average in 2015/16. This equates to saving \$900 per hectare – a figure that adds up pretty quickly.

Andrew is the first to say his farm is a work in progress and there is still much to learn, but his is just one example of farmers working towards win-win outcomes for the environment, people and the bottom line. ■

"On-farm sustainability and efficiency are closely linked," says CSIRO's Michiel van Lookeren Campagne.

Photo: Dairy Australia

A man and a woman are standing in a cornfield. The man, on the left, is wearing a grey polo shirt and blue jeans, and is holding a corn cob. The woman, on the right, is wearing a white t-shirt and blue jeans, and is holding two corn cobs. They are both looking at the corn. The background shows rows of corn plants under a bright sky.

COVERING THE DRY FRONTIER

DRYLAND COVER CROPPERS FIND MOISTURE CONCERNS MISPLACED



Dry frontier Weed roots give nothing back as indicated by the lack of soil aggregating on their roots.

The Great Plains that span the United States and Canada — especially the Western states and provinces — certainly put the “dry” in dryland farming, making moisture chief among reservations for those considering cover crops. An increasing number of adventurous dryland farmers have found those concerns to be largely unfounded and are pushing forward to glean ever broadening benefits from cover crops on their farms. Derek Axten, Minton, Saskatchewan, gets a scant 30-36 cm of precipitation on a good year, yet considers cover crops to be a critical cog in his diversified farming system.

“I was concerned growing a cover crop would use up moisture I could have used the next year to grow a cash crop,” he says. “What I found instead is if you don’t use it, you’ll lose moisture to evaporation anyway. With a cover crop, I’m putting more carbon in the soil and effectively creating a bigger sponge to hold even more water. Every time I grow a cover crop, I’m happier with the crop I grow the next rotation than I am with a crop that didn’t follow a cover crop.” Axten must not be alone in his revelation. Despite concern, cover crops are inching their way West across more and more hectares,

including those categorised as semiarid in years when it does rain. North 40 Ag in Ballantine, Montana, has seen their growth as a cover crop seed provider take a steep trajectory since starting in 2011. They report plenty of their seed is earmarked for dryland hectares yielding successes to report.

Building a base

Kate Vogel and her husband, Marcus, started North 40 Ag after experimenting with cover crops on Marcus’ family’s 50/50 dryland and irrigated Ballantine, Montana, farm. Kate had a years-long head start with cover crops having focused on dryland no-till systems while earning her master’s degree in agronomy and then working as a Montana NRCS agronomist promoting cover crops and soil health. “When I was at the NRCS, there was a lot of excitement about cover crops, but adapting them to Montana’s climate was a concern,” Kate says. She was able to work with Montana growers on test plots designing mixes, figuring out timing and executing rotations. “I had my big ‘Aha!’ moment working with those producers on cover crops. You could see the soil changing and it was obvious we had been missing a whole leg to our production stool.”

Eight years later, Kate applies the knowledge she continues to build to help customise cover crop plans for the family’s ▶



“Our goal is to help implement a strategy so farmers can be successful and not just quit,” Kate says.

farm and others in the region. She’s seen dryland cover crop users initially concerned about wasting moisture emboldened to be more aggressive with covers and diverse and innovative in their goals. They have growers using cover crops to potentially mitigate acidic soils without reverting back to tillage, to attract pollinators and beneficial insects, to act as biofumigants to suppress pest species, and to decrease inputs including fertiliser and weed, pest, and disease control.

Forging ahead

“They say the best time to plant a tree is 20 years ago but the second best time is today. I wish I had started planting cover crops 20 years ago, but there’s no time like the present to get after it,” says Roger Solberg, a Malta, Montana, farmer who raises small grains, pulses, safflower, and flax on 3,400 dryland acres (1,376 hectares), which have endured extreme drought the last few seasons. “I wish I had been a lot further along in my cover crop program with these dry years because as you build your soil health you insulate yourself against drought.”

Solberg first tried cover crops during a very wet year. He was shocked to watch his soil organic matter jump from 1.8% to 2.5% after just one year of seeding a diverse cover crop mix in place of fallow. That more than doubles his soil’s water and nutrient holding capacity. “I’m not going to say soil organic matter is going to build that fast every year. We just had a great year and were able to see significant changes in our soils,” he says.

Despite dry years bringing failure to cover and cash crops alike, he’s pressing

on. He reasons the 175 mm of rain might get on chem fallow would largely be lost to runoff and evaporation. With a living cover crop and improved soil structure, water from snow and rain instead soaks in and is insulated from evaporation. “I’m recycling more of that moisture through the growing plants while increasing soil water storage by building carbon and soil life.”

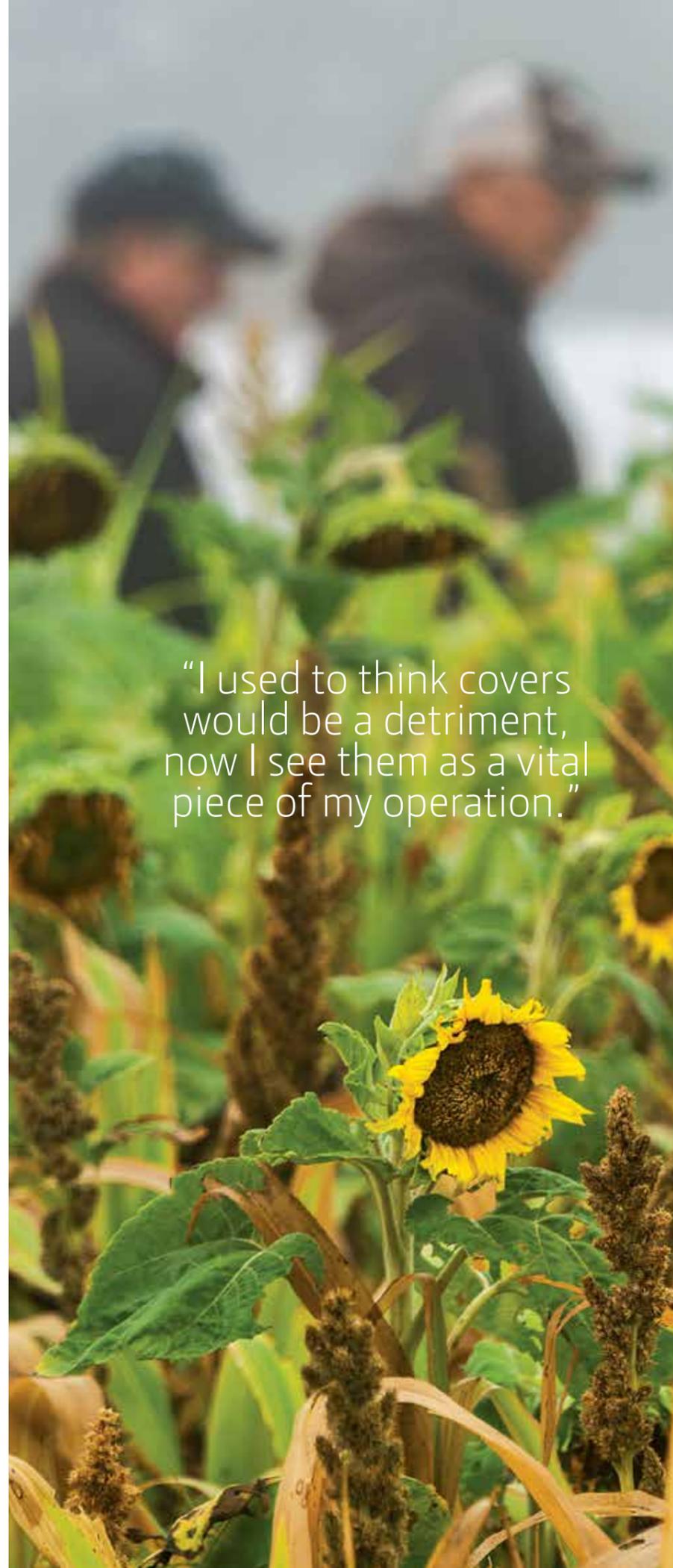
Vogel has noted on many occasions she emerges from cover crop fields with wet boots even in the heat of summer. “You’ll see the large leafed plants in the mix accumulating and absorbing dew, which to me says they’re capturing moisture that isn’t necessarily falling as precipitation. Also, we have roots pulling moisture from all different depths. We haven’t seen moisture issues ourselves with cover crops.”

The Vogels have moved to continuous cropping with strategic residue-building rotations resulting in one of the best dryland corn crops the farm had ever seen in 2018. It was a good rain year, but their previous standard yields were less than half the crop their once very marginal dryland acres produced in 2018. Kate jokes it might have been even higher if Marcus hadn’t picked so many ears happily checking the corn all season.

Axten also has a highly diverse rotation, even intercropping cash crops such as canola and yellow peas with yields exceeding monocultures. His dedication to building his soil health through diversity and cover crops was proven a moisture saving win in 2017. In 2016 he seeded a 4-tonne biomass cover crop which he grazed in the fall. Winter yielded very little snow and 2017 proved brutally dry with only



Dry frontier Above: Moisture accumulates on a large leaf deep in a cover crop mix. **Opposite:** Producers examine an irrigated cover crop in NW Montana. **Right:** Marcus and Kate Vogel check their near record-breaking dryland corn crop grown in part thanks to building carbon in the soil through cover crops. The roots of cover crops feed soil life and building soil structure.



“I used to think covers would be a detriment, now I see them as a vital piece of my operation.”

37.5 mm of rain falling the whole season. “In June I dug in that field and there was moisture at the surface where there shouldn’t have been. It had to be because of the increased surface residue protection and that what little snow and rain we did get had followed the root channels into the ground,” he says. It was one of the highest gross margin crops on his farm that year.

Custom look

A challenging aspect of cover crops is how wildly their uses and successes can vary from farm to farm. The Vogels lean hard on education, experimentation, and customisation to help more producers get the desired results.

Many dryland customers use cover crops in place of fallow or as part of an extended rotation. “A producer may use a wheat-wheat-corn-sunflower cover crop rotation having a cover crop on the field only once every four or five years as a diversity booster,” Kate says. Mix and seeding recommendations will vary significantly based on rotation, soil type, soil acidity, equipment type, and goals. Grazing is one of the best ways to put a dollar amount to the benefit of covers, though there is no universal grazing mix. Even that recommendation is based on when it will be grazed, animal species, animal age, calving dates, and more.

The Vogels maintain plots, host multiple field days per year, and hold winter round table discussions to help crack the dryland cover crop formula. “A lot of people get the general big concepts of cover crops, but it’s how to implement it that becomes the problem. It’s more or less a personal recipe in every case. Our goal is to help implement a strategy so farmers can be successful and not just quit,” Kate says.

Axten has no intent of going back. “I know in a moisture limited environment I have to make every drop count,” he says. “I used to think covers would be a detriment, but now I see them as a vital piece of my operation.” ■

Dry frontier Left: Growing a diverse cover crop in place of fallow, or as a diversity-booster in a longer rotation, helps stimulate soil life, builds soil carbon, and increases the soil’s ability to absorb water quickly and hold more overall.

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How a daughter's passion and a father's encouragement led to a determination to make a difference to farm safety - and a firm belief rural women are key to a safer agriculture industry.

GETTING TO THE HEART OF SAFETY

By Hannah Hardy

Heart of safety The #PlantASeedForSafety Project's Founder Alex Thomas (right) and the project's New Zealand Ambassador, Harriet Bremner (left)
Photo: Gianna Grbich.

A father and daughter were driving along the Eyre Highway in South Australia, somewhere between Whyalla and Port Augusta, when they struck up a conversation about the state of health and safety in rural industries.

Alex Thomas had been working as a health and safety consultant in the mining industry and her father, Chris, had spent decades on the land before making the move to a less weather-dependent career in mining.

After caring for her dad through a number of farm-related illnesses, Alex had decided that more needed to be done for people working in agriculture.

Growing up on the land, and spending a few years contract mustering, she knew making an impact on attitudes around safety would not be an easy task. As the red dirt and shrubbery rolled past them, she had a moment of uncertainty. She turned to her best mate in the passenger seat and sighed 'how am I going to do it?', to which her father replied, 'rural women'. It made sense. Women are often the ones connecting family, staff and the community.

In the seven years since that conversation in the ute, Alex has built a health and safety consultancy business and launched the #PlantASeedForSafety movement, a project celebrating Australian and New Zealand rural women and their role in creating change on-farms and in communities.

It is an initiative that saw Alex, now 33, named SA's AgriFutures™ Rural Woman of the Year in 2018 and led to her acceptance into the National Farmers' Federation's 2020 Diversity in Agriculture Leadership Program. After taking off in Australia, it has quickly spread across the ditch to New Zealand as the two countries share in a common worry for safety on farms. Inspiring stories from rural women fill the pages of *The #PlantASeedForSafety Project's* website. These women have opened up to share heart-warming and heart-wrenching stories with handy tips on keeping themselves, their family and their staff safe.

"It recognises rural women as key influencers and experts in, not only their businesses, but in their homes and their local communities," Alex says.

"Rural women have a vested interest in keeping people safe, they are often the ones who are left carrying the bundle if their significant other is seriously injured or worse, killed."

She's adamant that while women are accustomed to wearing many hats, the health and safety hat is an especially good fit. "Women are naturally more risk averse, and they will often identify a risk before their male counterparts."

The #PlantASeedForSafety Project aims to give these women the confidence to start crucial conversations about the practice of health and safety that is often missed amongst the emphasis on paperwork and getting things done.

Heart of safety Below: Alex Thomas was recognised as South Australia's AgriFutures™ Rural Woman of the Year in 2018. Left: Alex (right), with her parents, Chris and Sue, and sister, Millie, on their family property Parnaroo Station, in North East South Australia. Bottom: Alex's career in safety has been heavily influenced by her father, Chris. Right: Chris Thomas taking a break from fighting a bushfire.

Destined to make a change

There are many moments in Alex's life that she attributes to leading her to starting *The #PlantASeedForSafety Project*. One of the major catalysts was her childhood and her love for the land, and caring for her father who has experienced a lifetime of illness stemming from an on-farm disease.

Alex grew up attending School of the Air, from her family's sheep station in the North East of South Australia.

"I had the most amazing childhood you could ever imagine," she says.

Classes would finish around midday, which left the rest of her day to ride in the ute with her father.

Her parents had managed to weather the drought of '82 and Alex was born in the few good years following, while her father looked for ways to supplement their income - and ended up pioneering feral goat mustering in South Australia. It was on those trips away that he contracted Q fever, an airborne disease that attacks the immune system and can ultimately lead to a range of debilitating health conditions.

Having been sent to boarding school at 12, Alex remembers struggling with her own ailment - home sickness. She was holding out for the day she could return home to the family property.

"I was going to be a pastoralist, do or die, and was coming home to the land, despite the fact people had said to me that it wasn't a job for girls."

But her plans were diverted. A few years later, when the drought had worsened and her father was dogged with illness, Alex found out the station was being sold off and her parents were separating.

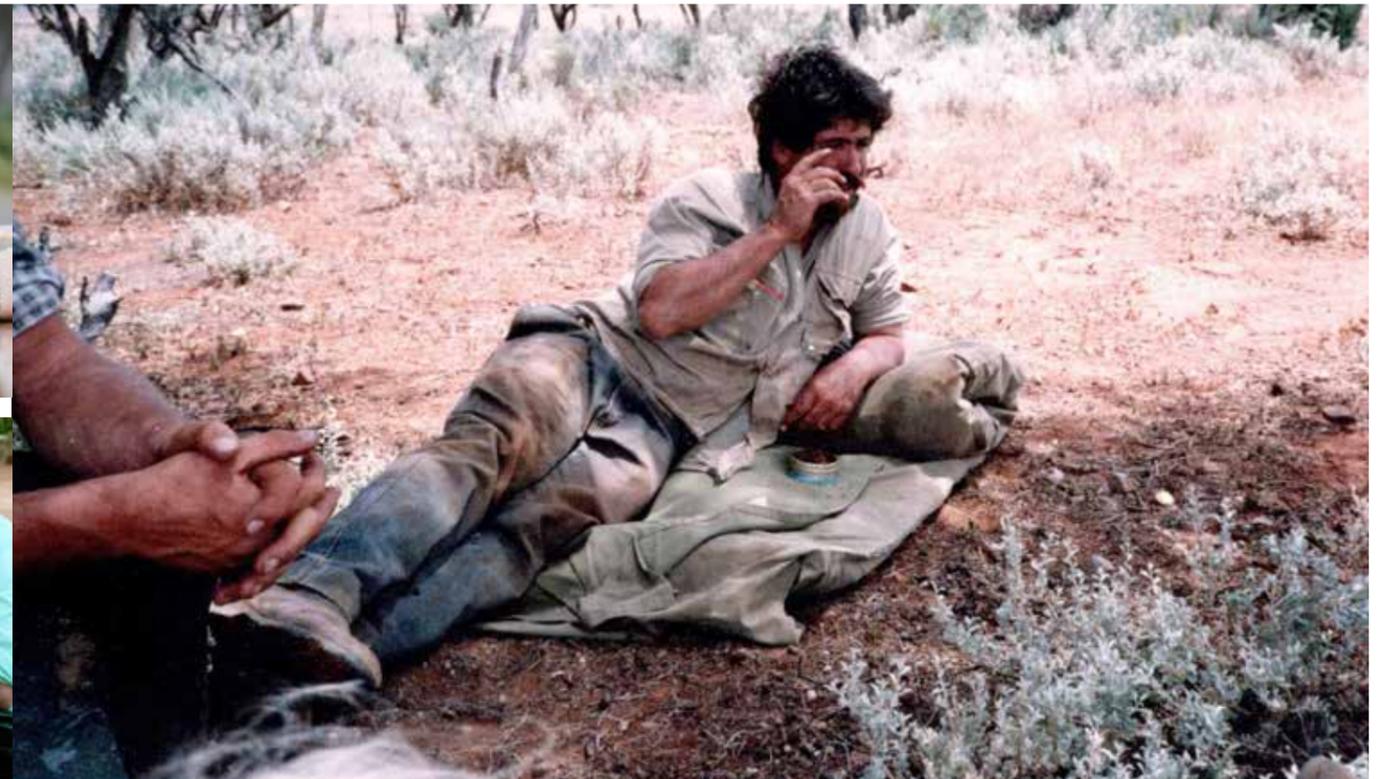
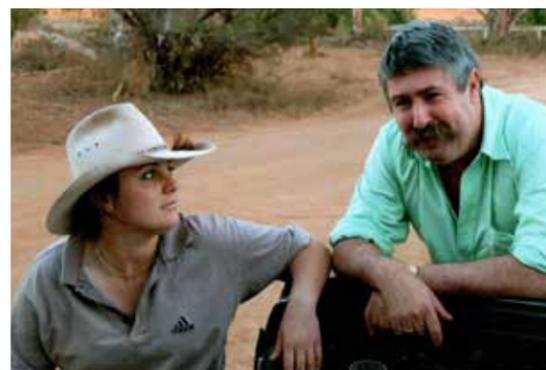
But, determined to reconnect with her rural roots after she completed school, Alex spent a few years as a jillaroo and contract mustering in a move that would, ultimately, deviate her course.

"It was cathartic in the sense that it helped me mend a bit of a broken heart, because I couldn't go home, but I could work on an adjacent block, and I had a great time," she says.

"But I realised that there just wasn't any career progression for me on the land at the time."

After subdividing and selling their ▶

"I HAD THE MOST AMAZING CHILDHOOD YOU COULD EVER IMAGINE"



SAFETY LINEUP

Alex's top tips for equipment users

1. Have a regular maintenance schedule in place to ensure your machinery is running to the best of its ability.
2. Make sure you have the right person for the right job. Spend the time to check the operator knows what they are doing and have been trained if necessary.
3. Be mindful of kids around equipment, whether in operation or not.
4. Have an awareness of equipment limitations. Do not push a machine to do something it is not designed to do.
5. Manage fatigue. Remember your ability is compromised when you are tired.
6. Do not remove, or tamper with safety equipment. It is there for a reason.

“NO FARMER WILL REFUTE THE FACT THAT THERE ARE THINGS THAT CAN KILL YOU. IT IS ABOUT ADAPTING HEALTH AND SAFETY IN A WAY THAT MAKES SENSE IN THEIR BUSINESSES.”

family property, her father had taken a job in the mines, and Alex decided to join him. It was there she fell into a career in health and safety.

“I was young and impressionable and eager to please, and wanted to tick the boxes to make sure that my boss was happy with what I was doing.

“And it hadn't really occurred to me at that point that health and safety had become so detached, detached from actually caring for people.

“It was so heavily orientated around policies and procedures. It wasn't until a little bit later on, that I realised that perhaps the profession wasn't really doing its actual intent any justice.”

Flicking the safety switch

The stark reality is there are consistently high rates of death, injury and illness in Australian and New Zealand agriculture. Alex believes change will need to be driven by social and cultural shifts, not paperwork, and that all starts with how we talk about safety.

“At the moment, everybody talks about policies, procedures and compliance, and the word compliance feels like a parent disciplining a child. Nobody wants to be spoken to like that.”

Farmers are already community-minded and are wired to care about their workers. Alex says if that focus can be amplified in

a practical sense, then more meaningful conversations about what can go wrong and what can be done to minimise risk will follow.

“No farmer will refute the fact that there are things that can kill you. It is about adapting health and safety in a way that makes sense in their businesses and the industry they operate in, otherwise, it can be like trying to fit a square plug into a round hole,” she says.

One of the most endearing and well-known characteristics of both Australians and New Zealanders is their perpetual ‘she'll be right’ attitude – we like to carry on and get things done. But, in the context of farm safety, that hard-wired psyche can also be dangerous.

“Farmers are especially good at accepting the challenge of a tough situation, but injury and death on farms is not something we should be normalising as an industry,” she says.

“We have to make an active commitment to wanting to improve health and safety. That doesn't necessarily mean investing heaps of cash, but we do have to invest thought.

“Everyone should return home safe from a day on the farm.” ■

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DROUGHT, RAIN AND RESILIENCE

How a Queensland community has come out the other side of one of the worst natural disasters in memory.

LARA DOWNS

Early last year, what was first welcomed as drought-breaking rain soon transpired into one of the worst natural disasters seen in North West Queensland history, an event so harrowing it drew an immediate response from the Prime Minister. But, as Jayne Cuddihy writes, local producers and communities have fought their way back from the devastation of the floods.

In North West Queensland, February 2019 is memorable for all the wrong reasons.

It started with the joy of what seemed like drought-breaking rain before descending into torrential mayhem and flooding not seen since settlement. Hundreds of kilometres of roads and fence lines were destroyed and isolated graziers had to be rescued from their roofs. Landowners recount walking chest-deep through water surrounded by snakes and creepy crawlies. A train derailed in the middle of a paddock. Days of heavy rain were followed by many more of uncharacteristically cold winds, while images of dead cattle piled against fences made national headlines. It was complete devastation.

But it soon also became a remarkable display of human resolve. Armies of volunteers and support networks rallied before the rain had even stopped, chomping at the bit to get in and help the most vulnerable to repair their infrastructure and their hearts.

Charities appeared seemingly overnight to support local communities and graziers, while governments moved mountains to provide assistance and a focus for recovery. While everyone knew the disaster was unprecedented for the North West, there was also a deep concern as to how the communities would fare after the spotlight faded.

Immediate and protracted consequences

Colin Burnett and his family at Lara Downs, 80 km north of Julia Creek, lost 25% of their stock, 45 km of roads, 5 km of poly pipe and a number of tanks in the flooding event, and for months afterwards found cattle carcasses in trees. But the Burnett family is bouncing back.

"If we didn't have the manpower on the ground we did, we wouldn't be in the position we are now," Colin says. "We're pretty much back on our feet. It's business as usual!"

This manpower was bolstered by charities such as BlazeAid, Farm Aid, Aussie Helpers and Farm Army who helped repair fences and infrastructure.

Colin says the current focus on Lara Downs is destocking after a below average wet season - and the irony is not lost on him.

"We worked hard to restock after a huge flood just over a year ago, and now we're destocking because it's so dry."

In the leadup to the 2019 flood, most of the North West had been in drought for years. ▶



Large numbers of stock were lost due to the floods. Photo: Nathan McDonald.

“To live and succeed out here you need to be resilient, resourceful and hardened - and maybe we underestimated that. But the flip side is that if you do get the wobbles, it’s hidden by distance, so we work hard to stay vigilant and keep across our networks to make sure everyone is okay.”

Susan Dowling, Western Queensland Primary Health Network.



Caught in the floods. Photo: Nathan McDonald.

Many graziers were already on their knees with debt, low cattle numbers and huge feed bills. Around half a million head of cattle were killed by the flood - most because of exposure to plummeting temperatures rather than drowning.

By mid-2020, Meat and Livestock Australia forecasts the national herd will be short up to 3.5 million head as a direct result of the two climate disasters. It expects the full impact of the stock deaths won’t be felt nationally until next year when there will most likely be a supply low point.

Colin says after such a turbulent few years most graziers are relaxed about the changing situation.

“No one is going to bust a gut feeding cattle this year I don’t think. We’ll just offload to look after what grass we have and see what happens.”

A surprising level of resilience

Even before the floodwaters receded, despair had begun. One of the only elements that made it tolerable was the fact it was a shared helplessness, which seemed to help people cope. Mental health organisations were put on high alert, not just for the immediate aftermath, but for months down the track when reality set in.

“The amazing thing is we just didn’t see the spikes,” says Susan Dowling from the Western Queensland Primary Health Network.

“We were preparing for huge rises in mental health cases at the three, six and 12 month anniversaries, and they just didn’t come.”

Susan says they have not been able to put a definitive reason on why, except to say North West Queenslanders are a tough breed. Maybe some of the toughest in the country.

“To live and succeed out here you need to be resilient, resourceful and hardened - and maybe we underestimated that. But the flip side is that if you do get the wobbles, it’s hidden by distance, so we work hard to stay vigilant and keep across our networks to make sure everyone is okay.”

As well as her health role, Susan heads Sisters of the North, a charity born in the aftermath of the flood.

“People were slow to come on board with the idea of accepting help, whether it be monetary or volunteers on their property. We were at pains to point

out that by accepting assistance, it was benefiting the entire region and businesses in town as the money was staying in the community. By the time we released the first round of funding through the charity, there was a 94% spending rate which was fantastic.”

Susan believes the main long-term indicator of success in building resilience and supporting the community’s recovery will now be people’s increased confidence in seeking help and having meaningful conversations with family and friends.

“It’s a hard slog living out here. There is always going to be another curve ball and we need to be able to adapt, reflect and learn. I think more than anything this event has brought us together.”

Businesses still struggling

Well over a year on, businesses continue to do it tough and rely on the commitment of locals to shop local, even when it’s not always the most economical option.

Colin Burnett says the truckies are particularly supportive, stocking up on tyres, food and fuel.

“People get frustrated that things cost more than they do on the coast, but the government really bent over backwards to support us following the floods and a lot of that was on the proviso that cash was spent in town, so I think that really drove it home to people.”

Neil and Ellen Warner have owned the Julia Creek newsagent for more than 35 years and say while it’s been a challenging 12 months, no businesses have shut in the area in what is surely a testament to the strength of community spirit.

“Every day is a day closer to something better,” says Julia Creek News owner, Ellen Warner.



Colin Burnett and Kate Andison



“Every day is a day closer to something better,” Ellen says.

“Modern business is challenging at the best of times so when you throw in online shopping, droughts, floods, locusts and COVID, we all just have to adapt.”

For the Warners adaptation means resilience and knowing your customers. Ellen says there hasn’t always been the market for ‘fancy stuff’, but everyone still has birthdays and cards and smaller items are in demand.

One of the biggest impacts has been on social lives. Sisters of the North, along with many other organisations, has spent the last 14 months championing social events by dropping in on the neighbours, attending campdrafts, rodeos, school events, barbecues - anything! But social

distancing measures to prevent COVID-19 have brought it all to a screaming halt.

“I really miss getting out and about,” says Colin Burnett. “People were really starting to loosen up and relax and not be so guarded about what happened.”

Like the rest of the country, North West Queensland is on hold, but the people there are resilient. A couple of extra months won’t stop their rebound. ■

“It’s a hard slog living out here. There is always going to be another curve ball and we need to be able to adapt, reflect and learn. I think more than anything this event has brought us together.”

Susan Dowling

“Modern business is challenging at the best of times so when you throw in online shopping, droughts, floods, locusts and COVID, we all just have to adapt.”

Ellen Warner



Mustering on Lara Downs.



YUMMY FRUITS

By Simone Smith

Keeping ahead of – or at least up with – changing consumer tastes, demographics and lifestyles is vital for the family-owned Yummy Fruit Company.

Supplying 70% of the apples, stone fruit and pears it grows across more than 700 hectares (1730 acres) in the Hawkes Bay region to the New Zealand domestic market, the Yummy Fruit Company is a customer-driven business with a vision to bring a touch of excitement to retail.

To do this, it's invested in delivering colourful branding, high-energy advertising and associations with popular reality television shows and school sports equipment programs. It's all part of moving towards a model which draws on the power of story-telling – the value of which came into full light last year when up to 70% of its stone fruit crop was damaged by a severe hailstorm.

Creating 'Hailstone Heroes'

Traditionally, damaged fruit isn't saleable but rather a cost to the business as pig producers or compost enterprises are generally incentivised to take it away.

In a bid to stem losses, the Yummy Fruit Company embraced its "consumer first" mentality to create the 'Hailstone Heroes' brand to sell its aesthetically challenged fruit in the local market.

"There were three things we were trying to do," Yummy Fruit Chief Executive Officer, Paul Paynter, explains.

"First, we wanted to show resilience and optimism, then it was about being honest with the consumer, rather than trying to hide the blemishes, and sneak it through.

"Finally, we wanted to offer value."

Supermarkets were initially cautious

about the 'Hailstone Heroes' concept, agreeing to stock the produce only when it was apparent most other available fruit on the market was also damaged to some degree.

But despite these odds, the imperfect fruit, that was also smaller than expected, opened up some key opportunities for pre-packaging that would boost its marketability.

"The problem is, if you put damaged fruit on the shelf not all fruit is evenly damaged, so what the consumer tends to do is maul their way through it and pick the best fruit out – and when you've had 50 consumers do that it looks like a total train wreck," Paul says.

"This is why you are better-off putting it in prepack where they are basically taking the whole prepack home with them."

Paul believes consumers appreciated this "frank" approach and, combined with the value offered by the prepack bundle, the Yummy Fruit Company exceeded its budget by 12% while relying on and building goodwill and relationships with retailers and consumers.

A new approach for a pioneering farming family

The Paynter family has been growing fruit in New Zealand for 158 years, with the Yummy Fruit Company, which produces 25,000 tonnes of fruit annually, established 46 years ago.

With an annual turnover of about \$NZ45 million (\$A42.2 million) and almost 200 permanent staff, the business



Yummy fruits Left: Paul and John Paynter are part of an innovative New Zealand farming family that has been producing fruit for 158 years. Below: Hailstone Heroes in store.



focuses on quality by controlling the entire supply chain.

John Paynter is a fourth-generation fruit grower and Paul's father who, at 79, just celebrated his seventieth stone fruit season and sixtieth apple season.

Growing and marketing fruit has been his life. And, while his commitment to the industry hasn't wavered, John says it has been the ability of his family business to embrace change that has helped it grow and thrive.

"We went from just being a fruit grower, waving the fruit off at the gate and hoping someone would look after us, to moving into the marketplace and trying to influence an outcome," he reflects.

Perhaps one of the early indications of this changing mindset was the introduction of fruit stickers in 1975 – a first step towards putting the Yummy Fruit Company front-of-mind with consumers.

"We were the first people to individually label fruit in the world," Paul says.

"The individual label was all about reaching through the supply chain, beyond having a commodity, to create a connection with the consumer. They have to look at this annoying little label and peel it off, confront your brand, and then bite the product. That little process made us very connected and very accountable in 1975. It makes us super connected these days."

Customers also share their thoughts and experiences directly with the Yummy Fruit Company via social media, email or phone, while exclusive "farmgate thinking" has gone out the window as changing

New Zealand tastes, ethnicities and lifestyles are considered the key to future sales.

Focus on quality for the Asian market

This consumer focus and relationship development has worked well in New Zealand and Paul hopes to extend this approach to the growing Asian export market. He wants these new customers to connect with the Yummy Fruit Company and is relishing the opportunity this blank canvas market offers.

"This is a brave new world for us as 10 years ago Asia was 2% of our business and they are now make 20%," he says. "They are growing incredibly rapidly, and the opportunity really is fantastic."

These Asian markets are where the Yummy Fruit Company hopes its integrated business model and concentration on quality will pay dividends.

"The good thing about Asia is they really love beautiful things," Paul says. "If your quality is 20% better, in Asia, they will pay you for it. They really appreciate that quality and that's a wonderful market to be in." ■





Childhood friends Sarah Parkinson, Dulacca, Kirsten Todd, Bell and Emily Grieve, South Kalbar, have taken their flair for gardening to Instagram on their page @grassrootgardeners.

GREEN GRASS A COUNTRY COMFORT

By Kirsten Todd, Grassroot Gardener

The Grassroot Gardeners are three friends turned gardening enthusiasts, sharing their love and knowledge of country gardens. Growing up together in a small country town, Kirsten Todd, Sarah Parkinson and Emily Grieve are now dotted around country Queensland, raising families, farming the land and cultivating cottage-style gardens. They consider themselves novices, having only established their gardens in the last four to seven years, and revel in sharing their small wins and occasional epic fails on Instagram @grassrootgardeners.

Acherished memory of growing up on a Queensland cattle property was the oasis of the home garden. It was here, gardening became an intrinsic part of me. However, it wasn't until Ben, my husband, and our three young children moved to our own property, 'Errol Park', located more than 230 km north west of Brisbane, that it became a priority to cultivate our own leafy sanctuary.

The foundation of any country garden is a lush, green lawn and this is particularly poignant in times of drought. Ben says he never ceases to relish the sight of our green lawn, as he returns home after a long, dry and dusty day in the paddock. As the sun sets, we often retreat to the lawn, share a drink and, for a moment, forget about any problems that lie beyond the garden fence. When we first moved to the property, the lawn was our top priority. Couch grass

grows naturally in our area, and when it is watered and maintained can make a great lawn. As an alternative, we decided to grow Kikuyu grass, as we found it stays greener for longer, it doesn't frost as easily and requires less water once established. If you are thinking about a new lawn, here are some tips and tricks that we used to grow our Kikuyu lawn.

- **Before you plant lawn seed, spray the area for weeds.** Spray the lawn area with chemical and then a day later water it to see if any more weeds pop up. If weeds do appear, spray and water again. Repeat the process until there are no more weeds.
- **Top dress and rake the dirt where you are planting.** This is so the seeds are not going straight onto hard ground. We used paddock dirt and manure to lightly cover the area.

- **Don't use a mixture of grass seeds.** Often you will find Kikuyu seed, but it is mixed with Buffalo seed, or other types of grass seed. Use 100% Kikuyu seed in order to get a good strike rate. Throw it out by hand, and then lightly rake it to get a good amount of dirt-to-seed contact.
- **Plant when you have a good window of sunlight and heat.** In our experience, Spring into early Summer has proven to be the best time to plant a new lawn.
- **Water, water, water!** Once your grass seed is spread, water it every day for a couple of weeks. Do not let it dry out for the few weeks following. The beauty of Kikuyu grass is that even if your strike rate isn't fantastic, it will rapidly spread, so don't be concerned if you don't get a great strike. ■

Hydrangeas in bloom at Errol Park

"The foundation of any country garden is a lush, green lawn and this is particularly poignant in times of drought."

Kirsten Todd



Kirsten Todd



Above: Sarah, Kirsten and Emily enjoy a glass of Champagne in the garden.



A STITCH IN TIME

by Lorne McClinton

Planning ahead lets farms survive death, divorce, disability, disagreements, and disasters.

Cecil Harris might be the only person in history to be better remembered for his will than for his life.

The Canadian farmer spent most of the final hours of his life on 8 June, 1984 pinned and badly injured beneath his tractor on his farm in Rosetown, Saskatchewan. He remained alert and at some point became concerned he wouldn't survive. So, Harris took out his pocket knife and carved his will into the tractor's fender. Neighbours discovered it when they checked over the wreck the following day. He'd written: "In case I die in this mess, I leave all to the wife. Cecil Geo Harris."

Saskatchewan courts quickly decided that it was a valid handwritten (holograph) will. Students now study it in law schools around the world.

No one knows why Harris never got around to writing a will until the last possible moment, but he's certainly not the only Canadian to procrastinate. A 2018 poll by the Angus Reid Institute found that an astonishing 75% of Canadians don't have a current will; more than half don't have one at all.

It's natural for people to avoid talking about death, divorce, disagreements, disabilities and disasters (the "Five Ds") with their loved ones and business partners, says John Stewart, a partner with the D'Arcy and Deacon law firm in Winnipeg, Manitoba. They're outside their comfort zone. But, if you don't plan for them, any of the Five Ds could destroy your farm.

"People know the Five Ds happen to others, but have a hard time believing they could happen to them," Stewart says. "Farmers need a will, a power of attorney, a shareholder (or a partnership) agreement, a dispute settlement mechanism to settle any serious disagreements, and insurance that mitigates the risk from disabilities, illness, disasters, and death."

A partnership or shareholder's agreement provides a clear set of terms and conditions that outlines what happens to the shares or the partnership if someone dies, divorces or wants out, Stewart says. It defines the assets and how to deal with them, rather than be tossed around like a football if there's a divorce or other acrimonious split. ▶

"In case I die in this mess,

I leave all to the wife.

Cecil Geo Harris."

A stitch in time Above: The portion of Cecil Harris's tractor fender that contains his will is now on public display at the University of Saskatchewan Law Library in Canada. Harris carved his will with a pocket knife while waiting to be rescued.

"So many people go to their grave or end up in a divorce and there's nothing in place," Stewart says. "Sadly, as a lawyer, I see family after family trying to work their way through tragedies that could easily be handled if plans were in place ahead of time."

Families often wait until some catalyst event forces them to start serious discussions. For Aaron Elskamp's family in Woodlands, Manitoba, it took his mother being diagnosed with a rare type of cancer at the beginning of harvest in 2008 to start the conversation.

"Her illness brought us to a fork in the road," Elskamp says. "I was 22 years old and pretty frustrated with the world when mom got sick. I was ready to leave the farm. We were milking 200 cows, had a 150 head cow/calf operation and about 3,000 to 4,000 acres (1,214 - 1,619 hectares) of cash crops at the time. I had no interest in the dairy, but I was interested in the cash crop side."

His mother urged the family to discuss goals for the farm and how to get there. They decided to sell the dairy and aggressively expand their cash crop operations.

The family soon realised they didn't have the expertise they needed, so they hired outside advisors to guide them through conversations about shareholders' agreements and buyout periods. They act as knowledgeable referees, and have the experience and perspective to know what is or isn't a fair and reasonable arrangement.

Today they crop 6,435 hectares (15,900 acres) and have a 7,200-head feedlot. Each brother has their own operation, but they work together in a universal partnership structure and share resources with their father to achieve the efficiencies of scale they want. Elskamp says it would be painful if the brothers decided to go their separate ways, but both operations would keep moving forward.

Having the right insurance is an integral part of managing the Five Ds. Most producers



think nothing of paying for crop, fire or flood insurance, but balk at spending money to insure their human resources, Elskamp says. But who's going to fill the hole when a key person dies or is unable to work due to sickness or injury? Having key man insurance in place lets you hire someone with the skillset you need in an emergency. Disability or critical illness coverage provides security when people are sick or injured.

George Dunnnett knows firsthand how quickly life can change.

The young orchard owner from Brighton, Ontario, was feeling run down for weeks in early 2018 but wasn't too concerned about it. Then one day Dunnnett felt so weak he had no choice but to go to Emergency. He collapsed before he got to his truck.

Dunnnett was diagnosed with atypical (walking) pneumonia. His infection was so advanced that he had developed sepsis and had gone into septic shock. Doctors fought for his life; his heart stopped three times during the three weeks he spent in a coma. By the time he was discharged from the hospital, three months later, one leg had been amputated below his knee, and he'd lost half his foot on the other leg. He's still recovering, rebuilding his strength and learning to use his prosthetics.

"Thankfully all my hospital bills and prosthetic were covered under Canada's medicare system," Dunnnett says. "But I didn't have any private disability (or critical illness) insurance that would have provided income right away. It took many



months to receive assistance under the Ontario Disability Support Program. I am fortunate that my father was there to step in and take over orchard operations. And he made sure the bills got paid while I was hospitalised. Otherwise, I would have been homeless by the time I got out of the hospital".

Still, not everyone has family available to help out, Dunnnett says. It's worth it to take some of your daily coffee shop money and buy the insurance you need. Once you get sick, it's too late.

Insurance makes it easier to survive disasters, too. Peter Ruiters had just sat down to join his wife for lunch on 8 September, 2017, when someone started banging on his door. He learned his dairy barn near Ottawa, Ontario, was on fire. Four minutes later, the entire structure was engulfed in flames.

"The machine shed wasn't on fire yet, so I was able to pull my tractor and truck out. But all I could do was stand there and say I'm sorry to all my cows inside the barn," Ruiters says. "We could have lost the house too, but the wind turned a bit, and the fire department arrived in time to save my house and garage. It was a rough day!"

Experiencing a disaster can often cause mental anguish too. It can be hard to accept that bad things do happen to good people. "Then the reality of the fire set in," Ruiters says. "I remember standing there thinking, 'Wow, I guess I don't have a job anymore.' I wasn't going to be milking cows that night; there were no cows left. Every night for 25 years, I walked over to the barn to

tuck in the girls and say, 'goodnight, see you in the morning.' It was a hard habit to break! The first night I got within 10 feet of where my barn used to be, it struck me, 'Oh yeah, it's not here.' It was a tough walk home."

Fortunately, a couple arrived from Ruiters' church Saturday morning with an envelope and a card. It said, "Ignore the rain, look for the rainbow."

"It became our family's rallying cry whenever we were feeling down," Ruiters says.

The insurance company was very good to deal with, Ruiters says. It covered his insured losses, but not what it would take to replace them. For example, he had insured his 20-year old TMR mixer for \$20,000 Canadian, so that's what the insurance company paid. He had to pay the additional \$45,000 needed to purchase the new replacement machine. The only dispute he had with his insurance company was over his loss of income insurance.

Ruiters used the insurance money and invested more to replace his barn with a state-of-the-art robot milking facility. Since his farm is within Ottawa's city limit, he made it visitor friendly to capture some of his location's agritourism potential. After 15 months he's milking once again, and the future is looking brighter.

Planning for the Five Ds is never comfortable, Stewart says. You don't need answers for every scenario, but it is essential to start working on them. After all, no one knows what curve balls life might throw at them. ■

"Farmers need a will, a power of attorney, a shareholder agreement, a dispute settlement mechanism to settle any serious disagreements, and insurance to mitigate the risk from disabilities, illness, disasters, and death"

John Stewart

A stitch in time Left to right: Aaron Elskamp, Peter Ruiters, John Stewart and George Dunnnett have experience managing the Five Ds. Discussing them forces people outside their comfort zone. When that happens, the natural human reaction is to procrastinate. Unfortunately, without advanced planning, any of them can have a terminal impact on your farm.





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