



**LEGISLATIVE ASSEMBLY OF THE NORTHERN TERRITORY**  
**Sessional Committee on Environment and Sustainable Development**

Committee Members:

Mr Peter Chandler, MLA	Member for Brennan
Mr Michael Gunner, MLA	Member for Fannie Bay
Ms Marion Scrymgour, MLA	Member for Arafura
Mr Peter Styles, MLA	Member for Sanderson
Ms Lynne Walker, MLA	Member for Nhulunbuy (Acting Chair)
Mr Gerry Wood, MLA	Member for Nelson

**PUBLIC HEARING, FRIDAY 16 OCTOBER 2009**

**Northern Territory Horticultural Association**

Witnesses:

Ms Kate Peake	Executive Officer
Mr Tim West	Environmental Development Officer

**Madam Acting CHAIR:** I declare open this public meeting of the Sessional Committee on Environment and Sustainable Development. Our inquiry arises from a reference to the committee by the Honourable Alison Anderson MLA, former Minister for Natural Resources, Environment and Heritage.

I welcome representatives from the Horticultural Association of the Northern Territory; Kate Peake, the Executive Officer and Tim West, Environmental Development Officer and thank both of you for appearing before us today.

Although the committee does not require you to give evidence under oath, these hearings are formal proceedings of the parliament and consequently they warrant the same respect as proceedings of the House itself. I remind witnesses that giving false or misleading evidence is a serious matter and may be regarded as a contempt of parliament.

Whilst this meeting is public, witnesses have the right to request to be heard in private session. If you wish to be heard *in camera* please advise the committee prior to commencing your answer.

Today's proceedings are being electronically recorded. To ensure the accurate transcription of the recording, I ask that witnesses and members identify themselves prior to speaking and, in the first instance; I invite representatives of NT Horticultural Association to state their full names and positions before commencing their evidence.

As soon as practicable following this hearing, a transcript of your evidence will be upload to the committee's website, but not before you have proofed it. So if I could just ask the both of you to identify yourselves and your positions.

**Ms PEAKE:** Kate Peake, Executive Officer with the Northern Territory Horticultural Association.

**Mr WEST:** Tim West, Environmental Development Officer with the Northern Territory Horticultural Association.

**Madam Acting CHAIR:** Who is leading off today? Kate, thank you.

**Ms PEAKE:** This is just a brief presentation to provide an overview and then Tim will follow on with a presentation with some more detailed context in terms of what a sustainable horticultural industry is.

Thank you for the opportunity to make a submission to the Sessional Committee and thank you for the opportunity to make this presentation. Indeed, thank you for forming this Sessional Committee because sometimes Tim and I feel like we are the only people who are enthusiastically engaged in the development of a sustainable horticultural industry in the Northern Territory. This is a really exciting step for us.

What is the NTHA? We are the peak representative body for the horticultural industry in the Northern Territory. Our role is essentially to provide support to the horticultural industry. We represent the industry on shared issues, we promote the industry to the wider community, we facilitate contact within the industry and we support industry research and development.

Our commitment to sustainability is incorporated in our logo. It says: 'fostering a sustainable industry that values the environment and the spirit of rural communities'. The reason why sustainability and the environment feature so strongly in the way we represent ourselves to our members and to the community is multi-fold. Horticulturalists have always been concerned with sustainability. This is not a new interest in the horticultural industry. For as long as horticulture has been around, people have engaged in horticulture with an interest in doing it for a lifetime and their children for a lifetime and their grandchildren continuing on.

Also, the current climate I think enhances the necessity of a focus on sustainability. With climate change and the consequences of poor agricultural practices elsewhere, both in Australia and worldwide, sustainability is a bigger issue than it has ever been before.

Furthermore, for the individual horticulturalist working the land, there is also an increasing concern with sustainability from the perspective of the consumer. We've got more discerning consumers; they want to know that the produce is being produced in a sustainable manner.

Who makes up the Northern Territory horticultural industry? I have listed a few up there. These are essentially the key players from the Northern Territory perspective.

I will go in to some statistics, some ABS statistics; because that is the data centre on which we base a lot of our decision making. I will make the statement up front that the ABS statistics don't, in our opinion, reflect our industry particularly well. The ABS statistics indicate that the NT horticultural industry has a production value of \$77.4m to the Northern Territory economy. NT mangoes represent about 30% of national mango production and about \$36.3m to the Northern Territory. NT melons represent 7% and \$11.6m. The rest of the industry groups that I listed up here represent less than 2% of national production. Overall, according to ABS, agricultural production in the Northern Territory represents about 1% of national production.

From our perspective, our view of the industry is that NT production is probably worth about \$160m, about twice what the ABS estimates. There are about 600 horticultural enterprises operating in the Northern Territory. That is a difficult figure to come up with because there is no actual formal list of them. That is approximately the number. Horticulture is a very intensive employer; largely with seasonal employment so the figures vary significantly throughout the course of the year. At this time of year, you will find an enormous number of people working in the horticultural industry as we are currently picking mangoes.

The horticultural industry also has considerable flow-on business; it is a significant contributor to the Northern Territory economy. The reason why I am painting this picture is that I would like to make two points fairly clear: one is the significance of this industry to the Northern Territory, and; the other equally important issue is our relative insignificance nationally, particularly in terms of the current focus on our industry as the future of horticulture in Australia and the future of agriculture.

Given the Sessional Committee's brief to consider the Northern Territory's capacity to progress agricultural production in an environmentally sustainable manner, I feel that it is important up front to establish what I call the 'keystone'; which is that ecologically sustainable farming systems are possible. With all the mistakes that have been made in modern western civilisations, it is easy to lose sight of this simple truth.

In fact, in theory, I certainly feel that we should be better placed to develop sustainable farming practices than anyone who has preceded us and I say this because we have the accumulated wisdom of the past - we can learn from the mistakes that have been made, we have more science to help us make good decisions, and we know the consequences if we get it wrong and, by extension to that, the potential benefits if we get it right. So with the appropriate investment in planning, the words 'sustainable development' are not an oxymoron, although you will tend to find that there are certain people within this debate who will suggest that in fact there is no such thing as sustainable development.

So at this point I think it is probably beneficial to agree on a definition of 'sustainability' and, from our perspective, sustainability is essentially two things. It is aiming to be productive perpetually, and it is securing the diversity of our natural environment and these two things have to be achieved to the best of our ability within the resources that are available to us at any given point in time. And when I talk about resources I am talking about natural resources; but the most important resource is knowledge and the use of knowledge. I think this point needs to be made: sustainability is not prohibiting development and sustainability is not having a zero impact on a natural environment because these two things are essentially untenable.

Going into the opportunities, there is an opportunity for growth in the Territory's horticultural sector and with the right support there are certainly benefits to be gained from that. Some of the opportunities that we can see at a really superficial level are, for example, we have land and water resources. We certainly do not have plains of highly arable organic soils and we certainly do not have an unlimited water resource, but we do have resources. Another opportunity is that we can; as I said before, learn from mistakes in the past. I think that is really important. Because we are starting relatively early on in the process, we have a fairly young horticultural industry and we have the opportunity to plan for the future and get it right.

Government also has opportunities in this process. Government has the opportunity to provide direction to the industry to support sustainable development and that support would be seen through promotion of the industry to the community and undertaking research, commencing possibly with the development of the four existing research farms at Coastal Plains, Douglas Daly, Katherine and Ti Tree.

Government also has the opportunity to benefit from collaboration with other stakeholders who are in a similar boat to us; Queensland, Western Australia and South-East Asia. All have similar climatic zones and are dealing with similar challenges and opportunities. And government clearly has the opportunity to capitalise on the Territory's assets and on future opportunities.

So investment in the Northern Territory horticultural industry will have benefits at multiple levels. It will increase the viability and resilience of rural communities, including Indigenous communities. As like I have said, horticulture is a big employer so there are jobs to be made. Horticulture, as I have also said, has flow-on effects through the community; it supports a bunch of other industries and, perhaps less tangibly but I think also importantly, horticulture has the ability to provide communities with identity and community pride.

Horticulture also has the capacity to boost the NT economy. I doubt that in the foreseeable future it is likely to be competitive with other industries like the mining industry or hospitality or indeed the pastoral industry but in terms of creating economic diversity, which we all know particularly in times of economic down-turn is a valuable thing to any economy, I think horticulture has a very important part to play.

The development of the Northern Territory horticultural industry is also really important in the context of food security. Food security is a term that is bandied around fairly loosely these days and I think people have lost the significance behind the statement, but essentially, we have got an increasing population and a decreasing capacity to produce food and clearly the outcome of that equation is pretty scary. We have the capacity to contribute to food security locally in terms of supplying our own population, as well as nationally and potentially internationally.

Another point I think needs to be made in terms of the benefit of investment in the horticulture industry is that it has benefits in terms of improved environmental protection. This is a delicate point because a lot of people would disagree with me strongly but ultimately farmers are land managers, the land is their primary asset and they will work hard to protect it. Also, food production at a local level means less transport and therefore has a whole bunch of flow-on environmental benefits, certainly in the context of the CPRS.

Finally, there is an opportunity to demonstrate best practice for other stakeholders elsewhere, to be a leader in the business of sustainable development. That is perhaps a fanciful statement at this point, but I think it is something that we should definitely aim towards.

The challenge is to embrace the opportunity to develop our agricultural systems without paying an unreasonable environmental price. So essentially, what we need to do is, first and foremost, start planning now. And I think that the planning process really needs to be commenced by government in the first instance.

We need to ramp up investment in agricultural research and improve technology. We need to provide accessible support services and build the capacity of growers. We need to engage growers in the process. That sounds like a no-brainer, but in actual fact there are examples of government storming off in a fabulous direction and not taking the community with it. In this kind of situation, if the growers are not engaged then the process is going to fail.

We need to implement properly targeted, well resourced and efficiently implemented regulations for good practice; so not regulation for the sake of it, but regulation that is as simple as it can be, that is aimed towards creating the benefits that we want to create and avoiding the issues that we want to avoid.

We need to also improve market supply chains so as to decrease the greenhouse impact of transportation that I was referring to earlier on, particularly important in the Northern Territory given the distances that we have from pretty much anywhere else.

Continuing on with the challenges, from my perspective the momentum necessary to make this happen, to make a sustainable horticultural industry reality, is not evident as yet. To my mind, the department is not yet engaged in a sustainable agricultural agenda. Certainly, the *Territory 2030* report, as the most significant document that we have at this point in time representing the planning process for the long term for the Northern Territory, really does not set the stage for any sustainable agriculture. A strategic and long-term commitment is going to be required to tackle the challenge of developing sustainable production systems relevant to the Northern Territory conditions and this needs to be guided by government; it is not going to happen independently. Essentially, farmers are motivated by immediate economic demands in the large part. There are certainly farmers out there who are paying attention to these issues and are engaged in sustainable practices, but they are in the minority so without government direction we will end up with a similar type of scenario as we have experienced elsewhere in the country.

Perhaps one of the biggest threats to sustainable development is the extent to which the environmental camp and the developmental camp are positioned as opposing forces. I think the first thing that we need to do is stop the endless debate about sustainable development, acknowledge the fact that development is necessary and start engaging in a discussion about how to do it sustainably.

This is the last slide. I felt the need to acknowledge the concept of the 'Northern Food Bowl' because it is appearing increasingly in the media. This is the concept that we are going to expand our agricultural industry, essentially to feed the nation. The researchers are warning us that this is not a reasonable expectation and certainly key players in our industry have known that for a long time. This is not, however, to say that greater production outcomes are not possible in the NT. Producing food locally to whatever extent the broader environment allows it is the most sustainable long term model, so we should be endeavouring to expand our industry within the context of concern about environmental impacts. Furthermore, in the context of local and global concerns about food production and food availability; I think there is an onus on us to do so, I think it is more important than ever that we explore opportunities for growth in the NT sector. As I said, the underpinning issue should always be an acknowledgement that development should be sustainable.

Just summing-up, in the opinion of the Northern Territory Horticultural Association, with the support of government and the community, a sustainable development model has enormous benefits and no long-term environmental negatives.

**Madam Acting CHAIR:** Thank you, Kate. Any questions or comments from committee members?

**Mr STYLES:** Kate, when you talk about Douglas Daly, Katherine and Ti Tree regions; have you got any percentages of what land is usable down there from your organisation's perspective and what percentage of land is under cultivation of being used for horticultural production?

**Ms PEAKE:** I am currently having this discussion with the department in the context of our lobbying around a number of other issues facing the organisation. We actually have an incredibly limited picture of what our industry looks like, where the industry players are, what they are producing and in what quantities. The lack of data is one of the key deficits that we need to deal with and then the lack of research would be the next challenge.

**Mr STYLES:** So really one of your challenges would be to actually get that and that is obviously going to cost some money. So as a Territory, we do not have at this point, a really detailed picture of really what is going on in relation to horticulture. Is that a fair assessment? I am not blaming anyone; I am just saying that we do not have the best picture or a reasonably detailed picture.

**Ms PEAKE:** That is a fair assessment. We certainly are quite conscious of some sectors of our industry. It depends very much on the level to which sectors of the industry want to be engaged, but there are other sectors that we have very limited information about. In terms of an assessment of the resources and the capacity of regions to develop, our understanding is the department is conducting a land capability mapping exercise, but it is in its early stages and we haven't been given a timeframe on that.

**Mr STYLES:** So at some stage in the near future, do you see the necessity for governments to assist in some way? I expect it is probably an obvious question; but at some stage as a community, we are going to need to map this information and fairly quickly, I would suggest, given the current situation of water resources down to the food bowl down south, we might have to produce locally. Is that, again, another fair assessment?

**Ms PEAKE:** Absolutely. We need to know who our current industry is and we need to have mechanisms to guide them in best possible practices. We need to know the capacity of the industry to expand and we need to be conducting continual and ongoing research around current production, improving production and the potential for other opportunities whether it is other commodities or other regions.

**Mr STYLES:** So just following on from that particular question; does your organisation or do any of the departments have any rough idea and figures as to the cost saving of locally produced stuff? I know that earlier, prior to this hearing commencing, we were chatting and I was talking to Tim West who was giving some indication about how locally produced food, there is a cost saving and obviously the carbon footprint is less if you can actually produce it locally. Do you have any figures on the cost saving and the carbon saving of growing locally versus the stuff that we are trucking in and flying in currently?

**Ms PEAKE:** No and in fact that would be fairly complicated economic modelling.

**Mr WOOD:** Can I just say, Peter, that there is a nice big article the Cattlemen's Association put out in their annual report on food security and local supply of food and it talks about the 'local track'. I think Kate is dead right; it is quite complex this idea that you can grow stuff locally and therefore save your carbon footprint and it is something that I think really needs to be assessed thoroughly before one can say they are growing something locally means necessarily a small carbon footprint.

**Mr STYLES:** Thanks, Mr Wood. That is the answer that I thought I was going to get and I just wanted to get that on the record because I suspect that at some stage in the very near future as a community, we probably need to start to look at some of those issues. I just wonder, I do not know whether the NTHA would have the resources to be able to do that, both financial and human.

**Ms PEAKE:** No – well, we could potentially obtain those resources. If we had project funding we could do that. But yes, it would be dependent on obtaining project funding.

What is a pretty simple conclusion to draw is that the old model that existed of producing food and sending it to the central markets and then trucking it back up again for consumption is pretty stupid. And that was remarkably common and is only just now being overcome by big players like Woolworths putting people in the local market place to ensure that local produce goes directly into local stores.

**Mr STYLES:** So that is why, when I go to my local supermarket, I can see locally produced Cos Lettuces and bananas and mangoes is actually coming in from producers here, as opposed to being trucked in from south?

**Ms PEAKE:** Not necessarily always, but certainly more often now than it used to be.

**Mr WOOD:** Well could I say; it used to be total then they changed. It used to be total local stuff was all sold to Woolworths and Coles direct!

**Ms PEAKE:** We have always had local markets where you could buy local produce; but certainly Woolworths and Coles are just learning.

**Mr WOOD:** No, could I correct you on that? I used to sell to Woollies and Coles. All local produce in the 1970s was sold straight to Coles. I took my watermelons in to Coles and they cut them up and they sold them direct. Then someone had to buy it here, had to have a centralised market in Adelaide and that is why a lot of people did not bother, but they still do sell stuff through Adelaide. It is grown in the same town and sold back where it came from, unfortunately.

**Madam Acting CHAIR:** Member for Arafura, you have a question?

**Ms SCRYMGOUR:** Are you finished, Member for Nelson?

**Mr WOOD:** Yes, thank you.

**Ms SCRYMGOUR:** I apologise that I was late for the presentation. Hopefully, you have a hard copy to have a look at.

I was just interested in one comment that you made, because it is an important industry, but what the collaboration is with your industry and with NRETAS and DPIFM given water use allocation and how that comes together with DPIFM and trying to get the industry working together. Is there any collaboration between the association and both of these agencies? There are quite significant resources under the National Water Initiative to try and do some of that planning and mapping, which obviously would be important to your industry. I was just interested in knowing what the collaboration is.

**Mr WEST:** I think I've got most of that collaboration covered in our guidelines acknowledgements; I was just informing that we probably need a bit more time to further develop these relationships.

I have been employed through the National Landcare Program to work with the NTHA on sustainable land use projects and we are currently in the second project delivering an implementation phase of the guidelines that were developed in the original project.

Our problem with the current federal funding system, *Caring for Country*, is it is a very reactive funding system; they are not proactive and because of that the Territory has across all spectrums, whether it is in agriculture, Indigenous land management, right across the board, has not fared particularly well under the present Business Plan. With the last funding round, there has been a fair amount of dissent about money available to the Territory that is relevant because it is primarily, and understandably to a degree, a reactive funding program for southern issues.

**Ms SCRYMGOUR:** Through the Commonwealth Natural Resource Management Board; that did not make those issues more simplified or did it just add  
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**Mr WEST:** The Natural Resource Management Board, the NTNRMB - - -

**Ms SCRYMGOUR:** Because the Landcare Councils get their funding out of you, don't they?

**Mr WEST:** Yes - and there has been good funding over the years, but with the present Caring for Country program, which has absorbed the National Landcare program, which was primarily where agricultural funding and NRM came from. Through that absorption the ability for projects that we would be interested in looking at, it has become very difficult to get them up. The business plan that they have does not sit well with the Territory perspective.

We are currently looking at projects through the Department of Climate Change. There are possibly funding opportunities there – there are some good federal funding systems, but they are hard to match with the Territory issues.

We do, across all land management systems, have a very proactive approach. Certainly, there are some reactive measures in respect to weeds, fire and other environmental issues, but predominately, we are looking at proactive programs to undertake R & D – Kate has spoken about research and development to develop sustainable farming systems in the wet-dry tropics, which is probably our major interest.

**Madam Acting CHAIR:** Tim, I understand you have a PowerPoint presentation.

**Mr WEST:** I do.

**Ms PEAKE:** Could I just quickly say something? In relation to our relationship with the NT Government Departments, our relationship with NRETAS is really largely around contributing to their policy and legislation to try to ensure that the NRETAS emphasis on environmental protection does not come at a cost to the horticultural industry. So for example, the development of the land clearing guidelines, there was a lot of feedback required to try and ensure that those land clearing guidelines really didn't prohibit any further development of the industry. Our relationship with primary industries is obviously fairly intimate and ongoing. There have been hiccups in the past that I am sure people are aware of, but we are working very closely together.

**Ms SCRYMGOUR:** But it would be important and I suppose valuable for the sector, in terms of water. I had a wry smile on my face when I saw that food bowl for the nation because that debate is certainly one that needs to continue. There is this myth that the water source as well as sustaining those industries is one that needs to be encapsulated and worked on. I was just wondering whether beyond the legislation of policy, whether the sector plays that important role of partnership with NRETAS; particularly in the water studies that need to happen – and that goes to the Member for Sanderson's question as well in terms of land allocation. With that land allocation, what is the water allocation within that land to be able to allow that industry to prosper? I suppose we all want industries to grow. What is the importance of that?

**Ms PEAKE:** We had our last meeting with the water resources guys last night and we are having ongoing meetings with them. The NTHA has taken a formal position of support for the water planning process. I think it is an incredibly valuable step along the path of creating sustainable development and it is fantastic the Northern Territory is doing it so pre-emptively with the aim of avoiding serious problems arising in another few years or so.

**Madam Acting CHAIR:** I am very conscious of the time, we probably have about 25 minutes, so a very quick one from Marion and then the Member for Nelson has a question as well.

**Ms SCRYMGOUR:** There is a lot of interest, particularly on areas of Aboriginal land, and I wondered whether the association has been approached. I know parts of my electorate, particularly where you have got year around water, because everyone has had market gardens in these communities for a long time and what the relationship is with the association with Aboriginal communities or Land Councils to try and get land allocation?

**Mr WEST:** There has not been, under the intervention as such any major contact made with the association regarding vegetables or plans in Indigenous communities.

There has been some contact made to myself by a few of the horticulturalists that are employed by shires to source local information. Broadly I am astounded at the fact that they had not spoken to the peak body regarding how to grow in the wet-dry tropics.

**Madam Acting CHAIR:** Member for Nelson.

**Mr WOOD:** Kate, the issue of land clearing and specifically in relation to the NRETAS draft clearing guidelines; what was your associations' response to those clearing guidelines?

**Ms PEAKE:** Essentially, our response was that the development of a myriad of different planning protocols around a myriad of different issues largely separately was not going to create either benefits for the environmental sector or a workable scenario for growers. The growers in a large part are supportive of sustainable practices and the kind of aims that NRETAS is trying to achieve, but you need to draw those components together; you cannot consider land and water separately. You cannot create separate documents and separate sets of rules and expect growers to be able to engage in that process or expect it to work at the end of the day. The land clearing guidelines were just another layer of rules that I personally did not feel were going to achieve outcomes for either side.

**Mr WOOD:** Where do you see the roles of the research stations now? Do you think it has gone backwards? Do you think we should be looking at more applied science like looking at new crops or do you think we should be continuing down the path which has been for many years of basically just supporting big industries?

**Mr WEST:** Having worked closely in my project with the research farms here, in Katherine, Alice and Ti Tree, there is an issue with the fact that there is very little research and development occurring and the type of research and development. As an industry, the growers are the stakeholders and they are keen to see, and the slides that will follow will explain that, either a collaborative research centre or a key centre for sustainable development that would utilise these research stations for the research and development of sustainable farming systems in the wet-dry tropics.

I might just point out to the Chair we have worked closely with NRETAS, DPIFM and other stakeholders on the development of these guidelines so the project has worked very closely with all stakeholders.

**Madam Acting CHAIR:** So Tim, would you like to move through your presentation? We did start nearly 20 minutes late, so I am intending to wrap this up around 11:20 am, so that you will still have the full hour. We will just take that time from lunch.

**Mr STYLES:** Tim, is that the peanut farm at Katherine?

**Mr WEST:** It is, yes. I might move through this fairly quickly so that we do have some time for questions. It basically is just a fairly rough framework for what ecologically sustainable development for horticulture could look like for the Northern Territory.

The brief concept of this ecologically sustainable development for horticulture; as it pertains to horticulture, it describes the farming systems that are capable of maintaining their productivity and usefulness to society indefinitely.

In the four points there:

natural resource conserving:

So sustainable production systems need to be governed by the resource base. If natural resources are adversely impacted upon, then the farming system should adapt to conserve those resources. These systems are yet to be perfected in the wet-dry tropics and arid zone due to a dearth of knowledge.

Under that, social/culturally supportive:

Sustainable farming systems should supply local food product and secure local food requirements. Local food systems should provide local employment and social infrastructure. Sustainable food systems should supply opportunities for regional and remote economic development and sustainable food systems should not impact on cultural considerations of the landscape and its peoples.

The commercially competitive point:

sustainable farming systems must be economically viable, obviously. These systems must have sound financial management, business plans. These systems need to provide measurable financial benefits for their participants, which is a difficult task of farming at times.

Last point, environmentally sound:

Sustainable farming systems need to maintain a holistic approach to land management and the broader environment. They should adhere to the NT Sustainable Land Use Guidelines, which was produced several years ago with the initial project that we worked on. They are a set of very generic, basic land management guidelines that have been developed collaboratively and fairly widely dispersed. Systems should be able to validate their environmental stewardship through environmental management plans and we have a pro-forma that has been developed through National Landcare Programs, an Environmental Management Plan that can be - again; it is quite generic. It can be utilised on different agricultural systems or areas like land management and park management.

The systems should have knowledge of their particular ecosystem services and manage them in that perpetuity. I am not sure if the committee is aware of Ecosystems services, but basically your pollinators, your bio-predators, the good insects and good fauna.

Moving on, under sustainability issues with respect to sustainable agriculture are:

the long-term viability and resilience of rural economies. We must move away from this fly-in-fly-out paradigm in the North. Regional and local food and sustainable food systems are an inherent component of a resilient rural economy. Sustainable farming systems, mainstream and traditional, create employment.

The second point is conservation and enhancement of the natural resource base:

sustainable production systems strive to sustain and enhance natural resources. They are continually improving systems by design. They are cyclic and it needs to be ongoing. These systems, if well implemented and managed, can assist off-reserve conservation management.

Next point is avoidance of environmental impacts:

Sustainable production systems are primarily driven by input reduction and avoidance of environmental degradation. It is inherent. The NT Sustainable Land Use Guidelines provide underpinning knowledge and independent assessment check-lists to assist with minimising any impacts. The *Sustain NT* Environmental Management Plan template I mentioned previously assists growers to identify, manage and rectify impacts.

The next point is socio-economic viability of rural communities:

Sustainable production systems can provide positive socio-economic indicator outcomes in rural and remote regions. Production and provision of local food creates positive socio-economic outcomes for individual families and for the community.

And the last point is the quality of land management and managerial skills:

Northern land managers require facilitated extension services to fully adapt to sustainable production systems. We require a proactive, accelerated approach for research and development and extension to fulfil the knowledge gaps and enhance managerial skills. Also, we require mentoring of the next generation as an imperative.

Just a few of the accomplishments of the NTHA in the last five or so years: the development of a Strategic Natural Resource Management Plan for horticulture, which we also brought in for the record; production and implementation of Best Practice Guidelines – I have touched on; addressing deficiencies in marketing supply chains of exotic tropical fruits through our Tropical Foods Industry Partnership Program – it is in partnership with Queensland growers. Borders have no importance; identifying the needs in non-English speaking background growers, in regards to natural resource management; a very important project. This sector of the horticultural industry is not well engaged either by the association or by government; working toward the determination of the best water practice and sustainable production of cut-flowers, and best practice and accreditation programs. For example, NIASA and EcoHort and they are run by the Nursery and Garden Industry. This is a national program.

I might just mention that there are three other projects in the works at present: one on providing a sustainable potting mix formulation for the Territory; utilising by-product from the forestry industry, so not bringing in pinebark from Mt Gambier; another on water efficiencies in nurseries. Nurseries are extremely high users of water. The third project is in partnership with Sydney University, DPIFM and the association looking at biochar as a soil additive for primarily Top End soils.

Ecologically sustainable development considerations: North Australia's largest relatively intact area of savanna on the planet. It is costly to manage and it is a definitely a huge natural resource asset. To be sustainably managed, it requires equitable consideration of economic, environmental and social/cultural factors that are inherent with the North; meaning relative to here, by the southern context. And a true triple bottom-line management system. It is a globally significant resource asset that demands world's best sustainable development in perpetuity. A 'lock-it-and-leave-it' approach will only lead to perverse outcomes in respect to all triple bottom line ratings.

A small population base on the landscape is the second point there. Good natural resource management provides people in the landscape. Culturally appropriate, sustainable, functional communities are a necessity in the North for landscape function. Remote communities and outstations provide infrastructure for broader landscape management and development. Hybrid mainstream and traditional sustainable food systems and the NRM ranger groups provide good scope for employment and economic development in rural or remote communities.

The second last point is that our economy is driven by purely extractive fly-in-fly-out industries. Greater focus is required on sustainable development that is going to provide infrastructure in the region for sustainable agriculture, ecotourism and defence.

Some of the ESD priorities: I mentioned earlier a collaborative research centre or a key centre for sustainable development in Northern Australia. That would be a cross-boarder organisation so looking at Kununurra and some regions in North Queensland that would provide a central knowledge hub for research and development; knowledge brokering, marketing and monitoring and evaluation programs.

To foster and promote a fully integrated and collaborative approach to sustainability.

That will maintain a direct partnership within a whole-of-government framework to implement sustainable development, with the relevant departments contributing to that framework.

To export knowledge systems to developing countries of the wet-dry tropics, to assist food production, ecological function, social/cultural wellbeing. I might point out there is not an institution in the wet-dry tropics globally that does this.

The second point, which I previously mentioned, is comprehensive land capability mapping. That is required to identify and secure appropriate agricultural lands and their natural resources for food production. Also to assist detailed landscape planning to facilitate sustainable food systems whilst maintaining ecological function. There is work occurring on looking at a more defined or narrow view of land capability, but it is not near small enough to identify those areas that are a potential for sustainable agricultural development.

Sustained research and development: to identify knowledge gaps, to hasten the development of sustainable food systems in the wet-dry tropics and arid zone; to produce a long-term data set or a continuum of knowledge that underpins northern sustainable development as sustainability is, by nature, an evolving entity; also to facilitate a more proactive approach to natural resource management and sustainable development in Northern Australia.

Extension programs are the last point. Extension programs to co-ordinate, facilitate and accelerate the implementation of sustainable food systems in the north: these programs would engage and assist farming enterprises with traditional knowledge and support; programs that enable the training of skilled farmers in wet-dry tropic sustainable farming systems; programs that would assist the conversion cost of current farming systems to a more sustainable farming system; programs that constantly monitor and evaluate the program and adapt accordingly to ensure timely, robust program delivery.

The last slide contains some thoughts:

Awareness of sustainability is about knowledge of sustainable practices.  
Education - ecology requires greater emphasis in our education system.

Training - there is a lack of appropriate training packages available.

Investment - there is little to date.

Commitment - we had 'continuity' there but I have changed it to commitment.  
There has not been a concerted effort by business as yet.

Passion - is needed now.

Thank you.

**Madam Acting CHAIR:** Thank you, Tim. Members, any questions? Member for Nelson and then Member for Sanderson.

**Mr WOOD:** Thank you, Tim. Just a couple of things; in relation to soil mapping, has the Northern Territory got no soil maps of any extent of the Territory?

**Mr WEST:** We have, for our size I would say, very good soil mapping, but for land capability mapping that is required at a level for good identification of soils and water, no. We do not have it to the appropriate scale, the scale that is required.

**Mr WOOD:** You also mentioned education. I know the Member for Arafura was talking about gardens out in communities and that is where I worked. I had a background in Horticultural Science. There is not any Horticultural Science in the Northern Territory. There is some training at CDU. Do you think, really, we have got to boost horticultural education up to a much higher standard before we are going to get true horticulture off the ground?

**Mr WEST:** Certainly. Previous to this position, I worked as a lecturer of Horticulture and Conservation Land Management, remote delivery so it was with community work as well. There is a lack of preparedness for future requirements in regard to horticulture. We need to identify what skills are required and adapt our training packages to suit that skill base.

**Mr WOOD:** I am probably talking about the next level up because you can train people in horticulture - - -

**Mr WEST:** There isn't one. My qualification has been gained here at CDU and it is an Advanced Diploma in Horticulture and that is the highest level of qualification you can obtain in the Territory. We still do not have a degree in horticulture or agriculture available in the Territory.

**Mr WOOD:** I had a look at my qualifications 30 years ago and I would say they were far in advanced of the Advanced Certificate in Horticulture in the Territory.

**Mr WEST:** I went through the system here 25-odd years ago. What is required today is one-quarter of what was required of me to obtain my qualifications.

**Mr WOOD:** You mention extension methods. We have lost a lot of that. Do you believe that is something that the government has got to put an effort back into? The extension officers I knew do not exist. You mentioned that in your slides.

**Mr WEST:** Certainly, it is an imperative. If we undertake research and development, it needs to be delivered through good extension officers, well trained locals with local knowledge to communicate to the broader horticultural community. The term we use these days is knowledge brokering, but it is primarily that conduit between the science and the actual production of food.

**Mr WOOD:** Can I just add one other thing to that? Love of the job.

**Mr WEST:** Passion.

**Mr WOOD:** You have to enjoy what you're doing.

**Mr WEST:** Most definitely. Horticulture is not a paying profession by any means. People that are in it are there for the passion because they see that they are making a valuable contribution to the community. That is an issue and it will be an issue in the future and is being addressed by the Nursery Industry with respect to their next generation program. It is a huge issue and is going to be a huge issue in the future to provide not only a qualified workforce, but a skilled work place for future people in the industry.

**Madam Acting CHAIR:** The Member for Sanderson had a question.

**Mr STYLES:** Tim, much has been said about the northern food bowl and Kate Peake raised it a little earlier. How does that fit in with what land appears or may be available in the Northern Territory; and also the land that is down near the expansion of the Ord River Project in relation to producing food that might feed the Top End?

**Mr WEST:** I think I have got your question...

**Mr STYLES:** Perhaps I can word it another way: how important is that Ord River extension, the further development of the Ord River Project and of course there is a big section that goes in to the Northern Territory.

**Mr WEST:** Yes, SH33. Extremely important, the development. There has been good investment recently with the West Australian Government and the Federal Government of around \$400m is available for that region for development.

I personally have some concerns, and I do not know whether the growing community has the same concerns, that the irrigation practices that have been put in place in the new system are from the old Ord system. They are archaic channel systems, open to huge evaporation rates. You would think that they would be using modern technology in this area. Irrigation systems that are being implemented and utilised in the MDB and other irrigation areas of the country including here – the Territory has always, primarily because of our soils, used enclosed irrigation systems. Some would say that we would probably be the best, the most efficient irrigators in the country, even though statistics for individual water use do not show that; we are the worst in the country. But our horticultural sector has always used a reasonably efficient system compared to our southern irrigation systems.

It is probably more in that that area is identified as a main food bowl and should be utilising world's best practice irrigation technology. I do not necessarily believe in that view or the term. It sort of encapsulates the Top End being one big farm, which is not the reality. It has been fairly well discussed that mosaic systems are the way to develop agriculture in the north and it has actually occurred in that manner, apart from small areas of Howard Springs and Humpty Doo. We tend to have a patch-work in the landscape which is good for the ecological functionality of the system and maintaining what is required for the farming system as well as for environment.

We have a lot of probably capable soils and capable resources on Indigenous land within the Territory that can be utilised for food production for those communities and for economic development between those communities. Also within pastoral properties, there are good land capability systems but because of the *Pastoral Act* there are some issues with being able to undertake food production on those lands. An example of that is an exemption or an area of land that has been sliced from a cattle station in Alice Springs that has grown table grapes successfully for many years.

Even with the threat of the market from Emerald, I think, dropping the prices, they have still been able to maintain a profitable table grape enterprise in that region. So there are some opportunities. It is a bit of an unknown as to where the best land capability sits and that is where the research and development is required.

**Mr STYLES:** But we need to look at it?

**Mr WEST:** Most definitely.

**Madam Acting CHAIR:** Member for Brennan.

**Mr CHANDLER:** Just a quick one. You identified earlier that there are some awareness and education issues with the people in the industry with non-English speaking backgrounds. Do you have any evidence of perhaps; bad practices, misuse or over-use of chemicals in certain areas of horticulture because of that?

**Mr WEST:** Definitely there are examples out there. We do have a fairly good training system in place with respect to that because it is legislated. The Smart Train system is one that is presently running. There is also the old ChemCert program. Programs are run by training providers for the NTHA, also Charles Darwin University Horticulture section run the ChemCert program. So the training is quite good. It is engaging those growers that are not members of the association or that are running their enterprises in isolation basically, and that is a challenge right across the board, not just for the chemical aspect, but for all land management aspects and probably business aspects as well.

**Madam Acting CHAIR:** One last quick question from anybody before we break after this one? Member for Nelson.

**Mr WOOD:** The Cattlemen's Association has got its act together because it used to be a different Cattleman's Association. Do you see a time when the horticultural industry can actually become a much more unified association than it is at the present time?

**Mr WEST:** It is already occurring. With the new CEO, quite a few pastoralists have been involved with our program and the implementation phase of the workshops that we are delivering, we are getting quite a few mixed farmers and pastoralists that are coming to those workshops. So where there use to be a definite wall, if you wish to term it that way, I think through this project and through Kate starting with the NTHA, there are better communication channels and we are identifying the synergies between the two.

**Mr WOOD:** And working with the Ag Association, too?

**Mr WEST:** Yes, definitely. I probably should point out that the three projects that I have now undertaken have all been in partnership with the NT Ag Association.

**Madam Acting CHAIR:** On behalf of the committee, I would like to thank Kate Peake and Tim West from the Horticultural Association of the NT for appearing before the committee today. Thank you very much. So, Members, if we just have a couple of minutes break while we change over.