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Post graduate education for the kiwifruit industry
in the Bay of Plenty

Post Graduate Education for the Kiwifruit Industry in the Bay of Plenty

A project report for the Primary
Industry Council/Kellogg Rural
Leadership Programme

Jenny Natusch 2002



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SUMMARY

This report covers two surveys that were conducted to determine how postgraduate education can be delivered in the Bay of Plenty, to best meet the kiwifruit industries needs. CEO's and chairmen of seven postharvest facilities covering 65% of the national kiwifruit crop and 50% of the avocado crop were interviewed. They were very positive about initiatives to get MBA type programmes delivered in the Bay of Plenty. There is a clear preference for developing business and leadership skills, and to a lesser extent horticultural skills. Science based graduates working in the industry are more interested too in developing their business skills, with only a minority who would consider taking further papers developed especially for the kiwifruit industry. However short courses in specific kiwifruit topics would be considered by the majority of graduate employees. To enhance uptake of any courses, they need to be designed to take account of the seasonal demands on the time of industry participants.

INTRODUCTION

Most kiwifruit industry leaders have grown with the industry over the last 30 years and have developed a wide range of skills over that time. However there is concern, with a far more complex industry both onshore and offshore, about how the industry can accelerate the development of new leaders.

There has been a reduction in packhouse numbers of 70% over the last 10 years and coolstores have decreased by 44%, while trays of kiwifruit submitted has changed little (1,2). This aggregation of the service sector has allowed the development of specialized roles within the post harvest sector. However these people often do not have the breadth of experience and skills that in the past was easier to develop. Alongside this is an awareness, too, of the rapid advance of technological knowledge, as well as increasing breadth of business skills needed to operate in the international food industry today.

A working group has been set up by Zespri to progress the development of training at the postgraduate level with delivery of the courses to be in the Bay of Plenty. Representatives from Priority One, Lincoln and Massey Universities, Zespri, Bay of Plenty Polytechnic and the avocado and kiwifruit industries have met to identify ways of meeting the needs of the horticulture industry. This group has identified three main areas of interest: horticulture, business and leadership skills. The desire was to deliver all these subjects at a postgraduate level. The kiwifruit / horticulture subjects could become part of a postgraduate certificate, diploma or a Masters in Applied Science. Alternatively the horticulture subjects might become part of a Lincoln Master of Professional Studies or a Massey MBA, particularly if there was the measure of business focus required for the MBA.

This report covers two surveys. These surveys seek to find how we can best deliver continuing higher level learning for our industry.

The first survey was conducted to determine the attitudes of employers to the development of postgraduate education for the horticulture industry in the Bay of Plenty. This covered two

groups, Zespri International Ltd and the post harvest sector of the kiwifruit and avocado industries located in the Bay of Plenty.

The main objectives of the survey of employers were to

- 1 assess the interest of employers for a master's degree in horticulture, business and leadership, and to prioritise these three components.
- 2 indicate particular topics of study that they wanted within these components.
- 3 assess their willingness to support potential candidates.
- 4 assess the likelihood of them employing graduates.

The results of the survey showed enormous enthusiasm for the concept and verified the perceived need, with a clear preference for business and leadership skills to be developed ahead of horticulture. However, while the CEO or chairman of a post harvest company may be very positive, and in nearly all cases able to identify staff that they thought would be potential candidates for further training, what did these graduates think themselves?

The main objectives of the survey of graduate employees were to

- 1 assess which subjects would interest them; business, horticulture or leadership.
- 2 determine if graduates working in the kiwifruit industry are interested in further postgraduate study, and which type of course they prefer.

An independent horticultural consultant who was interviewed said that 'the rate of uptake in the kiwifruit industry of information and change is phenomenal.' With the continuing need to meet changing consumer demands, we need to enhance the learning process at all levels in the industry and not rest on our laurels.

EMPLOYER SURVEY

Method phone interviews for postharvest sector
 personally administered questionnaire for ZIL

Sample 7 CEO's or chairmen of postharvest companies
They represent about 65% of the national kiwifruit crop, and about 50% of the national avocado crop. All these companies currently employ graduates who operate from the head offices which are in the Bay of Plenty.

 3 senior executives of Zespri International Ltd.

Survey Results

The following scenario was outlined to all the interviewees and their initial reaction was assessed. This proposal was used as a basis for the interview to examine their opinions and priorities.

I will outline a proposal for a masters degree. I would like you then to answer seven questions that relate to this. The proposal is

- that a postgraduate masters level degree is being developed.
- it would be a mixture of business, horticulture and leadership papers.
- it would be run by Massey and/or Lincoln universities.
- it would be based on a Massey MBA Executive programme or a Lincoln Masters of Professional Studies.
- that it would take 2 years part-time while working in the industry at an appropriate executive level.
- it would be located at the BOP Polytech.
- for a start in 2003.

Question 1 What is your initial reaction to the proposal?

All seven postharvest respondents were very positive. Comments included

“Our industry needs to take responsibility for its future requirements.”

“The concept is marvellous”

“There is a perception out there of a lack of professionalism in our industry. This indicates a coming of age.”

Zespri executives too were positive.

Question 2 What are your needs - business horticulture and/or leadership?

All the employers said that they would like to see a mix of subjects covering all three areas. There was, however, a clear preference for business and leadership skills being developed ahead of horticulture. Zespri indicated that it was more likely to have non-science graduates that would be encouraged to do further education, while mostly science-based graduates, usually horticulture, would come from the postharvest sector. Indeed the postharvest group said that the ideal candidate would probably have a degree in horticulture and have worked / be working in the kiwifruit industry.

Question3 What subjects do you want in the business and leadership component of the course?

All put the main priority as the development of strong business management skills. However Zespri emphasised that they would like to see graduates of this course with thinking and analytical skills, as well as systems design rather than process work skills.

There was a definite preference for an onshore focus, but with some offshore / international subjects. Other subjects mentioned were

strategic management,
project management,
human resource management,

organisational behaviour.

Business law expertise was specifically emphasised as a growing need by two post harvest CEO's.

Logistics and supply chain management were mentioned by all respondents, either as a business or horticulture subject. It was clearly a high priority for both groups.

Question 4 What subjects do you want in the horticulture area?

Most assumed that the master's student would have a horticulture degree, and therefore there would be a "good grasp of horticulture knowledge" as a foundation, although the course should not be limited to horticulture graduates. There should be no need to cover on-orchard issues or plant physiology, on the basis that this would be available elsewhere in the industry. Zespri Innovation and private consultants were mentioned as covering these areas with a breadth and depth of experience that was readily available, if this was not available in the company. On this basis, the topics that were preferred are (in no particular order)

postharvest physiology

supply chain and logistics

quality assurance

environmental management

health and food safety

However both Zespri and the postharvest indicated that there would be commerce or other graduates who would be interested in this course. For them it would be desirable to have access to some horticulture subjects, so that they could more quickly pick up an understanding of topics such as orchard gate return, plant physiology and orchard husbandry. The difficulty is that these courses would not be at a postgraduate level, and therefore could not be credited to a degree such as this. This could be covered by short courses delivered in the Bay of Plenty designed for the purpose by the industry.

Question 5 Assuming a cost of about \$10,000 p.a., would your organisation be likely to do any of the following?

- employ a masters graduate
- employ a masters student for the two years
- employ a masters student for the two years and give them some fee rebates.

All but one of the respondents said yes to all three without hesitation. One postharvest company indicated that it would be keen to employ a masters graduate rather than a masters student. He also did not identify any current staff member as a potential candidate. There was a feeling expressed by most that the cost is an investment in the future.

Question 6 How many of these masters candidates on average would you employ / support in a five year period on an on-going basis?

Together they would employ and / or put through between 10 to 12 students every five years. Zespri and six of the postharvest could identify potential candidates from within their businesses, but they did not know whether there would be the corresponding level of commitment and enthusiasm from these people to see it through. Most of the potential students have a science background in horticulture or agriculture and all are working in the industry now. Only one company suggested that they would bring in people with a view to them doing this course as a means of better meeting their needs.

One of the post-harvest CEO's said that "if a person walked through the door right now with that sort of qualification, I'd employ them. In fact I'd take two." This comment was echoed by several others.

Question 7 Do you have any other comments?

Most of the respondents reiterated their enthusiasm for the project. However, one employer asked if there were enough graduates in the industry to feed into a masters degree, particularly in an on-going basis. He also was the only employer to talk of bringing in new graduates and feeding them into a course like this if he could get them.

GRADUATE EMPLOYEE SURVEY

Method 4 phone interviews and 8 personally administered questionnaires

Survey Results

Question 1 **What is your age?**

35 - 39 years	5
40 - 44 years	2
45 - 49 years	5

The average age was 42 years. It was definitely harder to find science based graduates working in the kiwifruit sector under the age of 40 rather than over 40.

Question 2 **What is your graduate degree?**

horticulture	8, including 2 with Honours
agriculture	2
commerce	1
science	1

Science graduates were not included if they were already enrolled in masters degrees in the science field, as it is hard to incorporate the significant business skills component that the postharvest is looking for. One horticulture graduate, who has enrolled in M Prof Stud, was included to determine his interest in science topics. He has a business focus.

Question 3 **What is your current employment?**

grower	5
consultant or orchard operations manager	5
postharvest supply manager	2

Question 4 **What is your length of involvement in the horticulture industry?**

The average is 16 years, varying from 6 to 23 years.

Question 5 **Have you completed any postgraduate study?**

Six had taken papers, all extramurally, after completing their degree. Four had completed one or two undergraduate papers, and three of these people had chosen business topics. One had studied papers in social sciences out of personal interest. Two others had completed postgraduate diplomas, one in Public Policy, and one in Business and Administration. In other words none had taken any horticulture papers after finishing their degree.

Question 6 **Are you currently enrolled or planning to enrol in postgraduate studies?**

One is enrolled in a Lincoln Masters of Professional Studies.

One is enrolled in a Masters in Social Science.

One is planning to enrol in a Massey MBA or a Lincoln Masters of Professional Studies next year, and another is thinking about doing so in two years time.

Question 7 **What sort of topics would interest you if you were to do more study in the future? None, Horticulture, Business and Leadership or any other. Please elaborate.**

None Everyone indicated that they might consider further study in the future.

Horticulture Four showed a clear preference for these topics; three of whom clearly indicated that they would look for topics that involved on-orchard issues, and not consider business topics at all. The other graduate preferred only to study the broad field of biodynamics, but would prioritise business studies ahead of that at present.

Business and Leadership Eight of the respondents would choose topics in this area, choosing generally two or three subjects. The list of topics was longer for the two who were enrolled or enrolling in the MBA or equivalent, and perhaps reflected their thought and commitment. None of the graduates would choose to do further study in both horticultural science and business and leadership topics.

Other Two wished to study in the social science field, and one will study coastal navigation.

Question 8 Would you be interested in some postgraduate horticulture papers with a strong kiwifruit component, if they were delivered in the Bay of Plenty and would credit towards a postgraduate certificate, diploma or masters?

Delivering the postgraduate horticulture papers in the BOP, making sure there is a strong component of kiwifruit knowledge and crediting towards further qualifications did not change the mind of any of the those who would prefer to study other topics.

Of the three who might study horticulture, two indicated that they had “no ambition to get certificates but I like to learn”. For these three, delivering in the BOP would encourage enrolment, but the course content was the main determinant of whether they would enrol or not.

Question 9 Would you be interested in short courses of lesser workload and time involvement at a postgraduate level in horticulture?

The three who would study horticulture at postgraduate level with university papers would also be very interested in short courses. The short course style of presentation however clearly appealed more to the other respondents, with five of the eight who preferred business topics, now indicating that they might take a short course in horticulture depending on the topic. Three still said that they did not wish to study horticulture topics any further.

Pre-harvest topics were still preferred, but areas such as post-harvest fruit physiology would be considered by most.

The short course format particularly appealed to the commerce graduate as a way of picking up industry know how quickly, if a course was designed for non-scientists like himself.

Question 10 It is likely that the Massey MBA will be delivered in Tauranga, starting in August 2003, and that the Lincoln Masters of Professional Studies would deliver subjects in the Bay of Plenty if numbers were increased. Would you be interested?

One is already enrolled and one is in the process of enrolling in one of these degrees. Five clearly stated that they were not at all interested in a masters programme. The reasons given included

“If I was younger...”

“I’ve sat enough exams”

“I’m doing the job I want to now. My assets are fairly well organized, and I have other priorities now; my family primarily.”

Five might be interested. The delivery in Tauranga would definitely make several consider this option far more favourably.

Question 11 What are the disadvantages to you of doing a MBA or Masters of Professional Studies?

The major negative was seen to be time constraints, and this was mentioned by nearly every graduate. Family and business commitments were clearly for many a higher priority at present and were seen to be harder to overcome for the women. This was also reflected when all the women mentioned the cost of the course, and none of the men did. The need for the women to work part-time to complete the course was seen as necessary by those with young children.

Those interested indicated that it was essential for them to study part-time, and both degree programmes would be delivered on an executive basis, which would better suit our industry, if the required minimum numbers were able to be met.

Where there was interest in a masters degree, there was a clear preference for the ability to choose subjects to reflect their interests and career needs. The Lincoln degree was well received but did not have the profile. In fact several had not heard about it at all.

Question 12

What are the plusses of this sort of course?

Mental stimulation, “having the letters after your name”, increased ability to perform professionally leading to increased job satisfaction, and the advantages of networking in the local region were very consistent answers.

Question 13

What incentives would help you to decide to do a course such as this?

A fee rebate would help some, as would the local delivery, but overwhelmingly it was felt that self motivation was the main criteria needed to enrol and complete the course.

Those working in the post-harvest sector particularly, had some concerns about their ability to meet the course requirements around the harvest season. There would need to be some allowance made by either employers or the course directors for these people to participate. Indeed, two years ago Massey University tried to set up a MBA with an agribusiness focus. It failed to get off the ground because of the seasonality of the businesses involved and the inability of nearly all the applicants to commit for part of the year. This was compounded by the variety of industries that the applicants came from, and the lack of overlap of the busy periods (3).

CONCLUSIONS

Employers survey

1 There was a positive response from all employers to the proposal of masters with business, horticulture and leadership components being delivered in the Bay of Plenty.

2 There was a clear preference from all employers for business and leadership skills to be developed ahead of horticulture. The main priority desired was the development of strong business management skills, with an onshore focus but with some offshore / international subjects. Logistics and supply chain management was also a high priority.

The main horticulture subjects of interest were post-harvest physiology, quality management, health and food safety and environmental management.

3 Nearly all were keen to support suitable employees, and to provide fee rebates.

4 All the post harvest companies were very keen to employ people with an MBA type qualification, and a strong background in horticulture. The nature and character of the Zespri business is different, and yet this sort of degree would probably work well for some of their staff too.

Survey of Graduate Employees

1 The majority of the interviewees would prefer to develop their business and leadership skills if they did further study. Three would look at courses covering on-orchard issues, as these topics had direct relevance to their current employment. There was little overlap of interest between these two areas for most of the people interviewed. Those looking to do business topics felt that the horticultural knowledge that they might need was easy to access from within the industry.

2 Delivery of short courses on kiwifruit topics, at postgraduate level in the Bay of Plenty, would get a greater uptake than postgraduate level papers that are part of certificates, diplomas or masters. Five of the eight who would focus on business subjects would now consider a horticulture short course.

3 Delivery in the Bay of Plenty of masters level business programmes, would attract some added interest from the kiwifruit industry. The executive part-time delivery mode would best suit our industry but concern was expressed about the ability to meet course requirements at the peak of the harvest season. Fee rebates would help some to enrol.

RECOMMENDATIONS

- 1 Short courses at a postgraduate level should be developed in kiwifruit topics. These should be delivered in the Bay of Plenty and could be designed to contribute to postgraduate papers if participants wished to take study in this area further.
- 2 Support should be given to the uptake of masters type degrees by kiwifruit industry employees. Consideration should be given by the postharvest sector to bringing in people with horticultural training and/or experience to put into these masters programmes.
- 3 Greater enrolment in MBA type courses in the horticulture sector could be encouraged by more flexible course requirements from the universities, because of time constraints relating to the seasonality of the industry.
- 4 Further work needs to be done to determine if there would be sufficient interest in a short course for non-science graduates to learn about the fundamentals of growing kiwifruit.

REFERENCES

- 1 New Zealand Kiwifruit Marketing Board Annual Report, 1995.
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- 3 H. Mabin, Personal communication, November 2002.