

Report on the National Survey of the New Zealand Vermiculture Industry



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The New Zealand Vermiculture Industry

1. Background to Survey

During December 2006 and February/March 2007 the Extractive Industries Training Organisation national survey on the New Zealand Vermiculture industry was conducted. The purpose of the survey was to obtain data and information to facilitate future EXITO policy decision-making and enable accurate planning for the training needs of those people entering or involved in the New Zealand Vermiculture industry.

Vermiculture or worm farming as it is better known is a relatively small industry in New Zealand but is growing and becoming more specialised. Initially worm farming was thought of as a back yard or cottage industry and not as an industrial waste method for recycling large volumes of industrial waste. However worm farming has become a commercial industry. There are approximately 6 larger commercial vermiculture companies and many other small home operations. It is an exciting area of development within the resource recovery industry.

Professional associations have been crucial in the development of the vermiculture industry particularly the New Zealand Earthworm Association. There has been enormous support from people in the industry encouraging others to become involved and to learn. The Australian vermiculture industry has been established longer than in New Zealand and consequently a lot has been learned from them.

Most respondents were very interested in the purpose of the survey and there was a great willingness to be involved. Grateful thanks and appreciation to all those involved in the survey – as previously mentioned you will all receive a copy of the final report.

2. The Methodology

We have conducted the survey using two approaches:

1. Some respondents have completed a questionnaire – either a questionnaire for managers/owners or a questionnaire for operators.
2. We have also carried out one-on-one interviews with people working in their own businesses and with commercial vermiculture operators

This 2 pronged approach ensured we gained a more comprehensive and in-depth picture of the training needs for this industry.

We discovered a large proportion of people in the industry are owners as well as operators – that is they are running all aspects of their business and carrying out the physical tasks involved in worm farming.

The survey was conducted anonymously. Respondents were informed of the purpose of collecting the information and that the use and disclosure of the information would be limited to what was necessary to fulfil the survey purpose. We did not ask for peoples names – i.e. the survey responses cannot be used to

identify an individual because no personal information has been included that would enable identification of the survey respondent.

3. Survey Response Rate

The response rate from the questionnaires was outstanding in that a 100% rate of questionnaire return was achieved. However not all respondents completed a questionnaire. The questionnaires were more suited those running vermiculture businesses where staff were employed.

For those respondents who were running their own one-person business we tended to carry out an interview by phone or in person to gather their ideas and perspectives.

Responses from both the questionnaires and the interviews have been incorporated into the report.

All prospective respondents we approached were very willing to participate. This was an exceptional outcome for our surveying purposes.

4. Demographic Data - New Zealand Vermiculture Industry

A total of 22 respondents were surveyed in the regions Auckland, Waikato, Taranaki, Bay of Plenty, Canterbury, Otago and Southland in both commercial and small home operations. This number includes a high proportion of the larger commercial operations, some one-person commercial operators and a small number of home growers.

There are only 6 major commercial operations in New Zealand and approximately 40 to 50 growers who sell worms commercially in small home businesses.

Gender

Men made up 60 % and women 40 % of the respondents. There are a greater proportion of men working as operators and running the larger commercial businesses while women are found more running their own home businesses. One female respondent made the comment - *It is most definitely a good place for women to work – it's not a beautiful industry but it's a worthwhile industry.*

Ethnicity

The majority of respondents were NZ European/Pakeha, with one NZ Maori and one American respondent.

Age of Work Force

Almost all those surveyed were over 40 years old. However most of the operators working at commercial sites ranged from 28 – 35 years. There are a large number of experienced people in their 50s and 60s who are either running or working at commercial operations. These people have a desire to have their valuable knowledge passed on to younger people.

- *There is a need to pass on the skills and experience to younger people as there is a wealth of experience concentrated in people working in the industry who are in their 50s and 60s.*
- *We need to make sure we educate the younger people who are coming up behind us.*

Hours Worked

Most operators worked 60 hours per week; however a small proportion of operators worked a 40 hour week. Their managers on average worked 60 hours per week.

Number of Vermiculture Companies Worked In

Respondents had worked in either 1 or 2 vermiculture companies. As the industry is small this is to be expected.

Entering the Vermiculture Industry

People enter the vermiculture industry come from a great variety of occupations. Some people enter the industry because they are committed to reducing environmental impacts, for others it was the opportunity to use the skills they had been trained in and for others it was an opportunity to get a job.

- *I just fell into the industry*
- *No prior experience – told I needed to get off unemployment*
- *I am committed to reducing our environmental impact*
- *I was in vessel composting*
- *Yes had an education degree*
- *Yes previously worked at a transfer station*
- *Have an Ecology Degree – majored in soil science*
- *Came from dairy farming*
- *Teaching experience*
- *Was a shepherd and then worked at local abattoirs*
- *Teaching qualification*
- *Environmental work is a priority for me*
- *From a background in land development, cropping and machine operation*
- *Came from engineering and construction*
- *Wanted to do something for the environment*
- *I got into the industry from doing sustainable gardening practices*
- *Was a research and intensive care nurse – then did Permaculture training*
- *I came into worm farming from engineering*
- *A process worker at Tiwai for 26 years*

The combination of tasks which vermiculture workers take on is extremely varied. There is no one role which people in the industry are likely to take while working in vermiculture. What is evident is that people working in the industry are multi-skilled – it is rare to find someone working at only one aspect of worm farming – they need to know as much about the whole process as possible. This is partly because it is still a very small

industry so those working within it must gain a breadth of knowledge so they can understand and carry out all aspects of the work.

Time Spent in Industry

Respondents have spent anything from one to ten years in the industry with most people being involved between four to seven years. There is a very high commitment to the industry and the desire to progress and learn is strong.

Pay Rates and Conditions

Pay rates vary enormously. As we would expect those people running larger commercial operations are at the higher end of the pay scales – those involved in educational settings are paid in the mid range and operators are paid at the lower end of the scales.

A majority of respondents indicated that improving pay rates would help attract younger people into the industry. This is problematic as the industry is still very much at a developmental stage and set-up costs often prohibit paying higher wage rates.

Salary Range	
20,000 – 29,000	No-one in this range
30,000 – 39,999	Low range - approximately 50% of respondents in this range
40,000 – 49,999	Mid range - approximately a 40% of respondents in this range
50,000 – 59,999	
60,000 – 69,999	High range - approximately a 10% of respondents in this range
70,000 – 79,999	
80,000 – 89,000	
90,000 – 99,999	

5. Recruitment and Retention

Two issues were identified. Firstly it is almost impossible to recruit trained staff who are already familiar with the industry. Until the industry expands there will not be a pool of people who move within the industry.

Secondly there is a marketing issue. – Many people do not know such an industry exists. Again because the industry is small school leavers do not usually consider it as a viable career path. This is likely to change over time as the vermiculture education being done in schools will enable more school leavers to know something about the industry and may therefore consider it in their post-school plans.

Respondents report the importance of attracting people into the industry and suggest this is done by marketing the positive impacts of vermiculture on the environment. The scientific staff who are employed in commercial operations are mostly in their 50s and 60s as they have the necessary knowledge and experience. As one manager put it *if you are after no-how and skill you ask the old dogs.*

Other owners and managers commented that staff in their 30s, 40s, and 50s are very reliable, want to learn and are energetic. It is this age group they seek out when they are recruiting. They do take on young people but sometimes find they may come and go quickly.

Respondents consistently commented on the need to have quality induction processes to ensure new employees are supported in their role and are encouraged and motivated to stay in the industry.

There is an extremely strong commitment to working in this industry. Of those surveyed everyone except one person wanted to continue their career in the industry. Respondents report they are interested in having more involvement in how their careers progress as they mostly intend to stay in the industry.

For those employing staff, retaining them is not a problem. One larger commercial operation described their staff situation as *'very stable.'*

- *The main thing is to get staff with the right attitude – without this they won't work out – attitude is critical*
- *Staff retention – ours is very good – we pay them well – they have a variety of work – good working conditions and a good environment to work in*

6. Training

There is overwhelming support for training from the great majority of respondents. This is not surprising in an industry which is characterised by 'self-starters.' These people know first hand, the value of training. Many have set up their own vermiculture businesses and have relied on help and support from their industry counterparts.

- *I have had 100s of people over the years ring and email me to learn and find out more about this work – even the University of Illinois.*

This is an industry where the sharing of knowledge is ubiquitous. As the surveyor I was struck by the openness and willingness of respondents to reveal what in other industries may be considered commercially sensitive. People in this industry understand the importance of co-operative relationships to ensure the industry expands and grows.

Training Required for Vermiculture

There is a multitude of training respondents indicate is required by the vermiculture industry. They have identified the following areas for training:

Worm Husbandry

- *Moisture testing*
- *Aeration*
- *Carbon levels*
- *Types of worms*
- *Moisture control*

- *Using the liquid reticulation method*
- *Traditional wind row method – using drip lines or sprayers*
- *Critical is moisture control*
- *Environmental conditions which interfere – needs monitoring*
- *Worm castings*
- *Alleviating compaction*
- *Visual and smell tests- worms and feeding surfaces*
- *Worm biology*
- *Pests*
- *Worm husbandry*
- *Yield improvement*
- *Understanding the potential of worm casting and juice*

Recipe Management

- *Recipe management for things like the Tat G system*
- *‘Getting the right recipe is essential’ for example – the use of food and corrugated cardboard in producing a good recipe - bread now has so many preservatives in it that you can’t use that much in a recipe*
- *How to do a waste audit and then develop a recipe*
- *Putricibles – best types of food scraps to use – what not to use*
- *Critical is recipe management*
- *Worm food apart from food waste – understanding the correct quantities*

Factory Work

- *Operational issues*
- *Running a yard*
- *General safety*
- *Waste water*
- *Setting up sprinkler systems*
- *How to mix*
- *Managing stock*
- *Sheds and bunkers*
- *Rat baiting*
- *How to process product from abattoirs, dairy farms, domestic waste and bio-solids*

Systems

- *Assembling worm farms*
- *Running a worm farm*
- *Bed construction*
- *Setting up - Bedding, feeds, covers and harvesting*
- *Commercial production*
- *Mechanical sorting*
- *Organic waste management*
- *The positioning of worm farms for best production*
- *Operating screening plants*
- *Machine operation*
- *Worm farming systems – e.g. Tat G and Hot Rodder system*
- *How to run the mechanical systems so we understand how they best work*
- *Organic digesters*

Composting

- *Understanding the waste stream – would be able to employ people with a general understanding of composting*
- *Training in composting – what you can and cant do i.e. not using contaminated or hazardous waste. For example not letting cadmium in Bio-solids be used for food production*
- *Pre-composting – methods to dilute oil content*
- *Composting and worm farming – how they work together*
- *Vermicompost*

Specialist Skills

- *Business skills*
- *Marketing skills*
- *Uses of the materials produced in a farm*
- *End use purposes*
- *Agriculture or home gardens to increase the humus in soils and improve water and nutrient holding properties.*
- *Its use in preventing erosion*
- *Its use as a weed suppressor*
- *Audit process training so the operation is Euro/Jap approved for Kiwi horticulture – kiwi fruit production etc.*
- *Need skills related to managing people for those in supervisory and management positions*
- *Knowledge in Health and Safety*
- *Technical and mechanical engineering*
- *Biological knowledge*
- *There is a large gap in how to deal with bio-solids – there are not enough trained personnel in the country – but the idea could be sold to the agriculture industry*
- *More money and research is needed in the bio-solid field*
- *There is a lack of people with the scientific knowledge on soil science*
- *We desperately need people who understand soil science*
- *When working with farmers need a quality end product – training needs to reflect this*
- *Training for higher level work could be made up from a combination of horticulture and engineering education to enable people to gain higher level qualifications*
- *Our business has intertwined vermiculture operations with a specialist landfill – therefore training in this type of venture would be beneficial*
- *Reducing heavy metal content through the use of worms*

Literacy

- *Respondents of commercial operations report that for approximately 50 % of staff literacy is a problem*

Education

- *Biological education with farmers*
- *Running Worms in Schools programmes*
- *Education in schools*
- *Adult education with business and community groups*

- *Education is needed for growers or at potential sites where they want to be involved or are doing organic waste recycling – for example at Auckland zoo where they are using food waste*
- *Soil biology training is currently offered by only 1 person in NZ – we need more educators in this area*
- *Importance of being involved with education – it is a very important aspect of developing the industry*
- *We offer a range of community based waste minimisation programmes to businesses, schools and community groups – this needs to be expanded – therefore need more educators trained*
- *We are always looking for opportunities to extend programmes beyond schools and further into the community*
- *We need a course in commercial worm farming*

Importance of Providing Up-to-Date Training

Respondents report that all training developed must take into account the amount and rate of change occurring in the industry. New training modules will need to be designed and developed so new industry training needs are identified and developed at the time they are required. This will necessitate a very strong connection between the industry and EXITO so training keeps abreast of industry requirements and any forecast skill shortages.

- *This is definitely an industry that will grow a lot – for instance there are now businesses getting rid of their bio-solids using worms – vermiculture has so many beneficial uses.*
- *The end product is now becoming much more specialised. Waste from landfills and abattoirs is being processed for use in agriculture.*

Joint Venture Training

There is considerable support for the idea of co-operative ventures with Polytechnics and their Horticulture courses. Because this area involves high student numbers respondents see it is important to participate in providing some training in vermiculture to horticulture students so they understand this growing industry. The benefits of this would be to provide other pathways into the vermiculture industry as well as encouraging the uptake of vermiculture methods in the horticulture industry.

- *There is a big market to use vermiculture products in landscaping.*
- *Important to get polytechnics involved to get potential employees interested in Vermiculture.*

Career Paths for Operators

Respondents who employ operator staff report there is already a clear career path for operators in the industry.

Apprenticeships

The majority of respondents who employ operator staff favour an apprenticeship system for the industry.

- *To have an apprenticeship within the industry would be fantastic – there would be a recognised standard and a qualification - if there was a qualification I would do it*
- *Got my training from doing my own research, internet research, talking with people in the industry and got help from Australia with those who were more established in the industry.*
- *People involved in this industry make a point of sharing as much information as they can so that everyone in the industry benefits.*

Training Delivery

For operators the most common type of training undertaken in the vermiculture industry is on-the-job training where they learn alongside each other. Overwhelmingly respondents report that training for operators needs to be of a practical nature and provided on-the-job.

- *Needs to be hands-on and done side by side – guide them and give them the basics*
- *Train alongside them so they learn hands-on*
- *People need to learn in small groups out on the job*
- *The value of training employees is that they will obtain broader skill sets to develop and increase production – they need to have this training on-site run in conjunction with their operation*

The factors which are critical to the successful delivery of training are reported as follows:

- *That staff know beforehand what training they will receive and that we follow up after the training to see it has met our needs and the trainees*
- *That the employee really “wants” the development*
- *Staff need to understand the benefits of the training to them and to our production*

There is very strong support for training but the logistics of sending staff away to receive training is reported as *extremely difficult*. The preference is to run operator training at the trainee's work site.

- *Most sites are unique in their requirements - need to factor this into training so it is site specific*
- *Broader requirements will be needed*

Some respondents report that because distribution of product is problematic in a long thin country they do not want to encourage the shifting of product throughout

the country but instead encourage de-centralisation into small areas of distribution. This would be more cost effective and environmentally sound. This impacts on training as they report it too should also be done in a de-centralised way so that it provides for the particular needs of each specific operation.

- *It doesn't make sense to truck raw waste a long way to a processing centre – better to encourage local processing centres or encourage businesses to process their own waste – for example Verkerks butchery in Christchurch process their own waste.*
- *Commercial enterprises need help and support to learn how to process their own waste – they need vermiculture education and operational knowledge. They would need to understand the basics of biology, the worm, collecting waste, keeping it clean and how to use the product.*

For the commercial companies providing training 20% of the training is run by EXITO, 70% is non-EXITO training run by their own staff and 10% of the training is provided by external training consultants. It needs to be remembered that the smaller operations have taken responsibility for their own training. However as mentioned earlier they are very keen to have training offered for their industry through EXITO.

Some respondents have requested that the training systems are kept simple and easy to access and use.

- *Important not to let training become a self-seeding bureaucracy – keep it simple this is critical.*
- *Vermiculture is not rocket science and is about the age old breakdown of organic waste.*
- *Don't make the training difficult just to get a marketing edge.*
- *It is important to have simplified training systems*

Sourcing Trainers

All respondents concur that trainers will need to be sourced from within the industry as this is where the experience and knowledge lies. They are optimistic about the quality of trainers one would find within the industry and are confident such people would be able to successfully engage trainees and provide high quality learning experiences.

However they also report the usefulness of obtaining Australian trainers for specialist topics as they are a larger and more mature industry and have been an important learning resource for the New Zealand industry.

- *The industry has had excellent people from Australia who have run seminars are workshops here*
- *For training best idea is to get in international speakers in NZ to run seminars or get Vermiculture operators*

- *I think trainers would need to come from commercial worm farms*
- *The NZ Earthworm Association is a useful source of learning for commercial growers*

Professional Development

Those respondents who manage sizeable commercial operations report that they do receive support for their own professional development. However their long work hours are an impediment to receiving adequate professional development.

- *Our 7 day per week business operation and having a small team of staff means it is difficult to take time off to undertake ones own professional development.*
- *Difficulty of keeping the site operational during training and development*

When they do get to do professional development they report that it adds value and meets their own learning needs.

- *Whenever I have done professional development it does add value and it fits with where I want to go in my career.*
- *The company does provide training for me. There is a good match between what I perceive and what the company perceives are my needs. They encourage me to participate in professional development.*
- *It has always been useful*
- *I have sought out my own training over the years an am highly motivated to continue learning*

However there are reported gaps in professional development skills.

- *The main gaps for me in my professional development is computer skills development*
- *I need computer skills*

Industry Growth

The majority of respondents report that industry output is expected to grow substantially over the next 5 to 10 years.

- *Industry growth is very significant – our intention is to grow substantially over the next 5 – 10 years and we will need trained staff to make this happen.*
- *We have a burgeoning industry that will create jobs. The municipal scale of vermiculture in the USA is where I would look – it's where we are headed.*

- *The vermiculture industry has struggled but is ready to take off – but the jobs we will be doing in the industry in 5 years time are not there yet.*

Another respondent commented that - *Until farmers are ready to spend money on the product we don't have a large scale industry.*

Occupational forecasts for commercial operations were:

Occupation - machine operators - **Likely Growth** - medium

Occupation - managers - **Likely Growth** - medium

Occupation - site supervisors - **Likely Growth** - high

Occupation - technicians - **Likely Growth** - medium

The non-existent skill sets or occupations reported as needed were:

- Mechanical engineering
- Electrical engineering
- Hydraulic engineering
- Biological knowledge regarding product

Occupations Difficult to Fill

Generally the answers to this question were very consistent. The majority of respondents answered 'all areas.' Respondents employing staff said that technicians, professionals and management roles are difficult to fill.

In breaking this down most respondents indicated the jobs needing more skilled people were concentrated in four main areas. These were:

- Managers with good people skills
- Managers who have been hands on
- Managers who understand about stress and how it affects workers
- Management knowledge of how to run a business

Respondents also outlined competencies requiring greater skill levels. These included:

- Team leadership skills
- Financial skills for managers
- Health and safety
- Environmental skills

The main reason respondents gave for the difficulty in attracting skilled people is that the industry is relatively low paid and people are attracted to better positions. They did feel however that this is likely to change as the industry grows.

Environmental Management and Health and Safety Training

Environmental management and health and safety is a critical area for training in this industry. Respondents report the specific needs for training in Environmental Management are:

- Resource consent issues
- Knowledge of the waste industry
- Biological understanding
- Changes to environmental regulations

They report the specific needs for training in Health and Safety are:

- Hazards from composting
 - General work hazards
 - Safe operation of machinery, equipment and mechanical systems
-

7. Considerations for the Future

From comments throughout this survey and in discussion with respondents it is clear participants have a very strong commitment to training and know from their own experience that it is a crucial ingredient for the success of their businesses and for the growth of the industry as a whole.

Some questions are included here for EXITO's consideration, in anticipation that they will stimulate and direct the Board and industry personnel in their thinking, decision-making and future planning for the Vermiculture industry.

Entering the Industry

Issues:

Respondents are mostly attracted to this industry because of the nature of the work and its positive environmental impact. It is possible that these factors could be used more to increase interest in the industry and to market it more positively.

Questions:

1. What can be done to give prospective operators and managers more information about the industry?
2. What skills could be learned/Unit standards offered in high schools and polytechnics to support careers in the industry?

Pay and Hours of Work

Issue:

Some managers employing staff would like to be able to pay higher wages. While this does not appear to be having a significant impact currently, it may affect attractiveness of the industry as a career option in future.

Questions:

1. What can be done to make it easier for businesses to pay more highly?
2. If pay is higher how will this impact on business viability and hours of work?

Industry Career Opportunities

Issue:

Once people are in the industry they want to remain in it. For a relatively ‘young’ industry, average industry involvement is relatively high at 4 - 7 years. Career paths will be a critical future issue, yet having the opportunity to be involved in industry training at this stage is relatively problematic. Responses to the idea of apprenticeships was positive (and numbers are small), yet there are still many unanswered questions on how this might work.

Questions:

1. What can be done to more fully research and prioritise how to attract people into the industry?
2. Will apprenticeships assist with career opportunities? What would be the expected career path?
3. What support would be necessary for apprenticeship training – for the apprentice and the workplace?
4. Over what time period would an apprentice system be sustainable – for individual businesses and for the industry?

Views on Training

Issue:

The industry is growing and respondents have identified a comprehensive list of industry training needs to support that growth. They are very keen to have training formalised in their industry.

Personnel in the industry have a very strong interest in training and are committed to their on-going learning and development. Trainers will need to be drawn from industry experienced people as they have the most experience and knowledge and are more likely to be credible as trainers.

Questions:

1. What can be done to make good use of people’s enthusiasm for training?
2. How can accurate training needs be established?
3. What can be done to support Managers working more closely with Operators on identifying training needs?
4. What will it cost? Is that feasible?
5. How can businesses be supported to provide more training?
6. What factors need to be in place to enable (small) businesses to take advantage of training opportunities?
7. How could these factors be realised?

EXITOs Role

Issue:

This is an emerging industry and as such does not yet have a formal training structure in place. There is very strong interest from people in the industry in the role that EXITO might take in supporting the industry to establish training in vermiculture for those particularly at the operator level.

Questions:

1. What can EXITO do to improve its profile with this industry?
2. What can be done to manage future expectations?
3. What predictions does EXITO have for its own future in relation to this industry?
4. What can reasonably be delivered?
5. How can EXITO's business planning take these combined expectations into account?
6. How will these factors be communicated to the industry?

8. Distribution of Results

The results of the survey will be distributed to all EXITO staff and Board members. Each vermiculture manager/operator who was part of the survey has been promised a copy of the final report. There may also be other interest groups that might share a curiosity about the outcomes of the project.

9. Appendices
Appendix 1

Vermiculture Questionnaire for Managers, Professionals, Technicians

EXITO (The Extractive Industries Training Organisation) has developed this *confidential questionnaire* to gather information about the Vermiculture Industry. Your answers will help us understand how to provide the kind of training you think the industry needs to meet the demands placed on it in the future.

Thank you very much for taking part in this *confidential survey*. We really appreciate your help.

Part 1 - General Questions

1. Name of Company/Organisation: _____ 2. Job Title _____

3. Your Age: _____

4. Male Female

5. Ethnicity: (mark appropriate box)

NZ European/Pakeha	<input type="checkbox"/>	NZ Maori	<input type="checkbox"/>	Samoan	<input type="checkbox"/>
Cook Island Maori	<input type="checkbox"/>	Tongan	<input type="checkbox"/>	Niuean	<input type="checkbox"/>
Tokelauan	<input type="checkbox"/>	Fijian	<input type="checkbox"/>	Other Pacific Island	<input type="checkbox"/>
Indian	<input type="checkbox"/>	South East Asian	<input type="checkbox"/>	Other Asian	<input type="checkbox"/>
Chinese	<input type="checkbox"/>	American	<input type="checkbox"/>	Latin American/Hispanic	<input type="checkbox"/>
Other European	<input type="checkbox"/>	African	<input type="checkbox"/>	Middle Eastern	<input type="checkbox"/>

6. How many hours do you work per week? _____

7. What attracted you into the Vermiculture industry? _____

8a.) Did you have 'relevant' experience or qualifications before you began work in the industry? **Yes/No**

If yes – what? _____

8b.) Did you work in other industries before working in Vermiculture? **Yes/No**

If yes – what? _____

9a. How many Vermiculture companies/organisations have you worked in? _____

9b. What is the total time you have spent working in industry? _____

10. What is your current salary range?

\$20,000 - \$29,999	<input type="checkbox"/>	\$30,000 - \$39,999	<input type="checkbox"/>
\$40,000 - \$49,999	<input type="checkbox"/>	\$50,000 - \$59,999	<input type="checkbox"/>
\$60,000 - \$69,999	<input type="checkbox"/>	\$70,000 - \$79,999	<input type="checkbox"/>
\$80,000 - \$89,999	<input type="checkbox"/>	\$90,000 - \$99,999	<input type="checkbox"/>
\$100,000 or above	<input type="checkbox"/>		

Part 2 - Professional Development

1. Is there a match between your professional development needs and what the company/organisation perceives are your needs? **Yes/No**

If not please explain. _____

2a. How supported are you to participate in professional development?

▪ Encouraged?

▪ Not encouraged?

2b. What are the main impediments to getting professional development? _____

- 3a.) Are professional development goals set with you before you undertake it? **Yes/No**
3b.) Do the goals match what you actually want from professional development? **Yes/No**
- 4a.) Did the professional development add value? **Yes/No**
4b.) Did you elect to do it or did you do it because you were told to? Say which. _____
- 5.) Do you do enough professional development? **Yes/No**
- 6.) Does it fit with where you want to go in your career? **Yes/No**
7. What gaps are there in professional development areas – i.e. skills needed which are not being addressed? _____
-

Part 3 – Recruitment and Retention

- 1a.) What occupations within the industry are difficult to fill? Consider all levels i.e. operators, technicians, professionals, managers. _____
-
- 1b.) What is the reason for this? _____
-
2. What are your ideas for attracting people into the industry? _____
-
3. Is there an equal balance of men/women being recruited into the operator side of the industry? **Yes/No**
4. Should an apprenticeship system be organised for the industry? **Yes/No**
- 5a. Is there a clear career path for operators in the industry? **Yes/No**
5b. Should there be? **Yes/No**
6. How will the industry find good trainers? _____
-
7. Will industry trainers need a ‘Training the Trainers’ programme so they know how to engage training participants? **Yes/No**
8. Because sites are unique in their requirements how will this impact on training delivery? _____
-
9. Is staff retention a problem? **Yes/No**
If ‘YES’ what can be done to improve staff retention? _____
-
- 10a.) Is succession planning done adequately in your company/organisation? **Yes/No**
10b.) If not what needs to be put in place? _____
-

Part 4 - Training Issues for the Company

1. Where do you see the value of training employees? _____

2. Where does that value arise? (For example: increased productivity/taking initiative/
customer service etc?)

Please specify? _____

3. What are the barriers to adequate *provision* of professional development/technical training?

4. What factors are critical to the successful *delivery* of professional development/technical
training? _____

5. Should training be delivered in 1 or 2 day modules or in longer modules? **Yes/No**

6. What skills related to managing people, work relationships and leadership are needed for
those in supervisory and management positions? _____

7. Are staff keen to be trained **Yes/No**

8. Are you getting what you want from your staff being trained **Yes/No**
If not why not? _____

9. Of your total training what percentage is:

- EXITO training _____
- Non-EXITO company training run by your own staff _____
- Non-EXITO training run by outside training consultants _____

10. If outside trainers/consultants are used do they keep up to date with new company
standards? **Yes/No or Not applicable**

11. The importance of environmental management and health and safety is increasing. What is
needed for future training in these 2 areas? 11a.) Environmental Management _____

11b.) Health and Safety _____

12. For what % of staff is literacy a problem? _____

13. How is industry output expected to grow over the next five years? _____

14. What change in growth do you forecast over the next 5 to 10 years for existing professional occupations in the industry?

Occupation _____ Likely Growth _____
Occupation _____ Likely Growth _____
Occupation _____ Likely Growth _____
Occupation _____ Likely Growth _____

15. What non-existent skill sets or occupations will be needed? _____

16. What should be done to remedy any forecast skill shortages? _____

17. By 2012 what does EXITO industry training and skills development need to be doing?
Please comment. _____

Questions in Italics for Managers Only

1. If you are a manager did you work your way up to management from the 'coal face' or did you get management qualification/professional qualification and start work in the Vermiculture industry as a manager? _____

2. Total number of operators in your company/organisation? _____

3. Total number of supervisory positions in your organisation? _____

4. Total number of administration and support positions in your company/organisation? _____

5. Total number of management positions in your company/organisation?? _____

6. What is the average age of your operators? _____

7. What future changes may need to be made to the role of the ITO, its structure, capabilities and resources to support you - the industry stakeholders? _____

Thank you for participating in this survey

Vermiculture Questionnaire for Operators

EXITO (The Extractive Industries Training Organisation) has developed this *confidential questionnaire* to gather information about the Vermiculture industry. Your answers will help us understand how to provide the kind of training you think the industry needs to meet the demands placed on it now and in the future.

Thank you very much for taking part in this *confidential survey*. We really appreciate your help.

Part 1 - General Questions

1. Name of Company/Organisation: _____

2. Job Title _____

3. Your Age: _____

4. Male Female

5. Ethnicity: (mark appropriate box

NZ European/Pakeha	<input type="checkbox"/>	NZ Maori	<input type="checkbox"/>	Samoaan	<input type="checkbox"/>
Cook Island Maori	<input type="checkbox"/>	Tongan	<input type="checkbox"/>	Niuean	<input type="checkbox"/>
Tokelauan	<input type="checkbox"/>	Fijian	<input type="checkbox"/>	Other Pacific Island	<input type="checkbox"/>
Indian	<input type="checkbox"/>	South East Asian	<input type="checkbox"/>	Other Asian	<input type="checkbox"/>
Chinese	<input type="checkbox"/>	American	<input type="checkbox"/>	Latin American/Hispanic	<input type="checkbox"/>
Other European	<input type="checkbox"/>	African	<input type="checkbox"/>	Middle Eastern	<input type="checkbox"/>
African	<input type="checkbox"/>	Middle Eastern	<input type="checkbox"/>		

6. How many hours do you work per week? _____

7a. What attracted you into the Vermiculture industry? _____

7b. Did you have relevant experience or qualifications before you started working in Vermiculture? **Yes/No**

If yes – what? _____

7c. Did you work in other industries before working in Vermiculture? **Yes/No**

If yes – what? _____

8. How many Vermiculture organisations have you worked in? _____

9. What is the total time you have spent working in Vermiculture? _____

10. Have you been encouraged to take on supervisor roles? **Yes/No**

If yes – what? _____

11. Wages - what are your wages in your current job? Tick box

\$20,000 to \$29,999 \$30,000 to \$39,999

\$40,000 to \$49,999 \$50,000 to \$59,999

12. Do you want to continue a career in this industry? **Yes/No**

Part 2 - Training Questions

1. What do you think is the reason your company/organisation provides training? Tick box

- Safety
- Upskilling
- Staff retention
- Other

Please comment if you ticked Other _____

2a. Are you attracted to doing training? Tick box

- Interested in training
- Required to
- Encouraged to
- Other

Please comment if you ticked Other _____

2b. What would you expect to get out of training? Tick box

- Safer workplace
- Job security
- Promotion
- Other

Please comment if you ticked Other _____

4. Are there any skills needed which you are not being trained for? **Yes/No**
If yes, what are they? _____

5a. Do you understand the National Qualifications Framework? **Yes / No**

5b. Do you know how to register for training? **Yes / No**

5c. Are you consulted about your training needs? **Yes / No**

5d. Is there a match between your training needs and what the company perceives are your training needs? **Yes / No**

5e. If no, please comment _____

6. If training is suggested how is it sold to you? _____

7a. Are training goals set with you before you do training? **Yes/No**

7b. If no, how does this affect the training you do? _____

7c. If yes, do the training goals match what you actually get from the training? **Yes/No**

7d. Do you do enough training? **Yes/No**

7e. Is it relevant? **Yes/No**

7f. Does it fit with where you want to go in your career? **Yes/No**

8. How should training be organised to best fit in with your work? Tick box

- During work hours
- Evenings
- Weekends

Part 3 - Training Delivery Questions

1a. What type of training delivery works best for you? Tick box

- Self-paced (learning from a training booklet at your own pace)

- Presentations
- On-site practice
- Videos

1b. In your training is there the right mix between practice and theory? **Yes/No**
If no, please comment. _____

2. Think about the trainer. What factors are important in a trainer? Tick box

- Knowledgeable
 - Experienced
 - Qualified
 - Supportive
 - Allows time
 - Is accessible
 - Other _____
-

3. What are your ideas for improving the way training is delivered? _____

4. When new equipment is purchased and commissioned, when are you trained on it? Tick box

- Before it is delivered?
- After it is delivered?
- When it starts causing problems or faulting?
- Not applicable

If not applicable, please comment _____

5. After you complete training, what length of time is there between getting the training and using the new skill? Tick box

- 1-5 days
- A week
- A fortnight
- A month
- More than a month
- Other

If you ticked Other, please describe the time frame _____

6a. Have you experienced distance learning? (I.e. learning by correspondence/internet) **Yes/No**

6b. If Yes, was it a useful way to learn? **Yes/No**

6c. If Yes, please give the reasons you found it useful _____

Thank you for participating in this survey