Getting AgTech Ready

5 lessons from 5 innovative Australian farmers

agtech... so what?

DECIPHER

About this eBook

This eBook is brought to you by AgTech So What, a podcast from AgThentic, and Decipher, a precision agriculture company based in Western Australia.

AgTech So What is a podcast dedicated to telling the stories of innovators working at the intersection of agriculture and technology. Podcast guests range across innovators in agriculture, including innovative farmers and service providers, expert agricultural researchers, venture capital investors, agtech startup CEOs, and more.

The audience is global and includes early adopter farmers as well as current and aspiring agtech ecosystem participants, such as startups, investors, researchers, and government. As of August 2019, the podcast has been downloaded over 25,000 times.

AgTech So What is produced by AgThentic, a global food and agriculture advisory firm.

Decipher is an easy-to-use precision agriculture (PA) solution helping growers and agronomists in more than 60 different countries identify and address

variability, track growth performance and make data driven decisions. Born within the Industrials Division of Wesfarmers, Decipher draws upon 100 years of agricultural knowledge and expertise in products, soils, research and agronomy.

Decipher starts with the basics and puts the foundations in place, making the step to apply PA into your business, an easy one.

Watch this video to find out how a grower from Caniambo, Victoria has been using Decipher to conduct variable rate applications.

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Intro

The past ten years have seen an explosion of new technologies entering agriculture. This phenomenon, often called “agtech,” is driven in part by the increasing affordability and performance of emerging technologies such as artificial intelligence, robotics, and the Internet of Things. As the barriers to entry for innovation in agriculture have been lowered, new players such as startups are able to develop technology-based products and new business models.

This wave of activity holds potential for the Australian agricultural industry. For example, research indicates that adoption of digital technologies holds the potential to increase the value of production by up to 25% .

But despite the potential, the volume of activity and the vast range of new products has created confusion and frustration. Common concerns include that the products aren’t ready, haven’t been tested in local conditions, or are more focused on underlying technology than on delivering value to the end user. In the worst cases, these concerns are true. However, there are many Australian producers who have found ways to get started with agtech and to unlock the potential that these new products bring.

To help other producers get value from agtech, we interviewed five innovative farmers on their journey with agtech across corporate farms, family farms, different geographies and even different crops, and captured 5 tips for getting agtech ready!

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Our tips

Overview of the five lessons

LESSON ONE

Start with the problem

LESSON TWO

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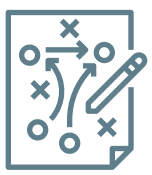
LESSON THREE

Evaluate more than the product



LESSON FOUR

Keep it simple and start slow

LESSON FIVE

Look for inspiration and don’t be afraid to ask for help

For each of the tips, we draw on the experiences of our five guests to provide practical insights on how to get ready for agtech.

About the Podcast Guests

Tim Rethus

Tim Rethus is the Crop Production Manager on his family owned farm enterprise, Rethus Broadacre, in Horsham, Victoria. They are early adopters and innovators who are leveraging best practices in technology, agronomy, and business to achieve their commitment to sustainable, low cost farming.

Tim has a Bachelor of Engineering and Commerce from the University of Melbourne and previously worked with the Shell Oil Company as a Technologist.

Lachie Sutton

Lachlan Sutton, Agribusiness Manager for Southern Cross Farms, has been involved with agriculture for his whole life. He was born and bred on his family's sheep and wheat farm, worked in various rural services roles for over a decade with Elders, and now looks after agtech for Southern Cross Farms, an agricultural management business. Lachlan holds a Bachelor of Agribusiness (Economics), a Graduate Certificate in Agribusiness, a Graduate Diploma of Agribusiness, and is currently studying a Master of Agribusiness.

Lachlan is a director on the board of the Future Farmers Network and also operates a small mixed farming operation in the far west of New South Wales with his wife.

Jess and Matt Fealy

Jess and Matt Fealy, alongside their four kids, manage Blue Sky Produce, a large scale horticultural farm in Far North Queensland. Blue Sky Produce is entirely managed on-site, and includes grading, packing, transport, marketing, and selling facilities for their avocados, mangoes, and Tahitian limes.

Jess is Board Director at Northern Gulf Resource Management Group, and the founder of 'Back Paddock Business,' which provides business and communications support to rural enterprises. Matt was a 2017 Nuffield Scholar, and prior to taking on the management of Blue Sky he was a senior manager at a global travel agency for over a decade.

Andrew Whitlock

Andrew Whitlock is a farmer who's spent his career helping farmers to adopt science-based, practical, precision agriculture solutions. An Agricultural Science (hons) student from Melbourne University, Andrew was formerly the Victorian Department of Primary Industry's Precision Agriculture Agronomist and was awarded Young Agronomist of the Year in 2006.

Andrew founded Precision Agriculture Pty Ltd a leading provider of precision agriculture services operating across eastern Australia.

1. Start with the problem

> **“The key with all this is identifying the problem that you’re trying to address and being very clear on what strategies you want to do first.**
>
> **And you can’t do everything at once.”**
>
> - Andrew

With so many solutions out there to consider, it can be challenging to know how to get started. Our guests advise that rather than starting with the technologies and products, getting agtech ready means first identifying the problem you’re trying to solve.

Before evaluating agtech solutions, start by identifying your goals: what problem are you trying to solve and/or what outcomes are you hoping to achieve? Answering these questions will depend on your farming system, geography and soil types, and your objectives as a business. Some good places to start might be:

- ask you accountant about your biggest costs, and whether any have the potential to be minimised through technology;
- ask your agronomist and farm consultant for help to pinpoint areas for improvement;
- brainstorm with your farm managers and staff; or
- have a family or board meeting to discuss issues and opportunity areas.

Andrew Whitlock, for example, often starts by asking, will greater returns come through maximizing yield or through managing cost and risk? Of course, producers are often working on both yield increases and cost cuts, but prioritising one area can help to focus in on agtech solutions with high potential. In the high to medium rainfall broadacre cropping areas with high land prices, where Andrew often works, a common strategy is to focus more on maximising yields. In other more marginal areas, in contrast, the strategy may be to manage costs and risks.

Once you determine your objective, the next step is to identify the limiting constraints that are preventing these outcomes from being achieved, both from a whole farm level as well as for individual paddocks. Again for Andrew, this means determining the factors that are preventing yield gains.

> “The key is to identify what are the key limiting constraints on your farm and then get that down to an individual paddock basis. - Andrew”

In Andrew’s work, a common limiting constraint is soil. Knowing this helps the farmer get ready for agtech solutions that target this problem.

“Often when I go and work on farms, in some ways the farmers can tell you, straight off the bat, what the strategies need to be and what the key constraints are. They’ve got that appreciation that soil health drives productivity of the farm. It’s just that we need some extra data then to define the spatial patterns of those constraints and then be able to develop a variable rate strategy for it. But the farmers know what country is acidic and where they get wet and where they’ve got the heavy soils and where the sandy soil lies. Farmers know that intuitively anyway. It’s a matter of then joining the dots and collecting some more data through the process and then spitting out the end solution.” **- Andrew**

Lachlan Sutton follows a similar approach in both horticulture and his own mixed farming operation, again emphasizing the importance of identifying the limiting constraints. Or, in other words, starting with the problem you're trying to solve before jumping in to the technologies and solutions.

> “Initially you've got to have a really sound strategy for what you're trying to achieve within the business. I mean everyone says their profitability and juicing as much fruit or whatever. I actually try to dumb it down and sort of find the most limiting factors...looking at not just the product but how people interact with it. - Lachie ”

Tim Rethus also emphasizes how important it is to start with the problem, and only then to look for technologies that will solve it.

He shares a specific experience from his own farm where they first realized they had soil compaction issues, and then began to set out a goal and find technologies that could help them reduce compaction and achieve their goal.

"The key thing is you have a very clear path of where you want to go. So in this case Dad knew that we needed to reduce soil compaction to save moisture. He'd already been doing things to retain stubble to store moisture and that sort of thing, then was asking, well, where do we go next? There's a lot of research about farming with discs seeders which seemed like a good fit, and separately there were the benefits of controlling traffic which formed the vision that 'what I want is controlled traffic disc system,' and you essentially do every equipment decision from then on to finally achieve that goal. you may not get it all right in one year due to cost, but at least you know the next time you buy a tractor, for example, you'll make sure that it's on 3 meter centers because that's where you want to be, even if it's not useful now. You're constantly working towards that vision." **- Tim**

Another benefit of starting with the problem first, is that once you have agreed on the problem, you're much more able and willing to commit to solving it. You stop looking for excuses, and get on with solutions. This has been Tim's experience.

> "Once you've made up your mind you want to change, you'll commit to it properly and start working on solutions. But if you're not, if you're sort of wishy-washy about it, you're going to spend time on excuses. You've really got to be convinced. - Tim"

Starting with the problem can also help to ensure that the whole team is on board with adopting a new solution, as there's buy-in for what you're trying to achieve and why. This allows everyone to play to their strengths to help come up with solutions.

For Tim, he and his brother have a divide and conquer approach once they've decided what problem they need to solve. Tim looks after the crops, and his brother looks after the marketing and logistics. Once they identify a problem, they can look for solutions from these two different approaches. This helps with managing the vast amount of data and the large range of possible solutions. It also helps them to avoid chasing technologies that are flashy, shiny, and new, but don't actually address a real problem in the business.

"We know what we want to achieve to fix a problem. On the seeder for example, my brother is the lead and goes and researches solutions to try and solve the issue. He'll discuss with me, saying 'I think this is what we should be doing.' I'll consider my areas of expertise and likely give a 'fine, if you think that'll work, we'll run with that.' But we've both got a clear idea of where we're heading. We're not doing two different divergent management strategies.

And again, it's about how it fits in the model as well. We've got to get our heads around that. Too often, we say 'well, I really like one of those' But it's not so much about 'I want one of those' it's like 'I need one of these to fix this problem." - Tim

No matter what your goal, or which problem you're solving, adopting new practices or technologies needs to start with identifying the problem. Agtech cannot be about data for data's sake.

"We're always taught we want to get as much data as we can and try and understand all these complex patterns, like the correlations are between all these maps that we're generating. But there's been a lot of soil science and farming science that's gone on for a long time here in Australia. We have to respect the science and understand the constraints you're dealing with. What are the critical measurements we need to understand that constraint? You don't have to throw as much data as you possibly can to try and get a better outcome. It's about using the right data for the right solution." - Andrew

2. Find tech that fits your farm workflow and systems

> Occasionally, the lowest common denominator on a sheep farm is someone shutting a gate or checking the water at the right time. So we can do all these different things, and we can really push the tech side quite hard, but we when we bring new tech in, we have to make sure that the direction it's headed is clear and sound.
>
> - Lachie

After determining the problem(s) you're trying to solve, it's critical to understand, before adopting a new agtech product, how the technology will fit into your workflows and systems.

For example, it's important to consider:

- Who on your team (e.g., staff, agronomist, consultant, accountant, etc.) will use the product?
- Will it require a change in how they do things now?
- Will that change be hard or easy?
- Will the new product help your team to achieve their goals and get their jobs done more efficiently?
- Does your team have the skills and capabilities to utilise the new product?

Thinking through how the product will be used across your team and operation can help you to filter out products that seem to be more focused on the technology than the processes that the technology will help with, as well as products without a clear return on investment (ROI). Ultimately, agtech has to help improve the bottom line.

Finding agtech that fits your workflows and systems requires understanding how different members of your team will use it to help achieve the objective. Lachie recommends checking in with different members of the team to see how they will use a new product in their workflows. For example, asking a farm hand who's been on the tractor all day how he or she feels about the product, or asking how a manager sees a product, or how the accountant would use the product or data.

Successfully understanding how a product will fit into the workflows requires keeping the questions open-ended, and not pushing for a specific answer. Instead, try to really seek to understand what will work for your team to solve the problems they're facing.

> "We consistently look for a strategic fit as we go through. We don't just jump on the bandwagon and run with something that we were probably never going to be happy with at the start. We might find something that maybe not everyone is one hundred percent happy with at the start, but that the majority of it it will work, and investors will be happy with the decision. - Lachie"

Lachie shares a specific example where this worked well for him and his team. Lachie found a GPS tracking system that looked interesting while at a field day. He then got to know the sales rep, and began to evaluate the features.

But Lachie explains that it wasn't just his decision, as they have an innovation committee structure that helps get everyone on board and ensures that new technologies will fit into workflows both on the farm and in the back office.

“So the business I work for has actually got an innovation committee, which is a mixture of people from in the offices to out in the field. And each one has a different opinion and a different set of ideas around how we can use things. We settled on this product because firstly it was simple- anyone can use it pretty well as soon as the tractor turns on it starts logging data. But right through, we could make it as complex as we wanted to. So it had the ability to suit what an accountant would want in the office, but it also had the ability to tell a farmhand where he was out in the field and let us know if he was back home safely at the end of the day. And although it may take more time to get there, by collecting a lot of different opinions from different areas in our business, with time we tend to get a really, really well-rounded product when we do finally take something on.” **- Lachie**

Taking the time to get the team on board and excited about the product paid off. In evaluating the technology, they had confidence that it was strategic and aligned to their primary goal of getting better data to reduce error across the team.

For Lachie in a corporate farming setting, this process of getting everyone on board helps to justify the purchase to investors as well as ensure that they’re adopting technologies that will have an impact, not just jumping on the agtech bandwagon.

> We consistently look for a strategic fit as we go through. We don't just jump on the bandwagon and run with something that we were probably never going to be happy with at the start. We might find something that maybe not everyone is one hundred percent happy with at the start, but that the majority of it it will work, and investors will be happy with the decision. - Lachie

Another aspect of ensuring that a new tech will be a good fit for your operation requires thinking long term and taking a "futureproofing" approach to technology adoption. You want to look for products that makes sense now and that will help you to proactively get ready for the technologies and workflows of the future.

Matt, after traveling the world looking at robotic technologies in horticulture as a Nuffield Scholar, really embraced this proactive approach and mindset. In horticulture, a key example is getting the farm "robot ready" by adopting technologies and practices that will have a positive impact on profitability in the near term, as well as lay the foundation to adopt advanced technologies as they come online.

"The most common question anybody ever asks me after finding out about my Nuffield is 'do you have a robot on your farm? Where's the robots, and can I buy one?' And I have to tell them "no, you can't because your trees are planted on 12 meter by 10 meter centers. And there's no robot in the world that's going to be able to pick that.' You have to go to high density two-dimensional tree structures, which is really easy for humans to pick and then it'll be actually ready for robots as well." **- Matt**

Of course, not everyone can travel the world just to stay up to date on what the future will look like. Other ways to monitor for trends include: attending conferences, including conferences specifically on agtech and in other industries; reading industry reports and research findings; talking to vendors at field days, both about what they have built today as well as what they're planning for the future; and asking your agronomist and/or consultant about the trends they're seeing.

Once you've adopted a new technology, it's important to continue this process of evaluation to make sure you're maximizing value and not leaving anything on the table. For example, you can continually ask yourself and your team if you're getting value from the product. Given that digital technologies especially will continue to change over time, it's important to make sure a product is still a good fit for your farming systems. Make sure you're ready to get value right now, and as it improves over time.

"Continually questioning and making sure that you're getting value out of the products I think is incredibly important." **- Lachie**

3. Evaluate more than the product

> “Most of the agtech companies, to their credit, are really receptive to new ideas and always more than happy to take on feedback. It may take something like integration with an accounting system or integration with some sort of approval system, whatever, and they’re always really happy to take that on board and say, ‘yeah, we’ll try to do it’. ”
>
> - Lachie

In the world of agtech where producers are experiencing products that are being developed by startups who follow different processes than big companies and often move faster, products are coming to market sooner (i.e., with fewer features) than producers are used to experiencing. This can be frustrating. Sometimes the experience is even worse, for example when tech companies overpromise and underdeliver.

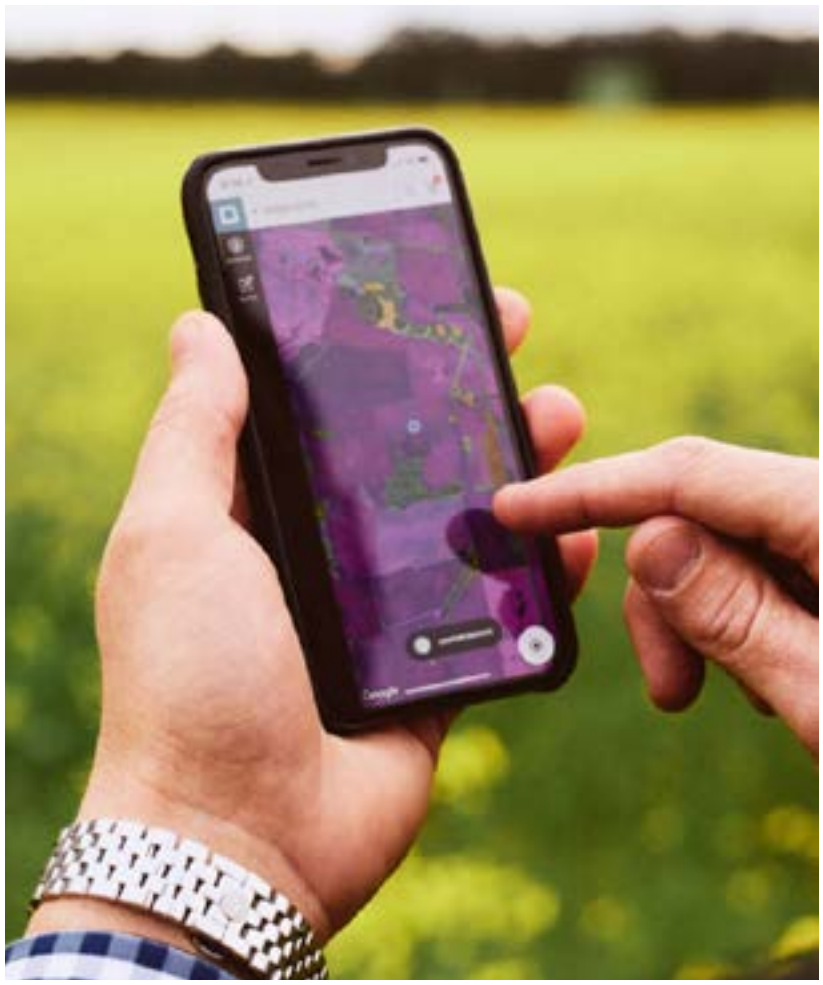
However, the rapid pace that startups move at can be beneficial to producers. Getting involved in agtech means an opportunity to give feedback and influence how solutions are developed, making sure they’re tailored to the environment and fit for purpose.

Tim explains that this is a big benefit. He’s seen that tech developers want to take on your feedback and make the product better. And giving them feedback helps you as a producer, because you get a product that works better and fits your workflows. It also helps the tech company, because they then have a better product to sell to others.

“You need to find a manufacturer that’s willing to talk your language, that understands where you’re at. So, some manufacturers are really keen to help you out, and other guys will just be like, “this is the product, this is the way it is.” And you might be really happy with that way it is, because it’s super reliable, and they’re going to fully back it, and there’s no risk. But other times, the companies get really excited about actually getting feedback from the market. So you’ve got to remember, they’re trying to understand what they’ve got to do, too.

If you don’t talk to them, they don’t know what to provide you with what will make you happier. It’s a bit like, getting the right presents for your wife. If you don’t ask, you’re going to get the wrong thing, and you’re going to get in trouble. Actually, you’re probably going to get in trouble anyway. So you want to be able to communicate to these manufacturers, because they enjoy the feedback. As much as trying to sell you anything, they want you to have the right product, and they’re learning from you as much as you’re learning from them. So I think you’ve just got to back yourself, and you’ve got to know that you have something that’s valuable to them.” - Tim

Working with companies and giving feedback requires a different mindset and different processes than just buying products. In getting agtech ready, producers must therefore use new metrics and approaches, such as evaluating more than just the features in the product. Given that the product will change over time, it’s critical to get to know and to evaluate the team behind the company, as they are the ones who will be making the changes and, hopefully, keeping their promises about the technology and development roadmap.



In evaluating the team, questions to ask include:

- How long have they been in business, and what assurances can they give you that they will be around for the long haul?
- Have they been transparent and realistic about their roadmap (i.e., the features available now, as well as what's coming next and when)?
- Are they open to feedback?
- Do they listen and ask questions and really care about understanding the industry, users, workflows, and challenges?
- Do they keep their promises?
- Are they fun to work with?

To assess whether an agtech company will be good to work with, Lachlan suggests working closely with the team and getting to know them- just as you would with any other vendor or service provider in agriculture. It's about relationships and trust.

> "It's actually building relationships. The [agtech products] that we really launched quite well, we had good relationships with the team. That's what it takes. We may not make a decision really quickly, but we make a decision after we're comfortable with the people that we're dealing with. We've met the CEO, and we're comfortable in their strategic direction and that it's going to fit our strategic direction as well. So that's that's one of the big things. It's just that relationship building. So even though we might be down to a bit of software or a bit of machinery, still that people factor is really really important. - Lachie"

Building these relationships, as Lachie says, requires "cutting through the 'sell' by spending time with the team.

"So being able to get one-on-one with a person that's selling and actually go through the product is incredibly important to me. It's that people factor. It takes actually really getting that one-on-one interaction to really gain an understanding of what the business is and what the product is. That's really important to me." **- Lachie**

Another critical factor to consider is support. One challenge with agtech is that digital and electronic products can be much harder to fix than mechanical products, and the farm may not have the necessary equipment or skills in house to diagnose and treat issues. So, the support that the agtech company will provide when things go wrong, as they surely will, is critical.

Lachie tells a story of a new agtech product that they took on at Southern Cross Farms. After they got to know the team and gained confidence in how the product would fit their systems and workflows, they decided to jump in with a trial. A big part of getting comfortable to put money in for a trial was the availability of support- they knew someone would be around to help.

"We actually took it on. We actually said we'll trial it for a little while [because we were] comfortable with the value proposition of the product. We're really happy with the support. We know that if we need someone to help us online or in person, those people are there. And we were prepared to come up with the money to do that immediately on a short contract. Our big thing is support. I really look at after-sales service, as well as well as functionally the product, because if there's no one here to help us [when it breaks], I can't get to Griffith. I can't get to Hillston tomorrow to go and fix the product. We need to have someone that can do that. - Lachie *"*

4. Keep it simple and start slow

> So I think for growers, they need to be a little more open-minded. Lean in a little bit and adopt low-hanging fruit agtech solutions rather than thinking that tomorrow they have to implement this new wireless technology with sensors all over the farm or a platform that's going to start driving automated tractors and start having robots picking fruit. You know, just an automated irrigation systems and some farm management platforms that have really been fairly well-proven over the years- just start implementing those first.
>
> - Matt

Getting benefits out of emerging technologies and new data-driven practices can seem complex, but getting started with agtech can be simple if you start slow.

Lachie recommends that once you've done all of the above (i.e., the first three tips) and you're ready to really start looking at the product itself, you want to go through each of the features to understand which features will be most impactful in helping you achieve your goals and solve the problems you've identified.

You also need to consider onboarding: which features will be hard vs. easy to implement.

Once you have a sense of the whole product, you can prioritize where you start. The best place to start is with features that are both going to have a high impact and be easy to implement.

> “I really try and understand the product a lot and just look at all of its features. And then once we made that decision [to use it], we bring it right back to, ‘okay, how are we going to start this thing?’ We’re happy with the whole product, but we can’t just go and do every single feature immediately. We start off on whatever the simplest thing is. So if it’s something that starts collecting data when the tractor goes on, or the flow rate controller goes on on a sprayer, then that’s where we start. We usually try and go for a softly softly approach at the start. - Lachie ”

But how do you actually get some of the tech working on the farm? One way is with a soft launch, which is basically like a trial. This is where you don’t immediately take on all the features, but rather take on a subset of the product for a period of time to see how it will actually work in practice.

During the soft launch, the goal is to work out the kinks in the product to make sure it will work in your environment and with your workflows and systems. Another important goal is making sure that the technology or practice is implemented correctly and consistently across the farm. In Lachie’s case, this means ensuring consistency across the many farms within the business.

“We need to be consistent with how it’s being built on our farm and how we’re using it. So we can’t have one farm doing it one way, and one farm doing another. One farm working on step five and another farm at step one. So we’re trying to really keep that consistency and it’s something we’re really focusing on at the moment.” **- Lachie**

Things to consider when setting up the soft launch of a new product include:

- How long do we want to give this a try for?
- What do we hope to learn or achieve in this period?
- Who on the team/staff do we need to get involved during the soft launch? Do they have the right training? Do they see value in the tech, so they're bought in to the trial?
- What training or support do I need to provide for my staff to ensure they get value and can use the product?
- How will we capture issues that we can feedback to the vendor, to see if they can make improvements over time? Likewise, how will we capture ideas for how the product could be used better over time once we take on more features?

Lachie has implemented many soft launches. For example, he's trialled products (often for free, in the software space) to compare solutions that seem similar and work out which is better for their needs.

He learned the power of the soft launch approach after a bad experience where he tried to roll out a whole product all at once. Rather than a soft launch that was time bound with clear goals and processes for evaluation and feedback, they rolled out a product all at once across several farms. The result was a disaster and required a lot of time and resources to fix.

> We had a lot of challenges with [this approach, as it] got out of control. People were using it in different ways, so we had to almost relaunch the whole product. Things like the chemical list were being put in in different ways; we had people recording their hours in different ways; we had all these other things that just seemed to sort of mutate and grow without us even focusing on it too much, and it just got really out of hand and really really messy. So we had to bring that right back to point A, relaunch it, and then rebuild it from there. It took a lot of time, and time is something we don't have a lot of. - Lachie

This approach of soft launches, which is basically like running small experiments with new technologies to ensure they work and add value, can pay off for new practices as well as with new technologies. By starting simple and not taking on too much at once, you can sometimes identify low hanging fruit that can have a big impact without a lot of cost.

Andrew has a great example of how big benefits can come with even simple changes:

"I deliberately try and keep things simple and I always have. I've always felt when I was first learning about precision ag just, that things just seemed too complex. There was something wrong with the messaging. Some of the best stories that I recall were where we deliberately simplified things, and still had a really good outcome. Drainage is a good example where people often often think that it's expensive and it's complex and it's gonna make a mess of the paddocks. But I love the times when we've looked at paddocks and we've literally just changed the direction that the tractors are driving in. They may have been driving perpendicular to the flow of water so it was holding the water up, allowing it to concentrate, and then blowing it into these huge waterlogged patches. So, literally just turning those tracks around and running up and down the slope made a huge difference. Then he's calling me the next year and he couldn't believe the benefit. Often we will say let's just start by changing the direction and we'll see how we go. If we have to put some drains in we'll do that but I think that's gonna make a huge impact. And when it comes through and it does, and they don't need to put drains they have really spent no money at all to get a really good outcome. I love that because that's that's the philosophy that we're trying to implement." **- Andrew**

Whether you're trialing a new practice or a new technology, be sure to evaluate- honestly- how the trial went. Often a tool fails because the technology didn't work or deliver value. However, it might have failed because of something you did or didn't do. If the team wasn't bought in, for example, or if you didn't fully invest in getting the value out of the trial.

By identifying the issues with both the technology and how you approached and implemented the trial, you can identify future opportunities for improvement both for the tech and for yourself and your team.

5. Look for inspiration and don’t be afraid to ask for help

The final key to getting started with agtech, even with simple practices and products, is not being afraid to ask for help. Sources of help and information can range from existing contacts, to the technology vendors directly, to overseas experts. The mindset of not being afraid to ask for help has been key for all four of our guests in getting agtech ready.

Matt has looked overseas in places like Israel that have been forced to innovate and use new technologies during his Nuffield research, but he’s also found trusted sources of help close to home.

“I soon found a grower nearby that was implementing a lot of the things that I wanted to implement. So I just picked up the phone and you know, thankfully he was a very open and sharing young fellow. He just opened his books for me just said hey look this is how it works.” **- Matt**

Andrew recommends conferences and peer-to-peer networks as the best places to look for help, as they allow producers to hear from other farmers about how the technology works in a range of environments. Talking directly to other farmers at these events builds trust and confidence that the technology is reliable and proven in a range of environments. It also gives you a chance to ask questions- something that’s not possible with just a brochure or website.

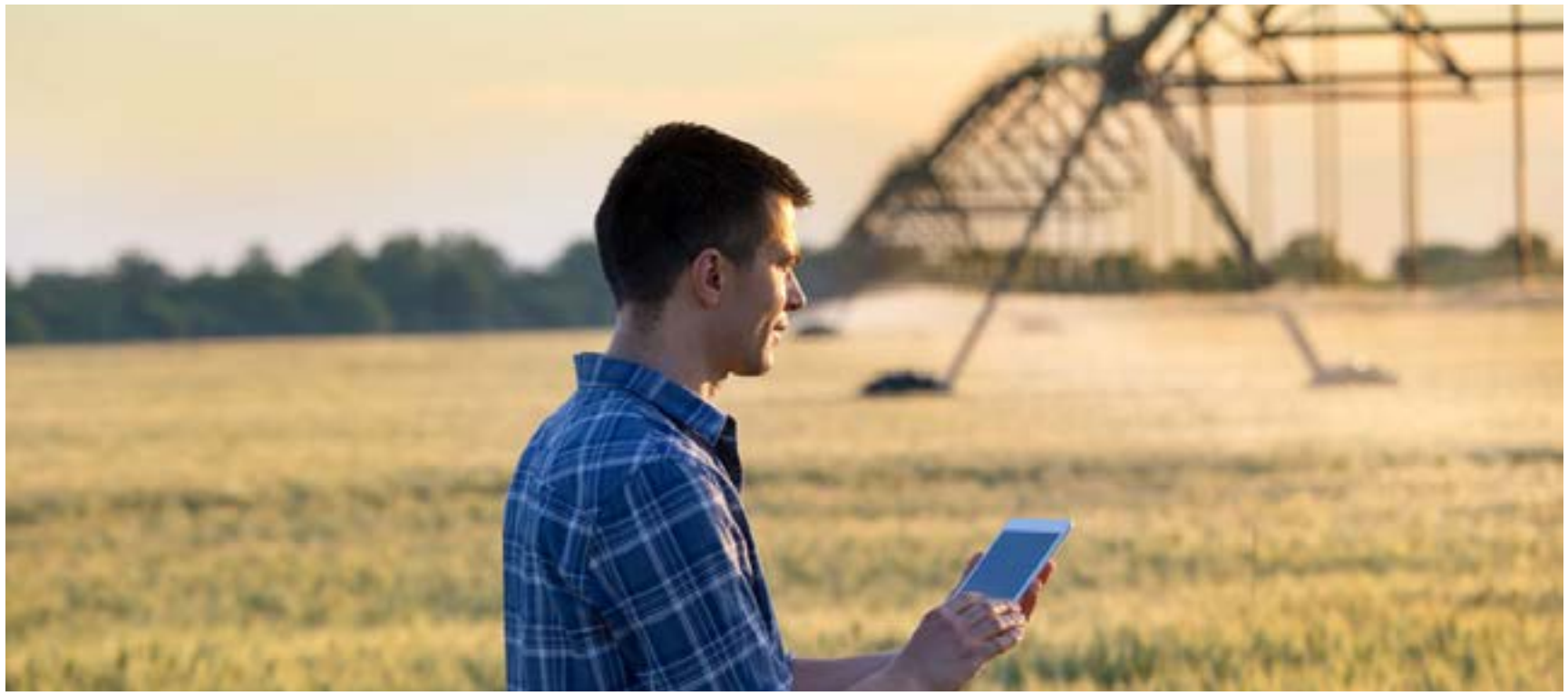
> “Farmers need to see it come from other farms, so that’s field days. But it’s also more than that. We need to hear it from a range of different sources. So it might be a podcast like what we’re talking about it, right through to travelling and visiting interstate and visiting farmers who are who are adopting these technologies that you’re looking at doing. Conferences are another big one. - Andrew ”

Tim, a self-identified early adopter, has a slightly different view. While he has had the experience of confidently adopting a new technology because he’s seen it work in person, he also looks further afield for solutions and inspiration about things that don’t yet exist in his area or even in Australia. Rather than have to travel though, he recommends online tools like social media.

“Right now, the easiest way to look is on Twitter. That’s the farmer’s medium: Twitter It’s a great place to look for novel ideas. So, I guess where we are in our business, I’d say we’re early adopters. we’re looking for new options that are going to help change things, that are going to get us towards our final goal of a sustainable low cost farm. And that means you’re looking kind of beyond the local farming block. So you can’t always just look at the neighbors, because they’re probably not doing that novel thing yet. you’re constantly trying to find a solution outside your area. It could be a different agricultural region, or even a different industry.” - Tim

Some tips to help you look for inspiration beyond traditional sources like conferences and field days include:

- Look on Twitter and Facebook for companies that share case studies and testimonials, rather than just updates on their activities
- Follow experts and other producers on social media to learn about what they're trying.
- Once you find a producer or expert with helpful content, check out who they are following, and follow them too!
- Post questions on social media (e.g., using #agtwitter and #agchatoz hashtags) to get help and tips from other producers
- Subscribe to newsletters from agtech companies you're interested in, as they often send out updates on new features and information on events they're attending where you can meet in person



Overall, the key tactic here for early adopters and those looking to push the boundaries, is thinking laterally. Or in other words, looking not just for solutions that are a direct fit for your operation, but also things that could work with slight tweaks or adaptations, such as products from other industries or geographies.

A final thought on getting agtech ready: give it a go!

With a vast range of agtech solutions hitting the market, it can be time consuming at best, and frustrating, confusing, and costly at worst, to get started. So a tempting option for some producers may be to wait. For example, to wait for consolidation amongst similar products so that there's a clear market leader. Or to wait until all your neighbors have something installed and working before giving it a go.

But all of our guests have taken a different approach, diving in and looking for solutions that will add value now. They've done this by following the tips above. They start with the problem they're trying to solve, and only adopt technologies that fit into existing workflows. They evaluate the team behind the product and the available support, as well as the features and functionality. And they keep it simple, start slow with trials and pilots, and aren't afraid to ask for help.

"That was when it sort of clicked for me to realise that you know sometimes we need to be brave and take on change and push back against the fear because the benefits are on the other side." - Andrew

"You can't just sit static. Nature's too smart for us to develop a model, and then agree that that's the best rotation, or that this is the best system. You've got to keep adapting it to keep ahead, and keep mixing it up, because it's never a static playing field." - Tim

"There was nothing formal in place. It was more, let's just have a go at this. Like, let's just see what happens." - Jess

"So for me, agtech is not necessarily just a new machine or a new bit of software that we put into a tractor, or a new way to analyze or collect our data. It can be a new technique: how we move our livestock or how we handle them through the yards. Or it can be a new chemical that's coming out to help break herbicide resistance. So to me, it's a really broad topic which brings with it some challenges, but also some really good opportunities." - Lachie

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