Speaker 1:

Welcome to Ag Vic Talk, keeping you up to date with information from Agriculture Victoria.

Drew Radford:

Imagine having a clear vision for making your farm more productive and less labour intensive, but not having the resources to even let you take the first step in making that happen. That was the story of Clay Gowers. A farmer from Carwarp in North Western, Victoria, who was certain drones could play a big part in improving productivity on their family property. He joined me in the Ag Vic Talk studio to discuss how he's now on the path to making his dream a reality.

Clay Gowers:

At the minute, what we do agronomically is we just drive around the paddock, just visually look and see if we've got an issue with any of the paddocks. I think our agronomists have told us to visually see a difference between that plant and that plant. It has to be a 10% difference and 10% is quite a lot when you start talking yield at the end of the day. So, what my plan would be, would be to fly my drone, be able to map a paddock. You get a bit better of a bird's eye view and you get the paddock as a whole. Whereas when we drive to the paddock, we drive through a bit of a corner or maybe through the middle and then out, you don't get a full idea of what the paddock's doing in every spot as you'd be driving around the paddock all day.

Drew question: So, it’s this ambition for drones that’s led you to apply to a Young Farmers Scholarship. Tell me about why you think then this would be a good fit?

Clay Gowers:

I'd always wanted to learn more about different farming processes. And I suppose I haven't really been able to fund learning different skills and all that sort of stuff. Some of the things you learn cost a little bit of money. So, I haven't probably thought it as a big priority financially. So I haven't sort of taken a step, but being able to get the scholarship has allowed me to take that scholarship money and be able to put it into an area where I'm really interested in, but haven't had the chance to sort of make that leap forward.

Drew Radford:

So, what is it you've put it into?

Clay Gowers:

The scholarship's pretty much broken down into two halves. So, you have up to $5,000 to study and up to $5,000 to implement. So, I've put my studying $5,000 in, which is the Upskill portion, I've put that into drone mapping. So basically, learning how to incorporate drones into the farm, to help map paddocks and gather data. And then the second half of my scholarship will be helping me to fund into a drone. So, it should pay for, I think, two thirds of a agricultural mapping drone, and then I'll fork out the last little bit to sort of help implement that into our farm.

Drew Radford:

Okay. So, you're getting into drones Clay.

Clay Gowers:

Yep.

Drew Radford:

But why do you see drones as an important tool for the future of your farming needs?

Clay Gowers:

So, it's just to get, I suppose, a better view of your paddock as a whole, as most farmers know, no paddock is equal from one side to the other. You've always got dead spots. You've always got hills that are either overproduced or under-produced and they address... I suppose, fertilizer side of things, they're addressed differently. And then I suppose if it comes to infestation of bugs or mice or any other kind of pests, you're able to visually see the damage faster and being able to address it earlier is always going to be a benefit.

Drew Radford:

Are you aware of drones being applied this way in other farming practices?

Clay Gowers:

I have on some small scale. I know that Agriculture Victoria, I believe in the Horsham Research Facility, they are doing tests on crops, but obviously that's a smaller scale. I believe there is a farmer in the Sea Lake, Manangatang area that is doing it. I have to look into that a little bit more, because I really want to go and visit him to sort of see how he's implementing it and how he thinks it works. And I suppose pick his brain of things have worked, things that haven't. But as for large scale, I don't know a lot that's going on in that space. But definitely if anyone, I suppose knows of anything can contact me, I'd definitely be interested in listening to what they got to say and even visiting the farm and I'm eager to learn. And I can see this space being a space that's... it's not going to get smaller. It's going to be one of those things where 10, 15, 20 years, farmers are going to be saying, "When did you get started implementing drones?" Not if you have but when you have.

Drew Radford:

So, you're going to be a bit of a pioneer in this space, in some regards Clay.

Clay Gowers:

That's the sort of the plan. Yeah. I already have a keen interest in drones anyway, but being able to implement this into the farm, it'll be learning from my mistakes and trying to work out well, what can we do better? How can we implement this technology in a easier or user-friendly way? Or I suppose it’s sort of very early stages in drone development in general. And then, yeah, you're trying to apply it into a professional space being in agriculture. There's always going to be some learning points and yeah, ways to drive that technology forward. So, I'm excited to see where it can go.

Drew Radford:

I guess the scholarship then has given you a chance to hyper accelerate your vision and pursue this technology because otherwise what would it have been. A bit of a have a go-show. Go and buy a drone and see what you can do with it. Whereas now you're going to be professionally trained and have the money to buy a piece of equipment that's fit for the task.

Clay Gowers:

Yeah, definitely. It's interesting that you sort of bring that up. I actually, previous to even hearing about the scholarship, I remember having a chat to my dad about maybe getting something like this to help with our spraying program. And I jumped online, looked at the price, said, "Yep, no way." And then shut the computer again, even just an entry level ag drone and I just looked at it and I thought I can't afford that, but I don't even know how to use it. I don't know anything about it. So that's going to be more training. And I just remember being overwhelmed the first time I saw the price of some of these ag drones, that can vary from five grand up to 40 grand. So, it was quite overwhelming. And then I suppose when the scholarship came out, I thought, well, why not use this as a chance to learn from people in the industry and try to, I suppose, implement this technology in a way that sort of never been implemented before, so.

Drew Radford:

Clay, you've given a bit of an outline in terms of a bird’s eye view opportunity it's going to give you in terms of looking at your crops and what may be occurring across the entire operation. Have you got a vision for other areas that may lead into for you?

Clay Gowers:

I believe in the short term, the next, let's say 10 years, it will be mainly focused on crop health. So obviously, like I said before, getting that bird's eye vision, being able to scan paddocks for the crops' photosynthesis. So obviously the green scale of the crop. And then obviously that's going to tell us if the plant is sick, if it needs either addressing because... And then finding the reason why it's sick. Could it be pest infestation or nutrients and addressing that issue. So, I believe that in the short term the main focus will be all for crop health and agronomic strategies and all that sort of thing. But I believe the long term will be people talk about drones. The first thing that comes to their mind is something flying in the air. But the definition of a drone is just anything that's unmanned.

Clay Gowers:

People talk about driverless tractors. I know in America they're testing driverless tractors at the minute. The biggest stumbling block is going to be obviously getting that over the line safety wise and OH&S. But I believe the future of farming is going to be more, less physical people in seats and more automated technology to have driverless tractors, driverless sprayers, driverless quad bikes, utes, all that sort of thing. So that then the farmer is more of a management of operations instead of sitting in the seat or having to employ five people to sit in each of these tractors. I think from a future visionary standpoint, I believe that the farmer is going to be more managing these machines and focusing on tasks that require hands, like filling up trucks again, or maintenance for breakdowns and all that sort of thing. I do believe that will be the next push. When that is, whether that's in 20 years, 30 years, 50 years, I believe it will be in my lifetime. I'm 27 at the minute so that will be either implemented or not far off being implemented.

Drew Radford:

Clay, as you said, you're only 27, but you're obviously seeing a change in terms of labour being available on properties. Is that part the driver also you think for this need for drone technology? Just simple access to people to do the job.

Clay Gowers:

Yeah, potentially. I know we usually employ people for harvest and sometimes for sowing. It is sometimes hard to get some people to say... Especially if they've got part-time job or another job to say, "Come work for us for two months. And then you can go back to your job." Most people don't want to do that. You need to almost find someone who either is looking for a job is only working let's say part-time and they can cut their other job back. So, to find that sort of person who's actually good quality people can be difficult to find because we... As we were running multimillion-dollar machinery, we don't want to just chuck anyone on there that doesn't really know what they're doing. We actually sort of almost filter through people before you even ask them. And then obviously those people are probably qualified or got jobs elsewhere.

Clay Gowers:

So, I don't believe labour acquisition is going to be the driver of it. I think it'll just be technology, making things easier so that you are working smarter. You're not working harder. You're putting your resources where they need to be instead of just sitting in a seat. I find sometimes during harvest and sowing, I'm just sitting there babysitting this machine, making sure that if something goes wrong, I'm on top of it. But 90% of my day is sitting there just watching. And if you could take out that portion and just have a machine that could literally drive itself and then if something goes wrong, it stops. And then you get a notification on your tablet or smartphone or whatever it may be, saying, unit such and such is encountering an error. And then you have to go and obviously solve that error. So, I just think that, that would... It makes you use your time more efficiently instead of sitting in a seat unproductive basically, is sort of my vision on it.

Drew Radford:

So, Clay potentially, is this scholarship putting you on the pathway of where you really think farming is going to be? I mean, your vision is moving farming towards a very high-end technical skill set as well as a high-end agronomic skill set as well.

Clay Gowers:

Yeah, definitely. The technology is here now to implement what I'm talking about. It's just got to be, I suppose, trialled and have issues sorted out and then obviously progress. And that period is going to take a long time. Right now, in America, they've got tractors that will drive themselves and you just set up your parameters. Here's the boundary, here's a tree. They'll go around it, not a problem. It's not that will be an implementation. It will be the part that the neighbour worrying about if it's going to drive through his house. It's going to be the safety side of things that will take a long time to get over the line to then start implementing. So, I suppose I've got my scholarship side of things, which is obviously is amazing. And I'm so excited to get started and start flying my drone around and start using it on our farm effectively and being able to make better agronomic decisions faster.

Clay Gowers:

But I can also see this other side of it where the future is going to be so incredibly interesting and the direction that it's going to go, really, it could go anywhere. But where I can see it going is just going to make life a lot easier. It'll be almost the same instance when GPS started being installed on tractors. Some people had them, some people didn't, but the people that did have them, they found the technology useful. They could see how it was saving the money with fuel, with chemicals, with not overlapping. So, they were saving more money and that paid for their unit in return. I can see this as another instance where once you implement it, it will save you more money and it'll pay for itself anyway. And then in 20 years, people will be saying, "It was the best thing I ever did. It saved me money. And when did you get your drone?"

Clay Gowers:

I believe this will be sort of the next step we'll be mapping. And then obviously in the future for the forward, it will be unmanned tractors and sort of progressed in that direction.

Drew Radford:

Well Clay, it's a very exciting future that you envisage. And I think you're probably on track for seeing it become a reality. How far are you through your training now with your scholarship in terms of the first part of the scholarship?

Clay Gowers:

I've pretty much only got one last portion of it. I'm doing my training down in Warrnambool and I've done the... basically the mapping and data gathering side of things. And then the third part is just a more in-depth learning how to fly larger drones and comply with aviation laws and things like that. I haven't been able to do that section of it due to coronavirus. I was pretty much set in to go just before it all started. And then obviously everything's sort of flared up. So that's sort of been put on the pause for the moment. And so once pretty much I can sort of get down to Warrnambool and organize that again, I'll be heading down there. And then once I've ticked that off pretty much, that's my Upskill portion of the scholarship covered. And then the next step will be the invest side of things, which will be where I'll be looking at purchasing an ag specific drone to help with my mapping.

Drew Radford:

Well, I'm sure you've been trolling the internet, looking for the perfect drone. Clay Gowers, thank you very much for joining me in the Ag Vic Talk studio and all the best with the remaining part of your scholarship and the exciting future road that it's going to take you on.

Clay Gowers:

No worries. Thank you, Drew. Thanks for having me on.

Drew Radford:  
For more information about the Upskill and Invest Young Farmers Scholarship and other Young Farmer resources visit [vic.gov.au/youngfarmers](https://agriculture.vic.gov.au/youngfarmers) or search Young Farmer Business Network on Facebook.

Speaker 1:

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