

Table 4: Growing Media Manufacturer's Sample Composition

	TOTAL
Base: All Respondents	20
	%
Gender:	
Male	85
Female	15
Age:	
Less than 18 years of age	5
30-39 years of age	20
40-49 years of age	45
50-59 years of age	20
60 years of age or over	10
State:	
NSW	25
VIC	25
QLD	20
SA	15
WA	10
TAS	5

In terms of the composition of their business (see Tables 5 and 6), the majority of Nursery Proprietors perceived themselves as small enterprises (61%), with 42% comprising 3 or less employees. Commonly, between 10 and 100 lines of plants were produced (40%) predominantly for the ornamentals market (77%). In the growing media industry, 65% of respondents comprised businesses with more than 7 employees and perceived size of their business was quite equally split across small, medium and large. Proportion of media sales was greatest for bagged media, equating to an average of 57% of media sales.

Table 5: Enterprise Composition - Nursery

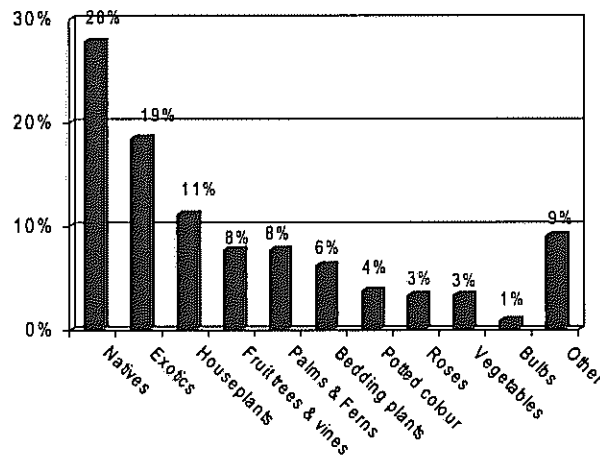
	TOTAL
Base: All Respondents	205
	%
No. of Employees:	
1 to 3	42
4 to 7	33
More than 7	24
Perceived Size:	
Small	61
Medium	33
Large	6
No. of lines of plants:	
Less than 10	20
10 to 100	40
101 to 500	29
More than 500	11
Don't know	1
Market:	
Ornamental	77
Commercial	23

Table 6: Enterprise Composition – Media

	TOTAL
Base: All Respondents	20
	%
No. of Employees:	
1 to 3	10
4 to 7	25
More than 7	65
Perceived Size:	
Small	30
Medium	35
Large	35
Media Sales:	
Bagged Media – average proportion of sales	57
Bulk Media – average proportion of sales	29

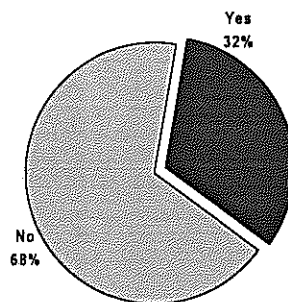
Respondents from nurseries were asked to indicate their main enterprise. One in five reported 'Native trees and shrubs', followed by 'Exotic trees and shrubs' and then 'House plants'. The results are shown in Figure 1.

Figure 1: Main Enterprise



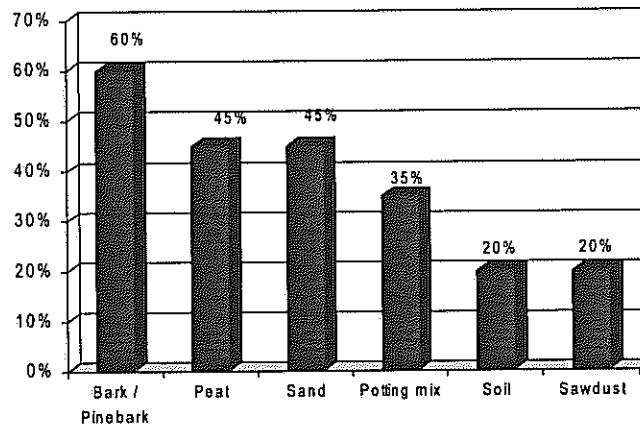
One in three nursery proprietors reported they produce their own growing media.

Figure 2: Production of Own Growing Media



In the growing media market, 'Bark / pinebark' were the most frequently reported type of growing media manufactured by respondents (60%). Peat, sand and potting mix were also frequently mentioned. The main results are shown in Figure 3.

Figure 3: Growing Media Manufactured



4.3 NIAA ACCREDITATION

The majority of nursery proprietors (83%) and growing media manufacturers (95%) had heard of the NIAA and of these, 12% of nursery proprietors were accredited with the NIAA and 42% of growing media manufacturers were accredited. Nurseries with more than 7 employees were significantly more likely to report being accredited (26%) than those with 4 to 7 (9%) or 1 to 3 employees (5%).

Figure 4: NIAA Awareness and NIAA Accreditation - Nursery

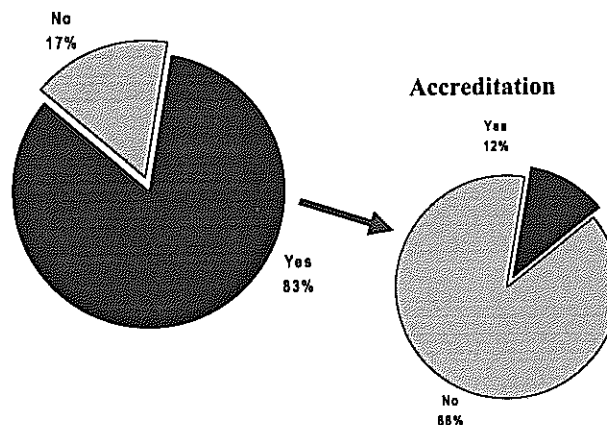
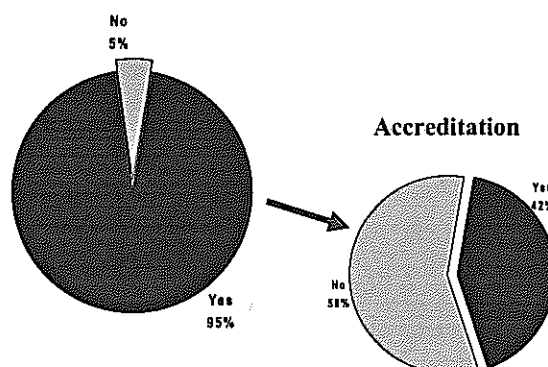


Figure 5: NIAA Awareness and NIAA Accreditation – Media



All respondents were asked why they were accredited or were not accredited. Of those nurseries that were (n=20), the primary reason was related to the perception that it was 'Good for business'. The reasons have been listed below.

Reasons why nurseries are accredited

- Good for business 55%
- Hygiene 15%
- Expert advice 10%
- Other 20%
- Don't know 10%
- Inappropriate response 5%

The main reasons growing media manufacturers reported being accredited (n=8) were related to 'Quality / standards' (38%), 'Hygiene' (25%) and 'Clients requiring accreditation' (25%).

There were 151 nursery proprietors who indicated they were not accredited and 11 growing media manufacturers. This was for a variety of reasons, but among nurseries was most commonly related to them seeing little point in being accredited. Among growing media manufacturers, the most frequently mentioned response indicated they were intending to gain accreditation (46%). Comments such as "they don't have anything to offer us" and "no need to be" were commonly mentioned among nursery proprietors.

Reasons for nurseries not being accredited

- No point / not concerned 26%
- Cost 19%
- Haven't got around to it 16%
- Don't / can't meet standards 14%
- Too small / new 9%

➤ Couldn't be bothered	5%
➤ Lack of information	5%
➤ Not a member	3%
➤ Accredited elsewhere	2%
➤ Exceed standards	1%
➤ Other	5%
➤ Don't know	3%
➤ Inappropriate response	5%

Reasons for growing media manufacturers not being accredited (n=11)

➤ Attempted / Intending to	46%
➤ No point	27%
➤ Other – single mentions	27%
➤ No customer demand	18%

The profile of NIAA accredited nursery proprietors members are shown below. Most commonly members were male, aged 40 to 49 years with businesses in NSW, employing 1 to 3 employees and therefore classify themselves as small enterprises, carrying 10 to 100 lines in the ornamentals market.

Figure 6: NIAA Accredited Member Profile by Age, State, Gender - Nursery

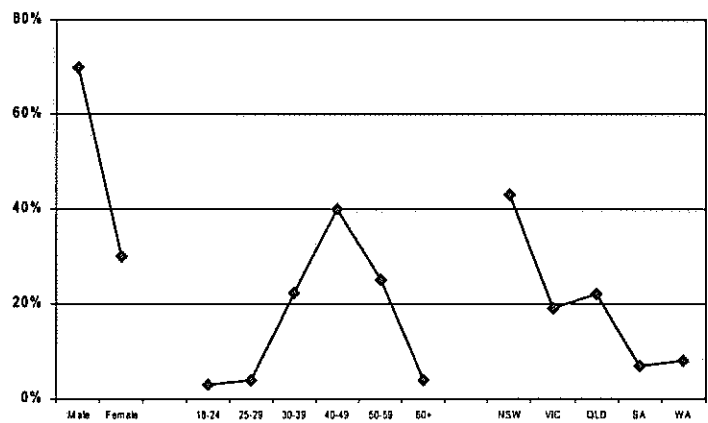
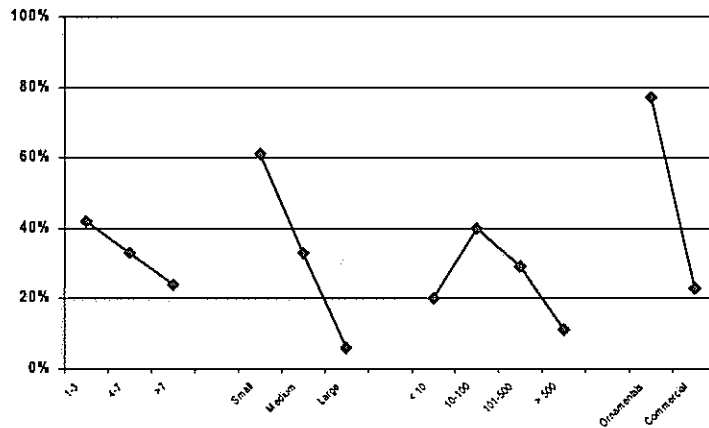
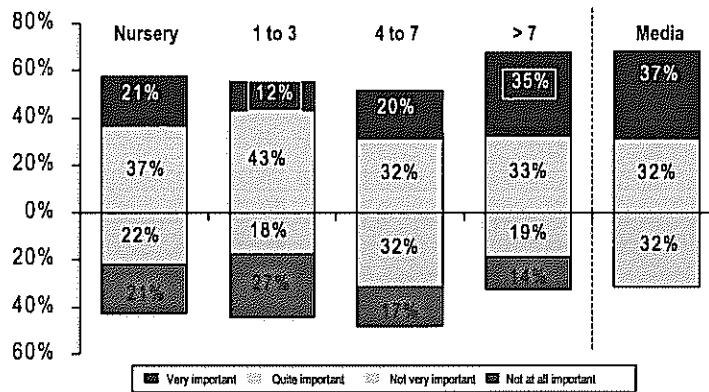


Figure 7: NIAA Accredited Member Profile by No. of Employees, Size, Lines, Market - Nursery



Respondents who were aware of the NIAA were asked how they would rate the importance of accreditation. Fifty eight percent of nursery proprietors and 69% of growing media manufacturers felt accreditation was either 'Quite important' or 'Very important'. Nursery enterprises with more than 7 employees were significantly more likely to rate accreditation with higher importance than those with 1 to 3 employees. See Figure 8 below.

Figure 8: Importance of Accreditation



Respondents were then asked to explain why they felt it was or was not important to be accredited. The main reasons for supporting accreditation were related to quality and therefore being good for the business overall. Reasons why it was not seen as important reiterate why respondents from nurseries were not accredited. These have been listed for the reader below.

Why it is important to be accredited – Nursery (n=98)

- Quality standards – generally 36%
- Production quality / helps business / marketing 21%
- Credibility / consumer confidence 14%
- Disease control / hygiene 11%
- Benefits the industry 6%

➤ Provide long term direction	4%
➤ Advice / information	4%
➤ No need / not essential	4%
➤ Inappropriate response	3%
➤ Other	6%
➤ Don't know	2%

Why it is important to be accredited – Media (n=13)

➤ Quality standards	31%
➤ Hygiene	31%
➤ Respectability	15%
➤ Clients require accreditation	15%
➤ Other – single mentions	31%

Why it is not important to be accredited - Nursery (n=73)

➤ No need / not essential	38%
➤ Customer doesn't care if we're accredited	21%
➤ Not worth it / can't see benefit	21%
➤ NIAA don't maintain standards	10%
➤ Inappropriate response	7%
➤ Disease control	1%
➤ Other	11%
➤ Don't know	3%

Why it is not important to be accredited - media (n=6)

➤ No customer demand	33%
➤ Good nurseries already meet standards	33%
➤ Quality / standards*	17%
➤ Already Australian standards accredited	17%
➤ Other – single mentions	17%

* This response mentioned that accreditation is good for quality / standards and then went on to mention that good nurseries already meet these standards.

NOTE: Sections 4.4 to 4.9 are not available for viewing until 8 February 2002.

5. Conclusions & Recommendations

5.1 CONCLUSIONS

Overall, the outcomes of the research indicate that Phytophthora is considered an important disease to the nursery industry, with serious implications. However, respondents did not feel their enterprises were susceptible to the disease.

Whilst most felt Phytophthora to be a serious disease, more than three quarters of nursery proprietors and all of the growing media manufacturers felt their businesses were not susceptible. Nursery proprietors do acknowledge the perceived severity of Phytophthora. It was the most frequently mentioned disease considered important to respondents.

This low perception of susceptibility may be attributed to the fact that the majority of nurseries implement some level of management strategies to reduce the risk of infestation from Phytophthora which they believe adequately reduces the risk of infestation, or to the belief within the nursery industry that they simply don't have a Phytophthora problem.

It is apparent as a result of this research that proprietors have limited knowledge about diagnostic testing for disease. Of those that have tested for Phytophthora, most don't know what techniques are used by their diagnostic service provider. Although one could speculate that this does not concern them as their satisfaction with these service providers is extremely high.

On collection techniques, findings from the qualitative research indicated that respondents felt this would be driven by the requirements of the diagnostic service provider and simplistically suggested soil samples. Therefore information on quantity, location or frequency of the sample taken was not provided. For this reason, the question was not explored further in the quantitative research.

Most information on Phytophthora is sourced from departments of agriculture, books, Internet, magazines and the DPI. But what this research did not measure is the frequency of seeking information about Phytophthora nor what drives the search for this information. It is also not known how useful growers and producers find these sources of information.

Growers and producers rely on some support from the departments of agriculture and providers of diagnostic services in relation to disease diagnosis and management. However, many feel they really don't need any support. This is probably due to the high level of satisfaction expressed by respondents with their current diagnostic service providers.

Despite the barriers identified above, the need for a predictive diagnostic service for Phytophthora was reported. The research demonstrates clear segments for targeting the marketing of the test.

5.2 RECOMMENDATIONS

On the basis of the information obtained in this market research, we make the following recommendations for your consideration only.

1. Heighten the perceived susceptibility of growers and producers in the nursery industry to Phytophthora infestation.
 - Personalise the risk of infestation from Phytophthora to increase perceived susceptibility and relevance;
2. Provide support by defining what action can be taken to treat Phytophthora and clarify the positive effects to be expected from diagnosis;
3. Segment the market – a blanket targeting approach is unlikely to be successful in the early stages of adoption;
4. Conduct education and awareness activities with consistent focus including trial information;
5. Further research conducted with this industry should consider payment of incentives to improve response to the research and should be mindful of seasons which are likely to be most demanding of respondent's time (e.g., Spring).

5.3 TECHNOLOGY TRANSFER

Involvement of end users in the market research has increased awareness of the DNA diagnostic technology and potentially influences the likelihood of adoption of the test when it becomes available. In addition, the assistance of Nursery Development Officers in each state has also raised awareness of the development of the new rapid soil diagnostic test for Phytophthora.

Given the nature of the information collected will be utilised for a commercial venture, a 12 month confidentiality period has been agreed to with the HRDC before publication of this report. This report upon publication will be a means of transferring technology and publicising the outcomes. At this point in time an article will be developed for publication in the NIAA 'Nursery Papers'.

Endorsement of this market research from the NIAA will assist with adoption of the diagnostic services among NIAA members.

The outcomes of the research will be utilised for the commercialisation of diagnostics for nursery industry diseases and technology transfer of the test itself will be carried out by C-Qentec Diagnostics.

Appendices

APPENDIX A: RESEARCH INSTRUMENTS

QUALITATIVE INSTRUMENT

**POTENTIAL USE OF NURSERY DIAGNOSTICS
FOCUS GROUPS WITH AUSTRALIAN NURSERY PROPRIETORS**

MODERATOR'S GUIDE 27 JULY, 2000

INTRODUCTION:

Thanks for coming this morning / evening. My name is (...). I represent Decisions Research, which is a specialist market research company based in Sydney focusing on the agricultural industry.

I really appreciate your time in coming here today. The purpose of the discussion is to talk about a range of issues related to pests and diseases in the nursery industry and the session will take approximately 1½ hours. The research is supported by a new diagnostic company – C-Qentec Diagnostics and the HRDC with the support of the NIAA.

First, we will begin by having a bite to eat and then we'll commence the actual discussion in about 15-20 minutes. Please feel free to continue eating or drinking during our discussion.

***** Break for meal *****

ROLES:

Before we begin, I'd like to point out my role here today, which is simply to get the discussion started and keep it moving along, without moving too far away from our primary issue. As you know we are undertaking this research on behalf of a new agricultural research and development company called C-Qentec Diagnostics.

RECORDING:

You might have noticed that we have a tape recorder here and we will be recording our discussion here today. This is 'standard procedure' and its only so that we can have an accurate record of what has been said. While you have name tags, we are not concerned with who actually says what - only with what is said. If you do have any problems with the recording of the discussion, please feel free to leave.

GENERAL 'RULES':

In these discussions there are no right or wrong answers. I'm interested in everyone's opinion and you should feel totally free to say what you feel about the issues we will discuss. Don't be afraid to have your say. We do try to keep the discussion limited to one person speaking at a time! It is quite OK to have a different opinion to someone else. At times, I may ask someone specifically for their input, but if you have nothing to say or add at that point just say so.

That's about it for the general information and 'rules', so if there are no questions, lets make a start.

WARM UP:

Before we begin lets quickly go round the room and introduce ourselves – please tell each other your first name and briefly a little about your business.

DISEASE PREVALENCE:

What diseases do you have to contend with in the nursery industry?

Which diseases are the most serious or most important?

Why are they considered to be the most important?

Which disease(s) do you see becoming more important in the years to come?

Why?

DISEASE DIAGNOSIS:

How do you identify if you have these diseases in your nursery? (Probe for each disease mentioned if necessary)

Prompts:

- Self diagnosis
- Experience

How frequently do you check for disease? How does this differ by disease?

Who do you use to confirm a problem?

How does this work? / What does this involve?

How much does it cost you to confirm a problem?

And how long does the process take?

How valuable are these resources?

What is your overall attitude towards these experiences to date?

Prompt:

- Negative – find out why
- Positive – find out why

IF PHYTOPHTHORA NOT YET ADDRESSED – INTRODUCE THIS DISEASE

REPEAT AS ABOVE.

How necessary is it to test for phytophthora?

Prompt

- Why
- Why not

Is it more important in particular regions of Australia?

DISEASE MANAGEMENT:

Once the problem has been diagnosed, what do you do? / How do you manage diseases?

What problems do you face?

Who currently helps you with this process? / Who do you go to for advice?

What resources do you require to assist you with disease management?

C-QENTEC 'PHYTOPHTHORA PROBE':

C-Qentec Diagnostics in conjunction with the CRCTPP, (Co-operative Research Centre for Tropical Plant Protection) SARDI (South Australian Research and Development Institute) and CSIRO have developed a new diagnostic test for Phytophthora. It involves the use of laboratory designed probes to identify the presence of Phytophthora DNA in soil samples, based on DNA extraction techniques. It is a unique and accurate test that will enable more informed management decisions.

A similar test is used by cereal farmers. Show card with flow chart as below:

*Soil sample > DNA extracted > DNA probes used to detect pathogen
DNA >
Fluorescent signal measured > Results to grower*