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STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND
FORESTRY

Reference: Rural skills training and research

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HOUSE OF REPRESENTATIVES
STANDING COMMITTEE ON AGRICULTURE, FISHERIES AND FORESTRY
Wednesday, 24 May 2006

Members: Mr Schultz (*Chair*), Mr Adams (*Deputy Chair*), Mr Martin Ferguson, Mr Michael Ferguson, Mr Forrest, Mr Lindsay, Mr Gavan O'Connor, Mr Secker, Mr Tuckey and Mr Windsor

Members in attendance: Mr Adams, Mr Martin Ferguson, Mr Forrest, Mr Gavan O'Connor and Mr Windsor

Terms of reference for the inquiry:

To inquire into and report on:

- The availability and adequacy of education and research services in the agriculture sector, including access to vocational training and pathways from vocational education and training to tertiary education and work.
- The skills needs of agricultural industries in Australia, including the expertise and capacity of industries to specify the skills-sets required for training, and the extent to which vocational training meets the needs of rural industries.
- The provision of extension and advisory services to agricultural industries, including links and coordination between education, research and extension.
- The role of the Australian government in supporting education, research and advisory programs to support the viability and sustainability of Australian agriculture.

WITNESSES

**SWIFT, Professor Roger, Executive Dean, Faculty of Natural Resources, Agriculture and
Veterinary Science, and Campus Director, University of Queensland 1**

**WILLIAMS, Professor Richard, Professor in Horticulture, School of Agronomy and
Horticulture, University of Queensland 1**

Committee met at 5.04 pm

SWIFT, Professor Roger, Executive Dean, Faculty of Natural Resources, Agriculture and Veterinary Science, and Campus Director, University of Queensland

WILLIAMS, Professor Richard, Professor in Horticulture, School of Agronomy and Horticulture, University of Queensland

ACTING CHAIR (Mr Adams)—I declare open this public hearing of the House of Representatives Standing Committee on Agriculture, Fisheries and Forestry in its inquiry into rural skills training and research. This is the 18th public hearing of this inquiry and it is part of an extensive program of public hearings and visits designed to gather information from people directly involved with the main issues of the inquiry. Today the committee will hear from the Faculty of Natural Resources, Agriculture and Veterinary Science, University of Queensland.

I welcome the witnesses. Although the committee does not require you to give evidence under oath, I should advise you that these hearings are formal proceedings of the parliament; consequently, they warrant the same respect as proceedings of the House itself. It is customary to remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of the parliament. Do you wish to make a brief statement regarding your submission?

Prof. Swift—I will first apologise for the fact that I am at the back end of a cold.

ACTING CHAIR—I also apologise on behalf of our chairman, who is absent. As I am the deputy chairman, I am filling in for him.

Prof. Swift—Firstly, in our view, this is a really important issue not only to us, because obviously it is the business we are in, but to the country. Agriculture and related industries are still a major part of the economy, particularly downstream industries. As we say in our submission, they make up about 17 per cent of the industry and workers, however you calculate it. Given that it is an important industry, it is essential that manpower at all levels for the sector, from the artisan to the technologist, from the graduate to the researcher, are properly trained and provided in the numbers required for that industry to advance.

For a number of years now, the demand by students for agricultural education has fallen; the numbers have been falling steadily. In my faculty, that did not take place until relatively recently, but in the last two years there have been quite substantial declines, which have alarmed us, particularly in a state where agriculture, particularly beef, is a major commodity. The situation is that there are too many education providers at all levels, not only universities but also the VET sector. Too many of them are small and weak; they do not have the breadth or the depth of skills to put on the courses required. The system is fragmented and, worse than that, it lacks coordination from one level to the other and across state boundaries.

I have said that there are too few students now—and it is not just of concern to the universities. One could say that, if there are no jobs, why shouldn't the student numbers decline? The reality is that there are too few students for the number of vacancies in the industries that we supply, and that is a major concern. In the university system generally, if I talk about that sector,

the funding is limited for what we do, and it needs to be used wisely. In my view, that means concentrating it, rather than spreading it widely and thinly.

As I have just said, we know that industry needs more trained personnel. How do we know? Because we get phone calls when our graduates graduate, and have all got jobs. The uptake of employment by employers in our faculty and in most agriculture faculties is very high. It is not like graduates with an arts degree, where 30 per cent of them are still looking for jobs a year later. They get into jobs easily. They often have jobs before they graduate. Then we get a succession of phone calls asking, 'Can you give me an agronomist, a beef scientist, a food scientist?' The answer is: 'No, they've all gone.' So we know there is demand.

I will say two further things before I finish my opening comments. Typically, in universities, and more so in modern times, there is a strong link between employment demand and student demand on entry. It showed up very well for a time in computers, with massive growth in the area; now there is a massive drop-off. Engineering has a strong demand, and medicine has a strong demand. Those things, other than being related to what students want to do, are often related to employment opportunities at the end. But, in agriculture, we have strong employment opportunities but not the strong entry demand, so there is a mismatch somewhere. I assume that that is more to do with students' perception of what the industry is like rather than the reality of what it is like. Finally, agriculture related jobs, whether they are in industry or on farms, tend to be at the lower end of the graduate payment scale.

ACTING CHAIR—Thank you very much. Professor Williams, do you have anything to say?

Prof. Williams—No, not at this stage.

Mr FORREST—Just to follow up on that last point, this inquiry comes out of a whole host of closures of agricultural training institutions in Victoria and Queensland. I am pleased you have just said what you said, because I have maintained for a long time that it is not about an absence of jobs; they are there. It is about an absence of esteem. Agriculture is a place where you can make a noble profession. We need to tackle that one, because maybe some of these closures are unnecessary.

Prof. Swift—I would probably not agree with the last point; I think there does need to be a real slimming down and a concentration.

Mr FORREST—That is my next question.

Prof. Swift—We will probably come to that. We have to be sure that what we finish up with can do the right job. To take up your issue about perception, the government ran a national campaign about apprenticeships not long ago, and I think that was reasonably successful. I do not know whether there are more apprentices now; I do not know the follow-up to that. If you think about it, the typical news item about agriculture is somebody kicking dusty dirt in a paddock and crying because they have to leave their property. The other news item involves 200,000 chickens cooped into two square metres and looking terrible and being treated cruelly. Those are the typical images.

We do not see the go-ahead images of an industry that is thriving. The beef industry is thriving. There are areas in fruit—the sugar industry happens to be thriving at the moment—but you seldom get that. I believe that there is an opportunity for an advertising campaign, not run by government but by AgForce or NFF, and perhaps with support from government funds, to actually talk about the range of job opportunities that might be in Rabobank in a city, not just sitting on the back of a tractor. There is a wide range of opportunities in a very wide range of industries, and many of them with potential to travel overseas. That was a long answer to your relatively short point.

Mr FORREST—No, it is a good suggestion.

Mr WINDSOR—I agree with what you were saying: I think there is a negative perception out there. When people think of agriculture, they think of tractor drivers and farm hands, when we are really talking about food production, and that can be in cities and in the country and overseas—here, there and everywhere.

In relation to the perception of agriculture within the nation, you mentioned the decline in student numbers. Why do you think that is happening? Is it partly to do with the drought, is it the perception or is it the competitive aspects of some of the other resource areas that can pay more? How much of it is to do with the price that agriculture can pay for the product?

Prof. Swift—It is all of the things that you mention. There are alternative occupations that pay better, and maybe you could get into them with a three-year degree rather than a four-year degree. There is the perception that it is a sunset industry rather than a growing industry, but agriculture in Australia is still growing. So there are perception issues, and there are reward issues. I am talking about trying to correct the misconceptions of the industry and the reality of the types of jobs that are available, and that they are extremely challenging and satisfying.

Mr WINDSOR—In terms of policy, what sorts of things should we be recommending that actually assist in that process of making agriculture a positive in the broader community?

Prof. Swift—As I say, working with the peak bodies to perhaps do an awareness campaign is one thing; showing the worth of students doing agriculture by making specific scholarships available to students, perhaps from rural areas, to study at a centre of excellence; encouraging the state departments to return to the cadetship scheme whereby they sponsor students through the university. In each of these cases, whichever government body it is, it is showing what the value of that graduate is to them, to their country and to their state. I think that is one positive approach that could be made.

Mr WINDSOR—In part of your submission, you refer to the relationship between research, education and extension. How valuable do you see the role of the CRCs that are currently scattered around the countryside—a partnership between industry and academia?

Prof. Swift—I have been in a number of CRCs so I have a lot of experience. I have a somewhat jaundiced view, but let me start with the positives. Having CRCs is better than not having CRCs, because it has put additional money into research. However, sometimes the only reason you join the CRC is because it is worse being out than it is being in. The transaction costs are enormous. Each one of them also sets up its own management bureaucracy in addition to the

in-kind partners. Those are some positives and negatives. They do bring people together, and they do give an outlet through the industry partners for the research that is being done. In that sense, the successful ones do form a link.

Some years ago I happened to review a program in Holland where they did what CRCs do but in a simpler and I think more effective and cheaper way. It was still costly, but it was cheaper than the CRCs. I have been a bit disappointed that the CRC program has not morphed into something more streamlined and a bit more effective than it is now. The simple answer is that it has made some impact there, but for the amount of money spent, I think there could have been more impact.

ACTING CHAIR—Can we just draw that out a bit with regard to research and extension? We have had some evidence that research is done over the year and does not quite get to the extension level.

Prof. Swift—Again, if I could just step back from the CRC, earlier in my career I was employed in Scotland, at the Edinburgh School of Agriculture. That was part of the University of Edinburgh, which was my appointment, but it also taught subdegree diploma students and it also had all of the advisers for the east of Scotland advising on pigs and sheep, cereals and so on. We all worked in the same building. When I gave my lectures, I would invite an adviser to come in and talk about his particular case. When we applied for research, we would all talk together: what are your problems, and how do you solve them? What research should we do to do this? We would bring in the farmers. It is the best example I have found of an integrated teaching, research, advisory extension organisation, and it really came out of co-location.

Mr WINDSOR—Can we do that in a nation of this size?

Prof. Swift—Yes, you can, if you do what I said under the national plan. We would develop focus centres which would be based in strong universities with strong research. We would co-locate the local DPI and part of the CSIRO division with them, but the DPI would be researchers and extension officers. We could try to rebuild or re-create that entity. That entity failed in Scotland. It did not fail but it was pulled apart because the different people putting in the funds were not sure that they were getting their money's worth. They destroyed the entity so that they could control their bit of it better. It was not pulled apart because it did not work; it was pulled apart because the managers could not abide something working but their not knowing how it worked.

Mr WINDSOR—That would never happen here!

Mr MARTIN FERGUSON—Gatton campus was originally an agricultural school, wasn't it?

Prof. Swift—It was an agricultural high school, then the Queensland Agricultural College.

Mr MARTIN FERGUSON—You would have had a lot of kids there originally on teacher scholarships?

Prof. Swift—That goes back before my days. There was certainly a lot of technical training done at that campus.

Mr MARTIN FERGUSON—One of the issues raised with respect to trying to get the kids involved was to address the shortage of teachers of agriculture by offering scholarships picking up part of HECS, a living allowance and things like that. Has that been explored by the college?

Prof. Swift—It has not, but I will ask Richard to talk about that.

Prof. Williams—The shortage of agriculture teachers is more a reflection of the attitude of the education departments to agriculture and students' attitudes to it. They are moving away from it and discouraging students. I think there is a need for in-service training, if you like, of people in the education department to actually see the value and take a more positive approach to it. Only then will you get to the situation where there is a need for training more teachers. I do not think there is a shortage of people available; it is just that the positions are not there.

Mr MARTIN FERGUSON—Have you pursued that with the Queensland government?

Prof. Williams—No, we have had interaction with the agriculture teachers association, from that end.

Prof. Swift—We do talk to Queensland education, but it is mainly about things other than that.

Mr MARTIN FERGUSON—You effectively argue in your discussion paper and today for a shake-out with respect to the number of institutions that are providing agricultural courses. How would you go about that from a policy point of view, and how would you then establish the centres of excellence that you talk about for agriculture education et cetera?

Prof. Swift—We understand there are lots of problems here, and you will get down to issues about Central Queensland University or Southern Cross University and, 'We're an independent organisation; we can do what we want.' I would start from the point that there is a certain number of students doing agriculture. That brings with them a certain amount of money. What is the best way to use that, if you look at the model in that way? The best way is to get really good, well-resourced faculties, with a breadth of disciplines and several people in those disciplines. It does a disservice to those students to teach 10 or 20 with two people who know a little bit about something and not much about all the rest. I think that is not the way to go. It would mean actively saying, 'We will not be funding you to do agriculture in this institution.' Whether an institution then wishes to continue with its own money, that is up to them. They would be foolish, but they might. That is typically the way that the UK operated: 'You can do as much geology as you want; you won't get any money from the university funding council.' It would have to be quite brutal in some areas—

Mr MARTIN FERGUSON—That would have to be federal government because you are talking about allocating HECS places?

Prof. Swift—That is what I am talking about. The university level can be managed by the federal government. When you get down to the VET sector, you are then having to liaise with state governments, but the university level requires strong action by the government. I am sure there will be an uproar from local MPs, but I am not suggesting that everything is totally

centralised. Much of it will have to be. Take my university as the one that is going to be the hub—I would say that, because I am here—

Mr MARTIN FERGUSON—It has a history.

Prof. Swift—It has a history.

Mr MARTIN FERGUSON—You are talking about rebuilding what we had before.

Prof. Swift—Yes, or before it was allowed to dissipate by all of the new places becoming universities and then creating schools or departments in areas where there was no real demand.

Mr MARTIN FERGUSON—That is why I am taking you back there. You are going back to what we had before.

Prof. Swift—Yes. It will be a little different; what I describe will have new components. I talk about this as a hub and spoke, so the strong university would be the hub, and other things would be co-located there. There would be some spokes which, instead of operating independently, would operate as a subpart of the hub, presenting the same curriculum and perhaps giving students two-year diplomas or associate degrees from which the ones who perform well move on into the centre to finish off their qualification.

Mr MARTIN FERGUSON—Which is where you would have the CRC too?

Prof. Swift—Possibly. The delivery of some of those courses could be done in remote mode, because we have lots of electronic stuff. You could have your highly skilled teacher in one place teaching a lecture room full of students, but being viewed by another 10 smaller groups, taking the same lecture or the same laboratory class, but watching the laboratory class. At the spokes, there might be a local tutor who can augment what the lecturer has said, but it will not cost as much. You maximise the use of your central hub and ramify its effects as far as you can, using technology.

Mr MARTIN FERGUSON—As part of that shake-out you are then starting to establish the centres of excellence based on the mass of those colleges of excellence?

Prof. Swift—Yes. Some of them become your automatic areas of excellence, and you would put some of the DPI researchers onto that campus; you would get CSIRO to co-locate with you; and the component of the VET sector that was coordinating its organisations would sit cheek by jowl with all of that.

Mr MARTIN FERGUSON—That leads to your criticism of the government's proposal on the tech schools, because it goes to further potential fragmentation of education?

Prof. Swift—VET?

ACTING CHAIR—The proposed technical colleges.

Prof. Swift—Yes, that leads to further fragmentation. I know that there is a problem; Australia is a big country, and there is a problem with doing things locally and doing things centrally. But we are behaving, in the systems that we are setting up, as though we are the USA and we have 200 million people. Well, we do not; we have 20 million people. You cannot have everything replicated in a town of 5,000 people. There has to be a way that people are able to move to centralised places, perhaps with some assistance, some scholarships, to allow them to do that, but not for the whole of that time. As I say, they need to spend some time in their local community and some time at the big centre.

ACTING CHAIR—Do you see technology as really the stimulant?

Prof. Swift—I would say to you that, in 10 years time—and let us say if you start now it is five years before much is done—you will not recognise a classroom, a lecture theatre or a laboratory session. They will not only be getting technology but, say, somebody who is examining an animal will have a glove that feels like the animal's teats or something like that, so that when they are listening to the lecturer, they will have a sensation; or if they are putting their hand down some hole or other for inspection purposes, they will have a picture of where it is going and the way that maybe the calf foetus is laying inside the mother.

ACTING CHAIR—Virtual reality.

Prof. Swift—Virtual reality. Things will change, and we need to get prepared for it. Instead of being prepared for it, we are actually going backwards.

Mr WINDSOR—Which layer are you taking out?

Prof. Swift—You take numbers. It is not the layers. I think the layers are not bad. School does not perform well, but the VET and university sectors do reasonably well. You take out certain groups of them, people who are not performing or are not worth funding. You are simply brutal and say, 'You stop, you are the centre, and you and you can be spokes of the centre.' That will cause a lot of upset, but if we are not prepared to take it on, we will not go forward.

Prof. Williams—We are not really going back to what we had a decade to 20 years ago; there are two important differences in what we see. Twenty years ago you had a smaller number of institutions each doing their own thing and trying to do everything. We would not see that in this model. First, they would be a network working together in terms of teaching and using the technology et cetera. Secondly, there would be a fair degree of specialisation. Specialisation in terms of teaching becomes possible now because of the technology.

Mr MARTIN FERGUSON—But on the unders and overs, where one university might win on your front, the university that loses on agricultural education could pick up and become a university of excellence on some other arm?

Prof. Swift—Indeed. It is that idea of differentiation that you have just mentioned where we really should be going. Rather than each university trying to do everything, it would be a matter of saying, 'You are good at food processing, you are good at food production,' or whatever it is.

Mr MARTIN FERGUSON—I appreciate that. I tend to agree with your criticism of having too many institutions.

ACTING CHAIR—With respect to the centres of excellence, you mentioned two.

Prof. Swift—That was a little—

ACTING CHAIR—That is northern New South Wales and Tasmania?

Mr MARTIN FERGUSON—What part of Tasmania, north or south?

Prof. Swift—I thought it was part of Victoria, I am sorry!

Mr GAVAN O'CONNOR—That is like Scotland being part of England.

Prof Swift—Indeed. My wife is Scottish, so you can imagine some of our discussions!

Mr GAVAN O'CONNOR—Whilst many of us are attracted to the notion of a national plan, people who like national planning are a dime a dozen. People who are capable of devising structures to implement plans that give effect to the sorts of changes that you are talking about are pretty scarce on the ground. How would you drive it?

Prof. Swift—It would need federal government support to drive it. The federal government would be the driver, but once—

Mr GAVAN O'CONNOR—Let us assume that you had the political will, that you had a minister with the political will to drive this—and nobody can construe anything from this; I am simply making a point about how you give effect to what you see as a fairly spectacular need of the sector in 10 years time. Make no mistake: we either come to grips with this issue or this sector goes out backwards. You do not have smart farming if you do not have smart farmers and people who support it.

Prof. Swift—Exactly, and we have one of the worst educated farming groups in the developed world, apart from Argentina.

Mr GAVAN O'CONNOR—The new waves of productivity in agriculture will be driven by agents of change in the political and academic sector. Do you think the academic sector is receptive to the sorts of proposals that you have been putting?

Prof. Swift—There will be local objection, but there will be financial reality. At the end of the day, the university system has to let people go bankrupt—universities or sections of universities—and the usual outcome of bankruptcy is that you cease to exist. If you are propped up from that, reform takes a long time because you keep being rescued. Going back to your question of how you drive it through, the most important thing is what you said at the end. If we do not change now, we will be an also-ran in the world market. The need is to do it now, and we really hope that something is achieved through this committee. It will need to be driven at the university level by the government, not just McGauran but the minister for education—

Mr GAVAN O'CONNOR—A good Labor minister will drive these sorts of things.

Prof. Swift—Yes, I imagine so. But once it is driven through the early parts, a board will need to be set up comprising men and women of great fortitude and depth. The board would have oversight of the program, seeing it through, because it would be a program that runs over several years.

Mr GAVAN O'CONNOR—Can I ask you about the statement you made about the CRCs—the positive sides and the negative sides, having regard to the bureaucracies that grow up around these things and the need to participate, because if you are not in that inner sanctum you do not get access and whatever. If we put you in the chair for a day or two, how would you restructure that system?

Prof. Swift—I will tell you how I would restructure. The main scientists come from the in-kind partners—university and CSIRO. A few come from industry but mainly it is universities and CSIRO. There is another group of scientists in there who are paid by the CRC out of the Commonwealth money. If I was in it, I would have a job at UQ to go back to, and so would Richard. These people paid by the CRC are dependent upon the existence of the CRC. Therefore, they are very keen on getting another second set, and they are keener on that than on the linking out. Their focus is on: 'How can I get my job for another seven years?'

Conversely, the people from the in-kind contributors are focused on the project. In the system I would run, I would still have collaboration and bringing in the various parties, and I would say, 'You are funded to do this project. I will check after a year if you are doing it; if not, you can go back to where you came from. If you are doing well, I will keep you going.' The biggest threat there is that you actually return to your own institution and carry on doing what you did before, so it will not make you worry that you will lose your job. The worst thing for a long-term researcher is the fact that he has a five-year project and a one-year job horizon; that tends to lose focus in their mind. Those people still can be managed from their own institutions that have a whole management structure anyway because they were being managed before. Then you have a honed down management of the CRC itself which just looks after the project, that does not bother about paying them and looking after their long service leave and all of that. I think you get 1½ times as much research for your dollar relative to now. I would change it to that very quickly.

ACTING CHAIR—Instead of wasting money on administration?

Prof. Swift—Yes. They all have a director, a business manager, a marketing officer and a lady making the tea. I think it is wasteful, but I think the idea is good.

Mr GAVAN O'CONNOR—Yes, we are not throwing the baby out with the bathwater. We want a progression—

Prof. Swift—I would do it in a more cost-effective way. Industry would still be in there, so you would basically be solving their problems.

Prof. Williams—Just on this issue of how you progress this rationalisation process, one of the issues that we have at present is the question of quality of programs, and I am thinking

particularly of the teaching side at the moment. Institutions are doing their own thing; because of pressures, there are cutbacks and whether they are maintaining standards is an issue. I think there is probably a need in our profession, as with medicine or vet science or whatever, to have some form of accreditation process. If we were to involve a combination of the professional bodies, and maybe industry, and charge them with the responsibility of reviewing the agriculture programs, identifying certain quality standards, identifying the resources in terms of people and facilities required to provide a credible program, once you define that you would soon find that some institutions would fall below the line. So you would have a sound academic basis on which to make that sort of decision. There are research issues and other resources to go with it. That is a concern at the moment. We all go out and advertise our programs. We are all offering a three-year degree in agriculture, but it is very hard to make a judgment on what the quality programs are, because there is no sort of accreditation program.

Prof. Swift—The answer basically is you need an objective assessment of quality, not just of the program but perhaps of the staff as well.

Prof. Williams—Yes.

ACTING CHAIR—How many people do you think are aware of or ready to make change, as we are talking about here? Do you think the industry, the academia at this level are thinking along these lines?

Prof. Williams—I would say academic staff in general are almost desperate for change because we can see the decay of the system.

Prof. Swift—All it is is a slow attrition; it is death by a thousand cuts. They would rather have the scimitar across the neck than wait around—or to have somebody bold put in a system that actually could work under the current-day situation.

Mr FORREST—I am pleased to hear you make reference to your Scottish experience. I did my masters at Aberdeen, and my daughter has just come back from Edinburgh. I have to say to you that you could fit Scotland into my electorate three times. I think you have answered my question with reference to the use of technology, but your submission to me is code for agricultural training facilities in the big cities, and maybe even, in the Victorian context, in Bendigo or Ballarat, or in the Queensland context, maybe in Rockhampton and Brisbane. You frightened the life out of me with your sort of dry approach to the matter.

Prof. Swift—Yes, I understand that.

Mr FORREST—I use my own backyard as an example. It is a very painful process that you are setting out for us here today. My second question is to tease out what you mean by the change in emphasis towards skills training. The reality is that this is an adjustment because to be the modern farmer to whom Mr O'Connor refers, as to the modern tractor, you have to understand technology, satellites, you must have an economic background; you do not need a PhD. So there has to be an adjustment in that need. I am not surprised that a university would say that it has to be corrected back again, but we have to keep the balance, and it has gone too far in one way. How do you respond to that?

Prof. Swift—I would say that the VET sector is in a bit of a mess. I think they are very important people. There is a range of jobs in any industry, and what you must have is the correctly trained people operating at each level. The agricultural colleges in Queensland, as you would probably know, have undergone an amalgamation, largely driven by low numbers again, but they have not harmonised their curriculum, for instance. We offered our services to help them have a harmonised curriculum so that now that they are one college they might actually teach the same material at different places. They are not up to speed with modern education theory and practice in the way that you teach certain things. There needs to be quite a shake-up. I am very supportive of there being a strong VET sector, and with the possibility of articulation from that sector into a university.

Mr FORREST—Yes, the pathway process.

Prof. Swift—The pathway process. Usually we talk about articulation upwards; in other words, ‘You have done this, what can we give you in the next level that equates to what you have done?’ As well as doing that, I would say, ‘Here is one of our first-year courses; can we put it into your program?’ and those people who do well in it will come to us with that part of the course already under their belt. It allows you to do a lot of things. It allows you to screen them; it allows them to get a feel for what a university course might be as opposed to the ones that they are doing; and they need to perform reasonably well in order to move on. But it is not an approach that has been tried yet. It is a closer relationship between the two sectors of the education system.

Mr FORREST—Are you speaking from a Queensland perspective regarding the absence of a good network from VET right through? Is that the same everywhere? My impression is that other states have done it a bit better.

Prof. Swift—You may be right. I have been in South Australia and Queensland. I know a little bit about the Victorians, and I know they have problems because I am very friendly with a number of the staff there. The problem is that, at university, you are examined on criteria: how does this happen? What do you need to know to do that? In the VET sector, you are examined on competence: can you drive this tractor? Can you make this thing work? The competence can be achieved. I am not saying that that is wrong, because that is the type of job they will do. But you can achieve a competence without understanding how it works and what you are doing, whereas criterion reference requires you to be able to explain—

ACTING CHAIR—A bit of theory.

Prof. Swift—how the fuel comes into the tractor, how the spark plugs work, how the emission system works and so on. It is not a question of checking the battery and pressing the button. I am not trying to demean VET training. I am just saying that there is a mismatch between the assessment of performance in one level compared with the other, so that when they come to move, there is not quite as nice a transition as one would like. I am suggesting a way of testing people who are ready for that transition.

Prof. Williams—You mentioned the fact that we have reached a situation of imbalance between the schools and the tech level and the university level. If you go back 15 to 20 years ago, you had the agricultural colleges—Gatton Agricultural College was one, there was

Roseworthy et cetera in the other states—and you had the universities. The agricultural colleges provided a very good role in that they had a good balance between the theory and the practice. So someone coming out of that area met the needs, whereas the university people were much more academic, for want of a better word.

What has happened with the merger of those in each state, in the case of Gatton with the University of Queensland, is that there has been a real compromise because, when you become part of the university system, you become research intensive as well as teaching and all the associated pressures, including entry requirements and things. The university side of it has actually been pulled back a bit and the agricultural college has lost the practical side of it, so graduates no longer have that balance. I am not suggesting that we go back that way. It was probably a better way, but rather than going back, we now need to have a much better partnership between universities to maintain that academic sector, and now the VET sector, to provide that balance. It is sort of going around in a cycle.

Mr WINDSOR—Just to follow on from Mr Forrest's question, I thought he made a valid point when he referred to a concentration on the cities. The model you are talking about could actually be a country based model where agriculture and agricultural related courses were actually given in the country and not in the city.

Prof. Swift—Indeed.

ACTING CHAIR—Like in New England.

Prof. Swift—New England, Charles Sturt. Gatton is not in Brisbane, let me tell you; it is very definitely in an agricultural area. It cannot be right in the bush because if you are going to have researchers and CSIRO, you need to be close enough to a large centre of population to be properly serviced.

Mr WINDSOR—Why do you have to? Armidale is not a terribly large community; it has five or six CRCs and CSIRO and the university, and it started to teach German, which was not its main game.

Prof. Swift—That could be so. I am not saying they have to be in big cities, but they certainly could not be in Charleville or Charters Towers.

Mr FORREST—I am not even suggesting that. If I am doing veterinary science, and I have never actually been part of a difficult delivery of livestock, I have to get that experience—and being on my own in that experience. So how do you do that?

Prof. Swift—They go out on rotation in their fourth and fifth year. In our case, they go to private practitioners; they go to our clinic at Goondiwindi and deliver cattle; they go to a place called Dayboro; and they do it on the Gatton farm as well. There it is supervised, but not so at other places. They spend a lot of their time in rural practices learning how to do those things.

Mr FORREST—The sort of scenario when I read your submission is, 'If I want to do beef, I will have to go to Rockhampton,' and I might be in Adelaide; or if I want to do dairying, God

knows where I will end up, but it probably will not be in Victoria, the way it is going. The geography for relocation is another disadvantage for students.

Prof. Swift—No. UQ and the universities of Adelaide and Melbourne will start sharing their courses. Say that UQ is specialising in beef, just for the sake of argument, but there is someone in Adelaide who wishes to pursue that. They can stay in Adelaide; they can take those courses in a distance mode and, for part of their course, they can spend time at Rockhampton actually working with beef producers, when everyone goes up there to do it. It does not mean spending your whole time in the other location, but it does mean spending a portion of your time at the right stage of the course.

ACTING CHAIR—This is a bit of a trend in education, isn't it?

Prof. Swift—Yes.

ACTING CHAIR—The world is going that way.

Prof. Swift—Well, it is going that way in medicine. You will have an expert sitting somewhere in the country who can be immediately linked to a problem. In our case, it is about delivering material or talking to students in a tutorial with two-way conversation about a particular disease in an animal or a particular issue in agriculture. We see that having to become more and more part of the future.

Mr FORREST—How does that rationalisation occur? Would you leave it to the marketplace? Where will be the centre for grain education, broad-acre wheat or barley; where will be the centre for beef? How does that happen? Someone has to sit down and negotiate or do you just let the attrition process occur?

Prof. Swift—I would say that we would give each of them the opportunity to be a centre of excellence in something. Two might bid for wheat breeding or wheat production, but there would be other areas that one of them might go into. Alternatively, they could both be part of the centre for wheat excellence. It is just that they would need to be operating in a coordinated way.

ACTING CHAIR—Thank you very much. We appreciate your time and your submission. It was excellent.

Prof. Swift—Thank you.

Resolved (on motion by **Mr Gavan O'Connor**):

That this committee authorises publication of the evidence given before it at public hearing this day.

Committee adjourned at 5.53 pm