T R A N S C R I P T

LEGISLATIVE COUNCIL ECONOMY AND INFRASTRUCTURE COMMITTEE

Inquiry into the Industrial Hemp Industry in Victoria

Melbourne – Monday 11 September 2023

MEMBERS

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David Davis – Deputy Chair
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Evan Mulholland

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David Ettershank
Renee Heath
Sarah Mansfield
Rachel Payne

WITNESS

Dr Stuart Gordon, Senior Principal Research Scientist, CSIRO.

The CHAIR: I declare open the Legislative Council Economy and Infrastructure Committee's public hearing for the Inquiry into the Industrial Hemp Industry in Victoria. Please ensure that mobile phones have been switched to silent and that background noise is minimised.

I would like to begin this hearing by respectfully acknowledging the Aboriginal peoples, the traditional custodians of the various lands we are gathered on today, and pay my respects to their ancestors, elders and families. I particularly welcome any elders or community members who are here today to impart their knowledge of this issue to the committee, or who are watching the broadcast of these proceedings. I also welcome any other members of the public watching via the live broadcast.

Dr Gordon, we will begin by introducing you to committee members, starting down here with Dr Heath, and then we will go to the screen.

Renee HEATH: My name is Renee Heath, and I am from the Eastern Victoria Region.

Evan MULHOLLAND: Evan Mulholland, Northern Metropolitan Region.

The CHAIR: Georgie Purcell, Northern Victoria Region.

Tom McINTOSH: Tom McIntosh, Eastern Victoria Region.

Rachel PAYNE: Rachel Payne, South-Eastern Metropolitan Region.

Sarah MANSFIELD: Sarah Mansfield, Western Victoria Region.

Jacinta ERMACORA: Jacinta Ermacora here, from Western Victoria Region.

Stuart GORDON: Hello, everyone.

The CHAIR: All evidence taken is protected by parliamentary privilege, as provided by the *Constitution Act 1975* and further subject to the provisions of the Legislative Council's standing orders. Therefore the information you provide during this hearing is protected by law. You are protected against any action for what you say during this hearing, but if you go elsewhere and repeat the same things, those comments may not be protected by this privilege. Any deliberately false evidence or misleading of the committee may be considered a contempt of Parliament.

All evidence is being recorded. You will be provided with a proof version of the transcript following the hearing, and then transcripts will ultimately be made public and posted on the committee's website.

For the Hansard record, can you please state your name and the organisation you are appearing on behalf of.

Stuart GORDON: My name is Stuart Gordon, and I am appearing here on behalf of CSIRO Agriculture and Food.

The CHAIR: Beautiful, thank you. We now welcome your opening comments but ask that they are kept to around 10 minutes maximum, so we have got plenty of time for questions.

Visual presentation.

Stuart GORDON: Okay. Yes, sure. You will know this diagram here, and you will know all those things that come off the plant.

Next slide, please. What we have got here is the Food and Agriculture Organization numbers for hectares without North America, so that is without Canada and the USA. There might be another 50,000 hectares there, but we not talking about a very large crop around the world. Just for some comparison, Australia grows

500,000 hectares of cotton and 12 million hectares of wheat. That is just Australia. So you are talking about a fairly small industry at this point. Next slide, please.

These are the countries that the FAO have taken numbers from. I have underlined North Korea there, just because they are estimates, so we are not really sure what happens there. I have accented the 12 per cent, and Australia appears in the 12 per cent. So 12 per cent of 74,000 hectares is still not very much. Next slide, please.

These are Australia's numbers. I guess Tim Schmidt might have also shown these. You can see also that it had a little bit of a burst, I guess, a couple of years ago. There have been some promising developments I think on the industrial hemp biomass side in the last year or so, which have been promising, but the crop is still very small. Next slide.

These are the product yields. You saw that first diagram there, and these are the expected yield and yield ranges. I have put down there on the bottom row 'cotton', just for some comparison. They are strict averages for cotton, but there are ranges for hemp crops. These numbers are taken from peer review and also Australian data largely. You can see there the grain yields. A poor grain yield is sort of only half a tonne, but I know in Canada they might get up to 3 tonnes per hectare. That is still a fairly low-yielding seed crop in a way, so there can be more done in terms of that yield, because that is a valuable crop. That grain crop is valuable. In Tasmania they do well. Elsewhere it is a little bit variable, I think. The biomass crop is also quite variable at this point in time, and that goes largely to some comments that have probably already been made here around a lack of understanding about varieties and regions and rotations.

Underpinning all of these product yields is farmgate price. The important thing to note here is that cotton, wheat, sugar, chocolate and coffee all have lovely large liquid markets for their products, so the farmer knows in advance what their forward sales will be. None of that exists for hemp. If the industry is going to survive here, it needs a little bit of help. It needs actually an integrated approach where the farmer knows what they are going to get for their crop. Ideally they are getting a refined value, though. They are getting a refined value for their hurd and a refined value for their fibre, which is what the cotton grower also receives. The cotton grower does not sell harvested seed cotton. He gets prices for fibre and he gets a price for his seed in the refined form. You have read, I hope, our BMP management guide and perhaps the fibre report, and you would have seen the gross margins there for biomass. They are not great unless they are getting a refined value.

Jacinta ERMACORA: Chair, could I interrupt. Just in terms of gender equality and respect for women farmers, rather than referring to a farmer as 'his' –

Stuart GORDON: I beg your pardon. I take that on notice, yes.

Jacinta ERMACORA: Thank you.

The CHAIR: Feel free to go on.

Stuart GORDON: That is it. That was just to set the scene. I do not think there are any more slides, Ben? Oh, yes, this is just another perspective here. This is natural fibre, vegetable fibre. You can see there the hemp tow is less than 100,000 tonnes of refined fibre that is coming out of the world crop each year. It just gives you a perspective on the size and scale. You know, the cotton industry is the largest natural fibre industry in the world, and behind it it has governments. It has the USDA; it has the Chinese government. It has the big baseline funding, and they are funding varieties, technology improvements and farm practices, just to pump up that volume. The other fibres all need the same thing, essentially, if the farmer is going to get any return on that crop. So that just sets the scene, from my perspective.

The CHAIR: Great. Thank you. We will now open up to questions from the committee. Oh, we have had Mrs McArthur return – hello.

Bev McARTHUR: Hello. I am released from PAEC.

The CHAIR: Beautiful. We will start with Dr Heath.

Renee HEATH: Thank you. Thank you so much for your presentation and your submission. You mentioned how the industry needs a little bit of help. Do you see that as government taking their hands off or government investing money?

Stuart GORDON: That is a difficult question, and it is a hard question to answer. There may be a scenario, so I will talk in scenarios and you can just take from that what you want. There might be a scenario where the government supports a cooperative development. The growers need to have some say in how their fibre is processed, but essentially that cooperative would then buy the biomass and turn it into something that is viable. There are markets, but they have to be well researched, and the supply chain has to be determined almost ahead of the production in a way or in tandem with the production. Australia exports a lot of raw fibre. There is no reason we cannot export good raw fibre into China and Vietnam for processing into our clothes. We are not going to repatriate that here very quickly, I do not think.

In terms of government help, I guess there is that perspective there about post-harvest processing, so whether the government gets involved in a cooperative sense in terms of a grower co-op – it is a silent partner. Whether that is a major or minor shareholder, I do not know, but that might be a scenario. Or it might be just a grower-led thing. I do know that there is some talk about a grower-led cooperative, so maybe there is some government support there around – I do not know what it looks like – free land or I do not know; that is up to you guys to make up your mind about.

The other area for government support really is in growing the crop, so variety trials. As Lyn mentioned, regional variety trials in Victoria would be key, I think, especially in the western districts where you have got plenty of land and water and sun – the crop likes that. Regional variety trials and rotation so the growers know what to do – there will be some benefit from rotating the crop with other crops. Maybe there will be a disease break, but we do not know that. We do not know what disease breaks there are, we do not know what pest pressures there are and we do not know what benefits hemp might create in that sense. There is also the question of carbon farming, and maybe that is something that the department of agriculture does here – it applies itself and does that audit. I know there are private practitioners who will do soil carbon and give you a number, but it might be good to have a peer-reviewed, open look at that over several years, I would suggest.

Renee HEATH: Thank you. A lot of witnesses have compared cotton to hemp.

Stuart GORDON: Yes, yes.

Renee HEATH: Why do you see the need to bring hemp in when we have got cotton?

Stuart GORDON: That is a good question. They are very different fibres, really. Cotton is far finer, and it will always be a strong apparel fabric. In fact most hemp garments you buy these days are cocktailed with cotton anyway just to improve the fabric handle. They join up quite well in fact, because you get a bit of crispness and a bit of breathability with hemp, but it is a coarse fibre. This is really just my own professional perspective: I see industrial hemp as a strong technical textile fibre for erosion-control fabrics, because we import all that. We import a lot of jute here; we import a lot of stuff. We do have in Australia some processing capability in that space with Geofabrics Australasia, and they are based in Albury and Molendinar in Queensland. They are running their first hemp fibre trial this summer. It would pay for some of the party here to visit them and to make themselves known, because they are an impressive outfit. They do all the road linings for Australia's roads, and they do the erosion control fabrics that you see – they import a lot of that. They could see local production. But there the fibre quality needs to be quite good, so it needs to be very consistent. You are talking about carding machines. I do not actually know the numbers, but they are running sort of 6 tonnes per day, and that material needs to be the same day in, day out. They run those machines 24 hours a day, seven days a week, 50 weeks a year. You cannot stop those machines, and you do not want to bugger up those machines with some off-quality hemp fibre that is going to contaminate the card clothing and things like that. It needs to be – I am going to use a technical term – schmick.

Renee HEATH: Thank you.

The CHAIR: Thanks, Dr Heath. Mrs McArthur.

Bev McARTHUR: Thank you. Sorry I missed part of your presentation, but I am gathering the gist of it. The vast majority of witnesses that we have had have suggested the biggest problem for the hemp industry is government: the roadblocks to entry are significant; the lack of, say, a hemp act; the whole lack of enthusiasm for perhaps having government procurement policies that would prioritise hemp as a product for either clothing or all sorts of – we saw hemp blocks or cement blocks or crete blocks, or whatever they are calling them – and not governments trying to pick winners in providing funding for the industry. So the priorities were for the VFF

and many others that government get out of the way. It is significant that a government bureaucracy or semi-government authority like yours is actually suggesting perhaps government funding in various ways when the industry has not really been suggesting that.

Stuart GORDON: I am just going back on my own experiences there where Victorian government funding has bought things – like, say, the International Fibre Centre that is down in Geelong, or was down in Geelong. It ran that unsuccessfully for a number of years, and it ran it successfully as a training organisation, but in the end it left a legacy. It left a large building down at Deakin University, which is still used today for fibre –

Bev McARTHUR: The carbon fibre production has gone very well, hasn't it?

Stuart GORDON: I am not talking about the carbon fibre, but there was a natural fibre mill there before the carbon fibre mill.

Bev McARTHUR: That was government intervening in the market and picking a winner.

Stuart GORDON: That is right.

Bev McARTHUR: Picked it badly.

Stuart GORDON: So, yes, I would push something back on the government and say, 'Well, how long are you going to think for?' because quite often we think a bit too short here in terms of government policy. It needs to be a long-term policy.

Bev McARTHUR: But don't you see the regulations as the main –

Stuart GORDON: I am not talking about regulations. If you are talking about regulations, then –

Bev McARTHUR: You know, that has been the major roadblock to getting this industry off and running. Emma Germano pointed personally to the time it took her – and she gave up – in filling out the licensing agreement. Victoria seems to be lagging behind other states in this whole regulatory space.

Stuart GORDON: Yes. I do not know whether you have had the Australian association of hemp regulators to the table here. I mean, Shane Herbertson would be a good commentator on that. He is in your department.

Bev McARTHUR: Also, did I hear you correctly, as I came in, saying that there needed to be a pricepoint for the hemp producers?

Stuart GORDON: Of course there does. I mean, that is what the VFF would say too. They would say they would need to have a saleable product at their farm gate, and at the moment they quite often do not.

Bev McARTHUR: No. Basically no other farm industry does. We are price takers, not price makers.

Stuart GORDON: No. What I am talking about there – and please do not confuse me – is a liquid market for commodities which the farmers can then have a forward price on. That does not exist for hemp. That is what I said.

Bev McARTHUR: Yes, well, we do not have a forward price for beef or sheep or –

Stuart GORDON: You do – you have a forward price for cotton, for wheat. You have a liquid one – it might not be a forward price, but it is a liquid price.

Bev McARTHUR: It is whatever the market – whatever prevails at the moment.

Stuart GORDON: No, it is a transparent, liquid price. We do not have that for hemp.

Bev McARTHUR: Yes. We do not have it in many other agricultural industries either.

Stuart GORDON: We have it for all our big bulk industries.

Bev McARTHUR: We do not have it for wool.

Stuart GORDON: We have transparent auctions.

Bev McARTHUR: Yes, we have auctions, absolutely.

Stuart GORDON: Yes, and they are published. We do not have any published costs for hemp.

The CHAIR: Can we just have a bit of order and move to some questions, Mrs McArthur. Let us move on.

Bev McARTHUR: Well, the question is –

Stuart GORDON: You are right about the regulation, though. I think the regulation could be eased so that you do have checks on the THC levels for that industrial hemp crop. But I think the regulation is important, because you do not want cross-contamination of that crop. You do not want high THC. You do not want somebody growing a suspect crop somewhere and then that crop being contaminated if it is going to be used for food and things like that. You do not want that, so you need to have regulation there. But it is expensive, as I understand, that regulation for the growers.

Bev McARTHUR: Well, there is no licence fee in Tasmania. We were told that there is in Victoria.

Stuart GORDON: I have a licence for Victoria. The fee is not that onerous.

Bev McARTHUR: Yes, there is a licence fee in Victoria, not Tasmania.

The CHAIR: We might need to leave it there, just because we have gained some more members for this session.

Bev McARTHUR: Anyway, farmers are by and large price takers, not price makers.

Stuart GORDON: Yes. Look, I get you there. Do not worry about that.

Bev McARTHUR: Good. We have that on the record.

The CHAIR: Thank you. Mr Mulholland.

Evan MULHOLLAND: Feel free to go to someone else and come back to me. There have been a few LNP members.

The CHAIR: Yes, beautiful. Thank you. Mr McIntosh.

Tom McINTOSH: I just want to ask a couple of questions, and maybe you can answer them concurrently. One was around the worldwide production drop – I have written demand, but production, I believe, the graph showed over the last 50 years. The other question I was going to ask you was around – you had the breakdowns of the yield per hectare on the various plants – if you are looking at an aggregate, which I know is difficult given the conversation you just had about different markets and whatnot, the value of the plants side by side, as best you can.

Stuart GORDON: Yes, so I think we published those in the best management practice manual. You can go to the back of that and there is a published gross margin there. That gives you an idea of what a refined value price received would be – you know, if the grower receives a refined value for the hurd and for the fibre alone, separately refined, and to the market on that basis. Then there is a price for where many of the growers find themselves where they are selling bales of just-harvested stem, and on that sale of that harvested stem, they do not make a huge dollar. They make something, but it is not huge.

Tom McINTOSH: I suppose where I am trying to get to is if you are running, say, sheep to the hectare, getting wool and meat and whatnot, versus growing hemp to the hectare, would that aggregate the products?

Stuart GORDON: You can look at that gross margin. It spells it out in detail. That is published in the AgriFutures Australia report. That gross margin analysis was put together by me, the Australian Hemp Council and various expert growers and agronomists from across the eastern seaboard – and the western seaboard, actually. I just jotted down the numbers that they gave me, essentially, and did the calculations, but it is reasonably accurate, I think. It sort of does reflect why I think you see at the moment a lot of hemp businesses

are integrating themselves, so looking at that post-harvest processing and talking about a biomass processing facility, largely.

Tom McINTOSH: And as far as that decline in world production –

Stuart GORDON: Why is that?

Tom McINTOSH: Yes.

Stuart GORDON: That is a very big question.

Bev McARTHUR: Cannot be a market.

Stuart GORDON: Cannot be a market for it, yes. It would be interesting to see how we go, because we are sort of in a space now where we are thinking a little bit more proactively about sustainability and circularity.

Tom McINTOSH: That was going to be my next question, if I can just finish. This will be my last question. There has been a lot of conversation around government intervention or leading the market or whatnot. Of course there have been times – when we have needed wool for war, we have needed it for health or whatever the situation may be – when government needed to take that lead. I am interested on the local level in water consumption and land usage and how sustainable that is per farm but then also on the emission reduction potential of it versus cotton or whatnot, if you could field that.

Stuart GORDON: Well, it is not going to replace cotton, so get that out of your head. I think the thing will be that it is a good substitute crop for whatever mulch plastics we are laying down at the moment, so there is that agricultural space. There is the erosion control space, where you have got riparian areas and you want to repair them. There are container loads and container loads of stuff imported for that stuff, so you could do the carbon miles on that. But I think there is a space if the government wanted to push-start the industry a little bit. I mean, it is a big cost, though. I do not know how you would get it across. I do not know how you would make a rule about it. The crop has real potential – structural integrity in terms of the fibre properties and the hurd properties. So you would be substituting synthetics and other imported goods for a benefit, just in terms of sustainability and circularity, and that would be a demonstration. The costs would be around demonstrating it, I think.

I mean, I have already said the gross margin does not look that fantastic for just straw alone. The biomass needs to be refined, and there needs to be a refined value paid for that biomass, and then that biomass needs to be converted into a non-woven textile. There are a couple of places in Australia where you can still have that done, as I said before. That is only the first step, but if you get that right and I think if you get the building products right – I think the building products are quite neat. It is a niche product at the moment. I did a rough calculation. There might be sort of 400 or 500 houses in Australia that have hemp walls or hemp, and they might use – we did a rough survey a couple of days ago – sort of 3- to 5-tonne of hurd in each of them. And then those houses do have all the properties that have been talked about. I have visited a couple of hemp properties, and if you really wanted a recommendation, not saying anything bad about Lyn's cottage, but Gary Rogers in WA makes a lovely house. He really does.

Tom McINTOSH: How many houses did you say have been made?

Stuart GORDON: About 400 to 500 houses around Australia.

Tom McINTOSH: I thought you put a thousand – 400 or 500 thousand – on the end of that.

Stuart GORDON: No, no, no – 400 to 500. So it is not many. It is still cottage in that sense. So it needs scale and scale needs more than 2500 hectares in one place.

Tom McINTOSH: Thank you, Chair.

The CHAIR: Thank you, Mr McIntosh. Ms Payne.

Rachel PAYNE: Thank you. Thank you, Stuart, for appearing today and for your submission. I actually am just curious with the graph that you provided. In 2019–20 particularly in New South Wales and Tasmania we saw a really big spike there. Do you have any idea what that result has come about from?

Stuart GORDON: Well, it is a big spike on a small space.

Rachel PAYNE: New South Wales has doubled.

Stuart GORDON: Yes, in biomass. So yes, I would put that just to the Australian Hemp Council just getting on the ground. I would give that credit to Tim Schmidt and co and there being actually some investor interest, I think, in biomass processing in those spaces. The next industrial hemp conference is in the Hunter Valley, by the way, next April.

Rachel PAYNE: Beautiful. I grew up in Newcastle, so my old stomping ground. Yes.

Stuart GORDON: Yes. Just up the road.

Rachel PAYNE: Something else that has come up quite a lot during this inquiry has been around water use, yield and varieties, and you mentioned the regional variety trials. Fiona Patten who spoke earlier today brought up that when she was part of the taskforce there was the Hamilton SmartFarm and the SuniTAFE in Mildura around seed development. Have you had any crossover with any of the progress that has happened there under the banner of the CSIRO –

Stuart GORDON: No, I have not.

Rachel PAYNE: or heard of any development in that space?

Stuart GORDON: I have heard of some crops up in Mildura, but I do not think they have been particularly large. I know Ali Cupper wanted some up there after the last inquiry here.

Rachel PAYNE: With your understanding of genetics and varieties, would you say that there is space there for further research around what would be the best type of seed to grow here in Victoria?

Stuart GORDON: Well, there is the variety and then there is the production of that variety for seed cropping, you know, for growing the crops. So that is one issue here is that we import our seed. The seed is a fresh seed, so it needs to be kept dry and refrigerated for long-term storage. Its germination decreases quite rapidly after six months, so you need fresh seed. I know the Australian Hemp Council is quite strong on that in terms of getting some seed certification for people supplying varieties. There would be that, and varieties would give you a foundation and then understanding how it rotates. You are not going to do any breeding here, I do not think. If you were to, say, introduce a breeding station into the western part of Victoria or something like that, you are talking about a 10- to 20-year time line before you have got very successful varieties out and about that are local.

Rachel PAYNE: Okay. You mentioned a supply chain and market needs to be determined to expand the industry, do you think – and this is something that has come up throughout the inquiry – there may be a role for government in procurement and looking at ways they can offset carbon emissions, and I think you mentioned jute. There has been mention of sound blocks around highways and things like that. In your experience do you think that that is something that could be a way of government investing in industry rather than actually giving industry money?

Stuart GORDON:, Yes, if they bought the product and helped start the refining of it. I mean, as I said before, if you are going to put fibre or hurd into the marketplace, you need to put it in there consistently. You need enough scale for that plant to run so it runs. It can sell product that is consistent essentially. I give you the example of the Namoi Cotton cooperative which started more than 50 years ago in Wee Waa, New South Wales, when the first Californian cotton growers came across to Wee Waa. They were thought to be fools at the time, but they begat the very successful cotton industry 56 years ago, 60 years ago now. If you think along those terms, then that is the time line you have to think of for something, and I would like to see government think about those sorts of time lines rather than short and sharp.

Bev McARTHUR: We are into election cycles.

Stuart GORDON: Yes, I understand that.

Rachel PAYNE: Thank you. Thanks, Stuart.

The CHAIR: Thanks, Ms Payne. Dr Mansfield.

Sarah MANSFIELD: Thank you, and thank you for your presentation and submission. We have heard some different perspectives around the role of government beyond addressing the regulations. You have highlighted, I think, a number of areas where the government could provide some support, particularly in terms of research and development. One of the things we have heard from others is that I guess we should not necessarily be favouring one crop over another when it comes to investing in, say, research and development. Why do you think it would be beneficial to specifically pick out hemp and put some more funding behind that?

Stuart GORDON: That is a good question. That is almost a million-dollar question, Jacinta, thank you.

Bev McARTHUR: That would be Sarah.

Stuart GORDON: Sarah, I beg your pardon. Yes, I do not know, to be honest. Why pick hemp? We are all a little biased in this inquiry. Perhaps coming to it we have grown it and/or processed it, so we do understand it a little bit better than others; we do have some bias there. I will say that as a substitute for synthetic fibres hemp does quite well in terms of those technical textiles. I am talking about erosion control fabrics, insulation – I know you mentioned that before. It would be interesting to see what the carbon accounts look like for glass fibre versus hemp fibre. You have some positives and some negatives with both products, but I think the positives in terms of the sustainability and the biodegradability are starting to play a little bit more heavily now. There are just good suggestions and leanings I think, rather than anything supersonic at this point. The fibre is stiff and coarse, but it works well as a glass fibre substitute in some composites. The people at the global summit in the next couple of weeks at Melbourne University will be able to point out what it does really well – better than me perhaps. It is about whether or not Victoria is ready to invest in the future, I think, in a sense.

Sarah MANSFIELD: Thank you. That answers my question. We have heard from a lot of people about potential benefits of hemp in a variety of spaces over and above standard or currently used conventional materials, but you are saying that investing in it requires a little bit of a rethink about where we want to go with those things. You have outlined in your submission where the market is and where it is projected to go in terms of its value as an industry. Do those predictions factor in any kind of regulatory change in Victoria, or is that the growth that is expected even if we did nothing?

Stuart GORDON: I mean, if you wanted an idea of a good regulatory environment, you might have a look at the Canadian federal regulations. I think they identify hemp varieties that have low THC, and they make those available to the industry with very little interprovincial politics. I think that there is a national perspective there. If Victoria can sit alongside its New South Welsh, Tasmanian and South Australian colleagues as quickly as possible, that would make things work. There is some hemp production in South Australia that is not very far from the Victorian border. It would be good to be able to worry about biosecurity, certainly, but not worry about regulation and transfer and things like that, particularly for varietal crossings and things like that.

Sarah MANSFIELD: I guess part of the question is around: do you feel that the regulatory environment is currently holding back the market in Victoria?

Stuart GORDON: That is another good question – well done. To be honest, I have not had any troubles with the regulations. We have had a licence to grow and process the stuff.

Bev McARTHUR: Who is 'we'?

Stuart GORDON: CSIRO. Yes, yes.

Bev McARTHUR: Oh, right. Thanks for that.

Stuart GORDON: Although, that said, we have not grown any, so we have not had to have any THC testing done. It is hard for me to say, actually.

Sarah MANSFIELD: That is okay.

Stuart GORDON: I am not privy to the situation of being regulated in that sense.

Sarah MANSFIELD: Yes, and I suspect it might be different for the CSIRO in terms of the barriers you might face.

Stuart GORDON: Yes, indeed.

Bev McARTHUR: Any barriers?

Stuart GORDON: No.

Bev McARTHUR: No.

The CHAIR: Just one more, if that is okay, Dr Mansfield.

Sarah MANSFIELD: Yes. I guess you have identified that there are a number of other barriers that we need more research into to help to expand the industry. Is that your perspective?

Stuart GORDON: Yes, it is. The Victorian government would perhaps be taking a punt if they were to say, 'We need hemp matting, so go and grow some,' but it would be a good thing. Even if it did not succeed in the first five or 10 years, you could see that there would be a legacy afterwards of some sort, which would be positive for the industry. There would be infrastructure. That is a difficult space and a bit beyond me. I do know that there are gaps in research, and we have pointed those out in the BMP manual. You will read the gap analysis after that. That again is a fairly national perspective on where the industry needs to invest, but I do not feel qualified to say where the Victorian government might invest first, to be honest. I would like to see more R and D, but again, that is my bias. I would like to see some processing too, because I did work in the Victorian textile industry last century. It was fun. We had lots of good people here, and now we do not have any. So I can see the benefits. I will make one point, though: perhaps if you were to invest in biomass processing centres, you could go to the cotton model. You have got 40 cotton gins in the western regions of New South Wales, and they are a great off-farm income for lots of people. They are the best in the world, those cotton gins. You could see how you could bring some diversity into those regional spaces, which would be good.

Bev McARTHUR: Are they run by government or the industry?

Stuart GORDON: No, they are all private industry.

Bev McARTHUR: Exactly. Yes, very good.

Stuart GORDON: As I said, they did start off as a grower co-op. Actually, do you know what? They did start off with the Queensland government. The Queensland government had the first cotton gin in Australia, and it was in Brisbane.

Bev McARTHUR: What a good thing it got out of it.

Stuart GORDON: No, it begat the Queensland Cotton Corporation, which begat the Olam group. So you have got a couple of supersonic groups that came out of it. That is what I am talking about – legacy.

The CHAIR: Thanks, Dr Mansfield. Mr Mulholland.

Evan MULHOLLAND: Thanks, Dr Gordon. On the graph you showed earlier, hemp production seems to have decreased over the years. You have got similar patterns with a decrease in hemp production in the US. What do you put that down to?

Stuart GORDON: I do not know the US industry very well. I do have colleagues at the USDA. I did work at the USDA last century as well. I know their federal government is putting money into understanding the processing of hemp through their cotton systems and through their short staple systems. They have a slightly different view to us, I think. It is still a very small crop there too. I think the decreasing acreage there is largely a result of the CBD rush being over essentially. – you know, the medicinal hemp crop being over.

Evan MULHOLLAND: Yes. Dr Gordon, just listening to some of your back and forth with my colleague Mr McIntosh, you seem a touch pessimistic about the future of the industry. Do you think that an industry could exist without taxpayer support?

Stuart GORDON: Yes, I think so. The grain industry will survive. This integrated biomass – some of them will fail, but one should survive, I think. There is enough market in Australia for the niche products – well, not niche but the small products, like the production of hurd, I think. As Lyn said, it would continue to flounder a little bit, though. It needs a wad of cash somewhere.

Evan MULHOLLAND: On your 'wad of cash' point, would you be willing to state a ballpark taxpayer investment?

Stuart GORDON: No, I could not do that.

Evan MULHOLLAND: Your point is that smaller parts of the sector would do okay.

Stuart GORDON: Ideally you are interacting with the industry at the same time, so you are supporting the industry. You would not set out alone because that would be failure, but I think that you could be part of the cooperative, in a sense, if one was to be founded here in Victoria.

Evan MULHOLLAND: I was interested in your remarks before to Dr Mansfield when you said there are positives and negatives to the industry as far as industry and research. What do you think the negatives are?

Stuart GORDON: There is only a scant amount of R and D money available. The CSIRO only does this work because it gets paid by AgriFutures Australia essentially, so I have to commend them. We would not do it otherwise. The CSIRO thinks the industry is too small to work on, so it takes whatever funding is available to do that work. That said, we do have people in our manufacturing division looking at the drug and bio extracts of the flower and things like that, but that is a separate system to this one. I guess the CSIRO is just keeping a watching brief on it at the moment.

Evan MULHOLLAND: Yes, but without that money you would not be able to keep a watching brief.

Stuart GORDON: Yes. We would not be looking at it.

Evan MULHOLLAND: I am interested in hempcrete. Is it viable, realistically, with standards applying to cladding and other building requirements? We have had a lot of debate about cladding in recent years especially and a lot of stricter regulations coming through. Do you have any estimates of that compared to other building materials?

Stuart GORDON: I do not know. That is outside my realm, the building. I would suggest you go and see David Wilson and co at the Global Hemp Summit. I know they have a couple of PhDs there that have reported at our conferences, and they are doing quite good things. They are doing all the standard things that you need to do for cladding products or block products and things like that, so I think they are on the money there. There are some commercial outlets now for hemp blocks and things like that. I am not sure how they are going, because I think supply of material into making those is poor. But it is a good building product, especially in regional areas for its fireproofness. I would say with aluminium windows and a hemp-clad wall, you have got something fairly sound there.

Evan MULHOLLAND: So I am just trying to summarise – from what you are saying, without taxpayer support, even if we repealed a lot of the barriers to hemp production here in Victoria, there would not be much of a watching brief in the way of research and there would not be much of an industry.

Stuart GORDON: I think it will continue to struggle along for the next few years. If there is a sustainability curve and consumers come to that a little bit harder and put more pressure on their elected officials for that, then I can see it kicking up. It is kicking up in the well-heeled set at the moment.

Bev McARTHUR: Who are they?

Stuart GORDON: Who are they?

Evan MULHOLLAND: Not in my electorate.

Stuart GORDON: Well, I mean, the houses I have visited are very nice houses and they have nice views and things like that. Actually, you know what you could do? You could actually replace all these tiles here, because the sound is bouncing around in here, and you could have hemp tiles up there. They are lightweight enough, and the sound would be – we would not be bouncing around so much. The acoustic insulation is quite good in those sorts of places.

The CHAIR: Thanks, Mr Mulholland. Dr Gordon, that is all we have got time for today, but thank you very much for coming along and presenting to us. We really appreciate it.

Witness withdrew.