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Hawkes Bay Apple and Pear Growers' Attitudes Towards the Proposed Deregulation in the Pipfruit Industry in New Zealand

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and Robert Y. Cavana**

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ABSTRACT

Apple and pear growers are major stakeholders in the current debate about the proposed deregulation of the Producer Boards in New Zealand. Unfortunately there does not appear to have been any systematic attempt to find out what their attitudes are to the proposed deregulation of the Producer Boards and of the NZ Apple and Pear Marketing Board (ENZA) in particular. This study is an attempt to assess the attitudes and opinions of the Hawkes Bay apple and pear growers, who represent about 55 percent of the apple and pear growers in New Zealand.

A questionnaire was developed and sent to a stratified random sample of 394 growers in the Hawkes Bay region, with an attempt to gain a representative cross section from large, medium and small growers. A total of 180 valid responses were received. These responses were analysed statistically by orchard size and the comments made by respondents were also analysed in a qualitative manner.

The overall results indicated that about seventy five percent of the respondents do not support the proposed government legislation to deregulate the industry, although about 40 percent of large growers do. However, nearly 90 percent of respondents want more information, particularly about the expected financial and economic implications of the deregulation and about the experiences of overseas countries that have introduced competitive export marketing of pipfruit. The majority of small and medium sized growers were concerned that deregulation may threaten the quality of fruit exported, and result in less cost effective delivery systems and in lower returns, whereas large growers were more confident that this would not happen and they would gain from improvements in innovation and efficiency. However, a clear majority of growers (80%) support the single desk marketing approach, although over 30 percent of large growers do not.

The research findings should be of particular value to the New Zealand pipfruit growers, the New Zealand Apple and Pear Marketing Board, and the Government Select Committee and departments that are currently considering issues associated with deregulating the Producer Boards.

Keywords: Hawkes Bay apple and pear growers, fruit growers, deregulation, Producer Boards, New Zealand pipfruit industry, New Zealand Apple & Pear Marketing Board, ENZA.

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1. Introduction

1.1 *Historical Background*

In 1910, New Zealand exported 5650 cases of fruit; by 1914 it had reached 68,000. As the industry expanded, growers banded together and in 1916 formed the New Zealand Fruit Growers' Federation in order to foster, promote and protect the fruit industry. In pre World War 2 days, apple and pear growers controlled the marketing of their fruit through the New Zealand Fruit Export Control Board, which acted as the growers' trustee. With the outbreak of World War 2 in 1939, shipping space had to be conserved for national needs. Britain considered meat and dairy produce more essential to the war effort than fruit, causing a serious situation for New Zealand's fruit growing industry, as nearly 50% of the apple and pear crop was exported.

In 1946, the New Zealand Fruit Growers' Federation recognised the need for the marketing of apples and pears. The final agreement provided for a marketing board similar to the one operating in the dairy industry, with price guarantees that assured the fruit industry some security and stability. The New Zealand Apple and Pear Marketing Board was established in 1948.

This remained largely unchanged until, at the request of growers, the Government passed legislation in 1993 which deregulated the local market for fresh and processing fruit. This meant that from January 1994 growers were able to sell their crop directly to New Zealand wholesalers, retailers or processors as well as to the Board. The Board is now effectively a co-operative - established, owned and controlled by the growers operates autonomously but is a statutory body responsible to the New Zealand Minister of Agriculture through the Apple and Pear Marketing Act.

Under the Act, the Board must accept all pipfruit that meets the grade standards for export. Third parties can also apply for consent to export fruit on their own behalf, as long as they meet criteria set out in published guidelines.

When fruit is accepted by the Board for export, it pays growers an advance price based on forecast market expectations. It then takes ownership of the fruit and markets it under the ENZA brand name. Net earnings are returned to growers. ENZA is responsible for ensuring that all export pipfruit has been packed at a packhouse with quality procedures that meet ENZA's stringent audit criteria. New technological developments, such as controlled atmosphere storage, have enabled it to provide improved product for increasingly sophisticated markets. (All the material in this section is from ENZA, 1998).

1.2 *The New Zealand Pipfruit Industry*

The wider New Zealand pipfruit industry employs about 5 to 6 thousand permanent and seasonal workers and earns about \$600 million in export revenue, generated by 50 percent from Europe/Middle East, 20 percent from Asia/Pacific and 30 percent from USA (ENZA, 1998). Table 1 summarises the total number of pipfruit trays exported in 1998 for New Zealand and the Hawkes Bay district (the largest pipfruit growing district in New Zealand). For the purposes of this research, the pipfruit growers have been classified (pers. comm., Westpac Trust, Wellington) into the following sizes based on the number of trays they export:

Small grower
Medium grower
Large grower

Under 12,000 Tray Carton Equivalent
12,000 to 49,999 Tray Carton Equivalent
Over 50,000 Tray Carton Equivalent

TABLE 1
Number of Pipfruit Growers and Exports from New Zealand and Hawkes Bay in 1998

Growers	Hawkes Bay		New Zealand		Hawkes Bay / NZ Ratio (%)
	(no.)	(%)	(no.)	(%)	
Number of Pipfruit Growers					
Small	556	82%	990	81%	56%
Medium	103	15%	204	17%	50%
Large	20	3%	30	2%	67%
<i>Total</i>	<i>679</i>	<i>100%</i>	<i>1224</i>	<i>100%</i>	<i>55%</i>
Pipfruit Exports (Tray Carton Equivalent)					
Small	2.5 m	42%	4.1 m	42%	61%
Medium	2.3 m	38%	4.1 m	41%	56%
Large	1.2 m	20%	1.7 m	17%	69%
<i>Total</i>	<i>5.9 m</i>	<i>100%</i>	<i>9.9 m</i>	<i>100%</i>	<i>60%</i>

Source: pers. comm., New Zealand Apple and Pear Marketing Board, Wellington.

1.3 Research Objectives

Currently the New Zealand Government is preparing to deregulate the Producer Boards, including the New Zealand Apple and Pear Marketing Board. One of the Government's main reasons for these proposals is that deregulated markets will provide more choice for producers (& pipfruit growers) to export their produce by other means than through the monopoly producer boards. However, there is considerable difference of opinion over whether this deregulation should occur, and if it does, what timeframe the deregulation should occur in.

This research is concerned with pipfruit growers attitudes towards the proposed deregulation of the New Zealand pipfruit industry and the NZ Apple and Pear Marketing Board in particular. For cost and convenience reasons this research concentrates on the attitudes and opinions of Hawkes Bay pipfruit growers (by small, medium and large size groups), since they represent 55 percent of the number of grower organisations and 60 percent of the volume of pipfruit exports from New Zealand.

Specific issues addressed in this research are:

- What are the differences between the attitudes of the small, medium and large growers to the proposed reforms.
- Have growers obtained sufficient information regarding implications of the proposed deregulation of the pipfruit industry (marketing board).
- What do growers perceive to be the economic and competitive effects of the proposed deregulation.

- Whether growers believe that the deregulation will have any destabilising effects on the NZ pipfruit industry.
- What are growers views regarding the international effects of the proposed deregulation.
- What is the current level of support by grower size for the proposed reforms.
- Whether the growers believe that overall returns will increase or decrease if the industry is deregulated.
- If deregulation occurs, what time frame do growers prefer.
- Do growers favour a single desk marketing approach for the New Zealand pipfruit industry.

2. Literature Review

While the issue of deregulating the NZ pipfruit industry is emotionally charged and regularly referred to and reported in industry publications and the wider media, we have not been able to locate any previous study or research that focuses specifically on the issues identified (in Section 1.3), through our search of the readily available literature. There is currently research in relation to deregulation itself being undertaken by Dr Megan McKenna at Massey University (pers. comm.). She has received funding (Foundation for Research in Science and Technology postdoctoral fellowship), to complete a study examining challenges facing the pipfruit industry, including deregulation. However this and other work in the area does not concentrate on the opinions and attitudes of the people that lie at the centre of the proposed changes to the industry, ie the pipfruit growers.

To conduct a review of the readily available literature for this topic has not been easy, for at least three principal reasons. Firstly the specific research subject is considered unique in itself, in that we are unaware of any other formal contact with the growers direct to provide a representative sample of their views on deregulation. Secondly the subject is somewhat topical and as such provides little in the way of a well-worn path through established sources. Rather there is a wide ranging and disjointed collage of smaller articles available, mainly from daily newspapers and industry publications. Finally information has not been easy to locate with many articles less readily available with a large portion of NZ government data only recently having been made available under the Official Information Act.

The research team has accumulated and reviewed a large number of newspaper and industry articles, as well as recently released Treasury documents, and New Zealand Apple and Pear Marketing Board (& ENZA) publications. We have attempted to provide a summary of the data and to establish what has transpired to date and how the main parties are represented and what their views are. The research team has also sought to provide some detail about other countries who have already progressed down the path of deregulation of producer boards.

Firstly, we should consider why producer boards were originally established (briefly discussed in Section 1.1 above). Essentially the boards were installed to provide producers with the ability to market their products in an orderly manner, and to present a united front to overseas buyers (Edlin, 1998b). If this holds true today then why would we want to deregulate and give away New Zealands competitive advantage i.e. the current single selling status ? (Venter, 1998a).

The uncertainty that has permeated the industry with the introduction and promotion of deregulation by the government has caused heartache in itself (McCliskie, 1998a). This is evident in falling land values, planning, and edgy buyers, and is not welcome when increasingly difficult climatic conditions and stringent quality standards already serve to place significant pressure on the orchardists (Kitchin, 1998). The growers also claim that there has been little or no data furnished that has served to definitively demonstrate the economic benefits of deregulation (McCliskie, 1998b).

While the government has produced various forms of data to promote their stance as commented, a large part of this has only recently been released. In short their argument revolves around (a) the removal of inefficiencies and competitive barriers (single desk status), which in turn will promote a breakdown of tariffs and subsidies world wide, and (b) that the cost of producer boards exceed the benefits (Sinclair & Papesch, 1998). In response to the claims that the government has not produced any financial data to date, the government points to the Thurman study (Static costs and benefits - Thurman Study : market power and deadweight loss), produced by Treasury. However the findings here are somewhat contradictory with the summary produced by Treasury espousing benefits as well as inefficiencies. Notwithstanding, Treasury recommends that the government's policy conclusion to deregulate remains valid (Sinclair & Papesch, 1998). When this research was undertaken, the Thurman report was still yet to be made publicly available.

A more recent article (du Fresne, 1998), outlines a broader approach to the debate. Agriculture Minister, John Luxton, covers issues such as flexibility, monopoly powers, political risk, etc. The article provides more needed information to the reform proposal from the government. However, statements within are largely unsubstantiated or supported with one-off examples. The article is light in terms of detailed analysis, rather it is a broad brush approach to the matter touching on various larger issues within the proposal briefly. The absence of any economic positive/negative analysis or statistical support is obvious.

In sum, the government is promoting the move as a direction towards a more open and competitive economy (Shipley, 1998). However the growers contend that this is a radical change (Venter, 1998b), that has been advanced in a crude attempt to align these markets with the Government's strong free market philosophy (NZPA, 1998b).

2.1 Stakeholders Views re the Proposed Deregulation

(a) Pipfruit Growers

The growers key concerns surround the maintenance of quality and the effect of renegade exporters selling New Zealand fruit cheaply to reduce the export returns to all of the others (Mercer, 1998). The growers see a threat to quality, delivery, and prices (Collin, 1998), but also to the community through ultimately lower returns (Smeaton, 1998). The government states that they expect to see a break down or substantial reduction in tariffs currently encountered by New Zealand to eventuate, however this is considered unlikely (Alison, 1998).

(b) NZ Apple & Pear Marketing Board (ENZA)

ENZA state that they have prepared a deregulation plan at the request of the government, but recognise that the majority of the growers do not support the removal of the single desk seller status. However, irrespective of the issue of deregulation ENZA are intent on separating their commercial business from industry issues, and envisage ENZA as a commercial enterprise with the industry ultimately being funded via a levy. It is highly probable that a change of ownership will embellish any changes, with a co-operative the most likely vehicle (McCliskie & Smith, 1998).

(c) New Zealand Business Roundtable

Another major player in the reform plan is the ideologically driven (Hall, 1997) New Zealand Business Roundtable (NZBR), who are keen to see deregulation move ahead. They have been accused of being ignorant, and in a world of their own (Marris, 1998), and others have made less veiled comments that their interest is purely self invested to allow NZBR members to break into a number of new and lucrative markets (Fouhy, 1998). However at least according to the government

the NZBR support deregulation as a free market advocate in that past experience shows that interventions are not justified, and have had poor results (Chaplin, 1998). The NZBR ultimately point to a commodity levy to protect R&D and promotion.

(d) *Overseas Purchasers*

The final key player is the overseas purchaser where there has been little evidence of support for the New Zealand government's proposal (Collin, 1998). Further it is doubtful that any purchasers have in fact taken any interest in the New Zealand governments efforts (Edlin, 1998a). This is especially pivotal noting the inherent pressures that are present when New Zealand is such a small producer of the total of the world market and located far from their main markets (Easton, 1998).

2.2 *Recent Developments*

The boards are not ready for the loss of their statutory monopolies at this point (Edlin, 1998a), and the growers have not been convinced that any economic benefit will be afforded, in contrast they contend that an overall reduction in returns will occur. They already contend that they are not playing on a level field with competitors receiving tariff and subsidies to assist (The Orchardist, 1998). To remove what the growers consider is their key advantage (single seller status), will only serve to further increase competition unnecessarily.

ENZA are moving ahead with restructuring plans regardless of government action. they are keen to settle the ownership format, and seek to provide the best exporting option to the growers in any event.

It is important to note that since the November 15 deadline (imposed by the government via the then Treasurer's budget speech, 14/5/98) for the nine producer boards to discuss how they would operate in a deregulated export environment, that the government has softened it's stance (Young, 1998). Food and Fibre Minister John Luxton said he could envisage the boards retaining their current form "for a while, but over time they'll evolve" (NZPA, 1998a). This would add weight to the growers and ENZA's comments that the government did not clearly outline or demonstrate the economic benefits for deregulation. After much publicity and furore the issue now appears to be firmly on the back burner.

2.3 *Overseas Experiences with Producer Board Deregulation*

Moving to the deregulation experience of other countries (primarily Israel and South Africa), it is useful to take some hindsight from their experiences as a real world example, and to provide lessons for New Zealand to consider. Formerly under a single desk system, South Africa deregulated their citrus fruit industry in January 1998 (ie "introduced competitive exporting"). Their rationale lay in improved market opportunities and competitiveness resulting in increased earnings. Treasury papers state that an initial lack of grower mandate has now reverted to general support for the new regime (Papesch, 1997). Indicative effects of competitive exporting indicate better contractual terms, greater commercial focus, lower costs, and increased industry investment, though at this stage there is little real data available for a detailed cost benefit analysis. Notwithstanding, other sources do not voice the same optimism. Peter Dall, Chairman of the South African Deciduous Producers Trust (via The Orchardist, 1998), states that there is tremendous pressure to drop standards, and that there is no long term planning, and no strategy. Dall states that prices are also under pressure with buyers exploiting the fact that there are so many independent suppliers. These comments echo the current concerns of the New Zealand growers.

Turning to the experience of Israel, who moved from a single desk seller of citrus fruit to competitive exporting in 1991. Figures produced by Treasury appear to confirm a reversal of the

downward trend experienced in both volume and price, with an associated grower satisfaction prevailing (Chaplin, 1997). Similarly to South Africa, the key initiative for change was a desire to see free market competition drive the industry. Initial problems encompassed poor fruit quality, branding problems, and a severe lack of uncertainty in overseas markets. The industry has recovered in recent years with improved quality, reduced costs, and more vigorous competition (Weinberg, 1996). However it is interesting to note that it is the largest exporters that account for over 90% of exports, and that price decreases have been comprehensive (although there are other global supply/demand factors operating on prices). Again these comments support the New Zealand growers concerns that multiple sellers will only serve to drive market prices downward. This can be further demonstrated by the fact that the Israeli government did eventually introduce measures to guarantee minimum prices (Marris, 1998).

The New Zealand Apple and Pear Marketing Board chairman, John McCliskie, also points to the Australian pipfruit market, as another example of why not to proceed with deregulation. He has described their market as fragmented, with no regulation and little control, since the removal of a single seller desk. He states that deregulation has effectively served to decrease production, and has resulted in a fading of their presence in the industry (Marris, 1998).

2.4 Final Comments

In closing, it is clear that the parties involved remain on two sides, one for deregulation and one against, with little middle ground having been achieved. Despite recent events that have dampened the governments resolve to deregulate, clearly changes remain on the agenda.

Both sides make compelling arguments, but a lot of the data produced has been inconclusive, and views remain wide ranging and diverging. More research is required, particularly into the positive and negative economic benefits before there can be any possibility of an accord. Also more research is required into the views of the major stakeholders, particularly the growers. This was the catalyst for this research.

3. Methodology

3.1 General Research Design

An exploratory study was undertaken to examine the current attitudes and beliefs of the Hawkes Bay apple and pear growers in relation to the perceived impacts of the proposed deregulation of the New Zealand pipfruit industry and removal of the monopoly status of the New Zealand Apple & Pear Marketing Board.

This involved surveying a stratified random sample of small, medium, and large pipfruit (orchard) growers in the Hawkes Bay area through a mail questionnaire. Selected growers were questioned specifically to gauge their understanding/opinion of the impacts deregulation will have on their business, their community, their industry and the wider New Zealand economy.

3.2 Data Collection Methods

A mail survey was utilised in an attempt to desist from any form of bias. The purpose was to obtain objective facts, subjective feelings and perceptions. This method allowed precise information when seeking responses from a large and wide spread number of people. This method also served to reduce costs.

A three page Questionnaire was developed on A4 size paper with a covering note outlining the purposes of the questionnaire and emphasising confidentiality of the individual responses. The

questionnaire was pre-tested with people involved in the industry and it took approximately 15 to 20 minutes to complete. A range of questions were asked covering the following areas:

- About the grower and their business (size, years in industry, ownership, age group & gender of respondent).
- About the information the respondent had acquired regarding the proposed deregulation of the industry (including extent of awareness, source of information, impressions of Government's explanations, and interest in getting more information).
- Grower's views about the effects of the proposed deregulation (growers were asked about the extent to which they agreed or disagreed with various statements about the effects on their orchard; the competitive and economic advantages for their industry; the economic benefits for their district; whether increased returns would come from improvements in innovation, efficiency, and trade negotiations; whether there would be any destabilising effects on quality of exports, delivery costs, and returns to growers; whether deregulation would prompt a breakdown in tariffs and export subsidies in competitor countries; and whether growers in NZ would still be competitive if international tariffs and subsidised exports remained).
- Whether growers supported the proposed deregulation and the timeframe to introduce it if they did, and whether they favoured a single desk marketing approach for the pipfruit industry.

Respondents were also asked to provide comments with most questions. The questionnaires were mailed out with a covering letter on 10 September 1998. Given the solid response rate within the first week it was not deemed necessary to proceed with a follow up letter. Cut off date for receipt of completed questionnaires was 24 September 1998, thus allowing a two week period from the initial mail out to the requested date of return.

Considering the rate and nature of responses, it is important to note two other issues:

- Acknowledging the seasonal nature of the industry a survey conducted at this time may evidence a limited response as growers may be "off orchard" at this time of relative inactivity.
- Being an emotionally charged topic (refer literature review), it is important to note that responses may incur a portion of "what respondents think", rather than "what they would actually do".

3.3 *Sample Characteristics*

The population questioned comprised a cross section of all of the Hawkes Bay apple and pear growers including small, medium and large growers. The Hawkes growers represent 55 percent of the total New Zealand growers (see Table 1).

A probability type sampling was used, with a stratified sample of growers selected from the small, medium and large size groups. We sampled 394 growers from the total population approximately 680, with all the growers from the medium and large size groups sampled, and a random sample of nearly 50 percent from the small size group. Details of the sample and responses are provided in Table 2. There was no bias in the selection of growers as survey respondents, as ENZA provided the names and addresses direct from their customer database, therefore there was no editing of grower information held. The level of desired accuracy was plus or minus 5 percent.

TABLE 2
Sample Characteristics by Grower Size

Growers	Hawkes Bay growers (no.)	Growers surveyed (no.)	Proportion of growers surveyed (%)	Valid responses (no.)	Proportion of valid responses (%)
Small	556	271	49%	84	31%
Medium	103	103	100%	77	75%
Large	20	20	100%	19	95%
<i>Total</i>	<i>679</i>	<i>394</i>	<i>58%</i>	<i>180</i>	<i>46%</i>

3.4 Responses

A total of 197 questionnaires were returned with 17 regarded as invalid where numerous questions were not answered by the respondents. Hence the analysis was based on 180 valid responses or 46 percent of the surveys distributed. Ninety five percent of large growers responded, 75 percent of medium size growers and 31 percent of small growers. The response rate received in the small grower category was lower than what was envisaged. However, it was still greater than that the normal response rate for a mail survey (approx. double), as Sekaran (1992) suggests a response rate of 15 - 20% is to be expected. The response rates in the other two categories were significantly greater however.

The responses indicate that the growers are people that are committed to the industry, with 80 percent of the growers having been in the industry greater than 5 years. Approximately 70 percent of the respondents own their own orchard with a further 19 percent involved in a partnership - ie they financially have a large stake in relation to what eventuates in the industry. Only 7 percent of the respondents indicated that they managed the orchard on behalf of others, with the final 3 percent making up the other category that were predominantly large growers involved in a consortium arrangement. The majority (over 70 percent) of the respondents were aged 40 years or more, and 10 percent of the respondents were female and 90 percent were male, reflecting the nature of the Industry. Where the responses indicated that they were a husband and wife team both female and male respondents were recorded.

3.5 Data Analysis

There are three categories of growers: small, medium and large. The data has been prepared for analysis with a coding of all questions and variables with a sequential number. The responses to each question were then coded using the number actually marked by the participant. The analysis was undertaken with the use of Excel spreadsheets (Microsoft, 1996). Tables were generated which showed the actual (number) and relative (percentage) frequencies for each question by grower size

Chi-Square tests were undertaken with Excel to determine whether there were any significant differences between the growers' responses by size of grower. The procedures used are outlined in Levine et al. (1998, pp. 475-477). In some cases the response categories were combined where the expected frequencies were low, otherwise unreliable Chi-Square statistics would be produced.

Tests were conducted at the 5 percent significance level. The null hypothesis tested was that there were no differences between the responses by grower size group. The alternative hypothesis was that there were significant differences.

4. Results

The results of the quantitative and qualitative analysis of the responses to the Questionnaire survey are summarised in this section. Each question from the Questionnaire is stated as the sub-section heading, followed by a table containing the number and percentage of responses by grower size. Below each table are the Chi-square results from the statistical tests determining whether there are any significant differences between the responses by grower size. A p-value less than 0.05 indicates that the opinions of the different grower size groups are statistically different at the 5 percent significance level or 95 percent confidence level. Generally, reference will be made to the Chi-square tests only when the results indicate that there is a statistical difference in the responses by grower size group. After each table some general observations are provided, together with some representative comments from each of the grower size groups.

4.1 Information Regarding the Proposed Deregulation

The results in this sub-section summarise the views of Hawkes Bay apple and pear growers regarding their level of awareness and the sources of information they have acquired in relation to the proposed deregulation of the New Zealand Pipfruit Industry.

- (a) *Are you aware of the proposed legislation for deregulation of the New Zealand Pipfruit Industry?*

Table 3 summarises the responses to this question. This table indicates that nearly all growers were aware of the proposed deregulation and there were no statistical differences in the responses by size.

TABLE 3
Awareness of Proposed Deregulation

Growers	Yes		No		Total	
Small	83	99%	1	1%	84	100%
Medium	76	99%	1	1%	77	100%
Large	19	100%	0	0%	19	100%
<i>Total</i>	<i>178</i>	<i>99%</i>	<i>2</i>	<i>1%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 0.24, df = 2, p = 0.886)

- (b) *Where have you gained knowledge in relation to the proposed legislation to deregulate the New Zealand Pipfruit Industry?*

The responses to this question are summarised in Table 4. There are no statistical differences between the responses by the different grower size groups. The right hand side column refers to the total number of respondents, and multiple responses were allowed to this question.

TABLE 4
Where Growers received Information re the Proposed Deregulation

Growers	Newspaper	Other Growers	ENZA	HBPA	Local MP	NZ Govt	Trade Publications	Total Respondents
<i>Number</i>								
Small	78	54	72	41	5	26	32	84
Medium	70	58	72	53	5	28	37	77
Large	15	13	15	13	2	9	9	19
<i>Total</i>	<i>163</i>	<i>125</i>	<i>159</i>	<i>107</i>	<i>12</i>	<i>63</i>	<i>78</i>	<i>180</i>
<i>Percentage</i>								
Small	93%	64%	86%	49%	6%	31%	38%	na
Medium	91%	75%	94%	69%	6%	36%	48%	na
Large	79%	68%	79%	68%	11%	47%	47%	na
<i>Total</i>	<i>91%</i>	<i>69%</i>	<i>88%</i>	<i>59%</i>	<i>7%</i>	<i>35%</i>	<i>43%</i>	<i>na</i>

(Chi-Square = 7.28, df = 12, p = 0.838)

Most of the information that the growers have received has come from the newspapers (91%), ENZA (88%), Hawkes Bay Pipfruit Association (59%), trade publications (43%) and contact with other growers (69%). Only 35% of the growers who responded have had any information from the Government. It could be argued that the information that the growers have based their conclusions as to the effects of deregulation is not a truly balanced one, as they haven't received much of their information from the Government. This concern is reinforced by the responses to the next question summarised in Table 5 below.

- (c) *Has the New Zealand Government clearly articulated the effects of deregulation on the Pipfruit Industry to you?*

TABLE 5
Has Government Clearly Articulated Effects of Deregulation

Growers	Yes		No		Don't Know		Total	
Small	9	11%	73	88%	1	1%	83	100%
Medium	9	12%	66	86%	2	3%	77	100%
Large	4	21%	14	74%	1	5%	19	100%
<i>Total</i>	<i>22</i>	<i>12%</i>	<i>153</i>	<i>85%</i>	<i>4</i>	<i>2%</i>	<i>179</i>	<i>100%</i>

(Chi-Square = 2.94, df = 4, p = 0.568)

In support of the above question, the growers generally agree that the information that has been supplied (which is very limited), has not clearly outlined the Government's view of the positive and negative implications of deregulating the Pipfruit Industry. A similar view has also been expressed by a well known New Zealand economist, Gareth Morgan, in his article in The Evening Post in which he discusses some aspects of the deregulation of the Producer Boards: "No coherent case has been put as to why their existence (ie the Producer Boards) costs all New Zealanders..." and "Political intransigence has overtaken rational analysis" (Morgan, EP, 25 Nov 1998).

(d) *Are you interested in gaining more information as to the effects of deregulation on the Pipfruit Industry?*

TABLE 6
Interest in More Information re Effects of Deregulation

Growers	Yes		No		Don't Know		Total	
Small	69	82%	13	15%	2	2%	84	100%
Medium	67	87%	10	13%	0	0%	77	100%
Large	18	95%	1	5%	0	0%	19	100%
<i>Total</i>	<i>154</i>	<i>86%</i>	<i>24</i>	<i>13%</i>	<i>2</i>	<i>1%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 3.83, df = 4, p = 0.429)

Nearly 90 percent of all growers have expressed an interest in gaining more information about the effects of the proposed deregulation. In particular, they are interested in obtaining:

- Information as to how they are going to benefit financially - the Treasury reports
- A cost benefit analysis
- Do other countries really care about our regulated market
- The down stream effects - information comparisons to the Chile / South African situation
- How R and D is going to be financed
- Who will ensure quality standards are being met
- Bank and Market attitudes towards deregulation
- How will ENZA operate in a deregulated market

While some of the larger growers comments may have been of a more sophisticated nature, regardless of the size of grower the common response to this question was a strong call for a more detailed economic cost benefit analysis to be provided, particularly from the Government.

Small growers:

"What benefits particularly financially are there for me"

"How will R&D be financed. Will private exporters still have a "submission profile" for maturity in place? Will the fruit quality standards be as tough."

"As far as I know there has been no specific information given. Nowhere have I seen or heard evidence that deregulation will increase the value of our fruit or business. I have on the other hand heard of it having the opposite effect eg South Africa."

Medium growers:

"Why or how the government believes that deregulation will financially benefit the producers"

"In simple terms what is the benefit? i.e. The Government is not recognising the size of NZ and in this case the "Crop" relative to the World market."

"Long term effects to income. Who will provide support for R&D".

"Banks attitudes. Markets attitudes. Would like to see the Government's facts/figures supporting the benefits of deregulation. So far they haven't attempted to present any analysis".

Large growers:

"An unbiased cost benefit analysis"

"Breakdowns of ENZA's overheads so true costings are known"

"Facts regarding the upsides of deregulating the export industry."

4.2 Effects of the Proposed Deregulation

The results in this sub-section summarise the opinions of Hawkes Bay apple and pear growers regarding the effects of the proposed deregulation of the New Zealand Pipfruit Industry on whether:

- it will create any further economic advantage to their own orchards.
- NZ growers will benefit from any competitive or economic advantages.
- there will be any economic benefits for their provincial districts.
- increased returns will come from improvements in innovation, efficiency, or trade negotiations.
- it will cause a threat to the quality of fruit being exported, threaten the ability to deliver in a cost effective manner to NZ's external markets, or threaten grower returns.
- it will prompt a breakdown of tariffs and export subsidies in competing countries.
- a deregulated NZ industry will continue to be competitive if tariffs & subsidised exports remain in the global pipfruit market.

The questions in this section of the Questionnaire were provided in the form of a statement and respondents were asked to indicate the extent to which they disagreed or agreed with the statement. Five response options were provided: strongly disagree, disagree, neutral, agree and strongly agree. The 'strongly disagree & disagree' and 'agree & strongly agree' categories were combined to facilitate a more reliable statistical analysis of the responses.

- (a) *Deregulation of the New Zealand Pipfruit Industry will create further economic advantage for your orchard.*

The responses to this statement are summarised in Table 7.

TABLE 7
Deregulation Will Create Further Economic Advantage for Your Orchard

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	62	74%	13	15%	9	11%	84	100%
Medium	51	66%	13	17%	13	17%	77	100%
Large	9	47%	4	21%	6	32%	19	100%
<i>Total</i>	<i>122</i>	<i>68%</i>	<i>30</i>	<i>17%</i>	<i>28</i>	<i>16%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 6.43, df = 4, p = 0.169)

The main thrust of the responses encompass the threat of overseas buyers driving the prices downward. However, the responses to this question are somewhat aligned to the grower size. While about on third of the larger growers are more confident of achieving some economic advantages in a deregulated market the medium growers are less so (66% disagree), with the small growers heavily opposed (74% disagreement). Representative comments include:

Small growers:

"Deregulation may help the larger grower, but I can see no benefit for the smaller grower (the majority)"

"20-30 possible exporters competing against each other will have a detrimental effect on the whole industry"

"In a world over supplied with apples and a small producer of high quality fruit the last thing we need is to be competing with ourselves."

Medium growers:

"My orchard may benefit short term"

"Deregulation of the local market has shown what will happen. There will always be someone who will drop the price."

"I believe underselling by weak exporters will effect prices of New Zealand fruit generally. No control over the product."

Large growers:

"I would like the choice through deregulation to make my own business decisions"

"Prices obtained may not increase in a deregulated market but overheads should go down."

(b) *New Zealand growers will benefit from deregulation of the Pipfruit Industry through further:*

(i) *competitive advantage*

(ii) *economic advantage.*

TABLE 8
NZ Growers will Benefit from Deregulation through further Competitive Advantage

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	65	78%	7	8%	11	13%	83	100%
Medium	50	66%	11	14%	15	20%	76	100%
Large	11	58%	4	21%	4	21%	19	100%
<i>Total</i>	<i>126</i>	<i>71%</i>	<i>22</i>	<i>12%</i>	<i>30</i>	<i>17%</i>	<i>178</i>	<i>100%</i>

(Chi-Square = 5.06, df = 4, p = 0.281)

TABLE 9
NZ Growers will Benefit from Deregulation through further Economic Advantage

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	59	74%	11	14%	10	13%	80	100%
Medium	49	65%	14	19%	12	16%	75	100%
Large	9	47%	3	16%	7	37%	19	100%
<i>Total</i>	<i>117</i>	<i>67%</i>	<i>28</i>	<i>16%</i>	<i>29</i>	<i>17%</i>	<i>174</i>	<i>100%</i>

(Chi-Square = 7.74, df = 4, p = 0.102)

Most growers regardless of the size cannot see any significant advantages that will not evaporate from the increased competition and lower returns that are generally expected in a deregulated environment. While the small growers are more vigorous in their negativity there are relatively few growers that envisage any positive economic or competitive advantages occurring. Also worth noting is the high level of negative feedback towards ENZA, who in general are seen as inefficient and cumbersome.

Small growers:

"We are only a small player through deregulation we will become weaker"

"ENZA needs restructuring and competitions on-shore - not necessarily offshore."

"ENZA has too much dead wood attached to it, and it isn't transparent enough."

Medium growers:

"Deregulation only benefits the buyer not the producer"

"ENZA as an exclusive sales environment have no need to manage cost to the extent it would in a competitive environment".

"What we lose in "competitive" advantage, ie more fragmented selling will be made up by a significant cost reduction. ENZA operate purely on a cost plus basis and have no real interest in holding costs down."

Large growers:

"Overall costs would be reduced however I doubt that gain will offset reduced sales values"

"A far more competitive and professional ENZA cost structure will apply. We will also finally be treated like clients."

- (c) *Economic benefit for your provincial district will be generated as a result of deregulation (eg additional revenue generated via coolstores, packhouses and in the transport industries).*

TABLE 10
Deregulation will Result in Economic Benefits to Your District

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	65	77%	7	8%	12	14%	84	100%
Medium	56	74%	9	12%	11	14%	76	100%
Large	10	53%	3	16%	6	32%	19	100%
<i>Total</i>	<i>131</i>	<i>73%</i>	<i>19</i>	<i>11%</i>	<i>29</i>	<i>16%</i>	<i>179</i>	<i>100%</i>

(Chi-Square = 5.40, df = 4, p = 0.248)

There is very little economic benefit envisaged by the growers for the Hawkes Bay province if the pipfruit market is deregulated, regardless of grower size (although larger growers are not so pessimistic). A large number of growers, irrespective of size, believe that the industry will shrink with the associated negative social and economic impacts being passed on to the community at large. Some specific comments are:

Small growers:

" Small growers will go out of business, there will be less work not more"

"We all know fruit will go overseas to be packed this can only be bad for our community."

"More likely to benefit marketing organisations outside of province, (outside of NZ?). At least in short term."

Medium growers:

"Lower export prices will have a detrimental effect on local infrastructures"

"Industry will retrench if allowed to operate under multiple exporters - less revenue, less jobs, less hectares in production."

"The industry will down size, ie less cartons, fewer packhouses less employment - disastrous social and economic effects on district. This will be serious."

Large growers:

"It's hard to see where extra revenue will come from"

"Overall costs will be driven down therefore the province will lose economic benefits not gain any."

"The economic advantages may be off set to a degree by the closure of uneconomic packhouses and pull out of some orchards."

(d) *Increased returns as a result of deregulation in the Pipfruit Industry will come from improvements in:*

(i) *Innovation*

(ii) *Efficiency*

(iii) *Trade negotiations.*

The responses to the questions regarding improvements in innovation and efficiency are summarised in Tables 11 & 12, and the responses regarding trade negotiations are in Table 13.

TABLE 11
Increased Returns from Deregulation through Improvements in Innovation

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	46	55%	15	18%	22	27%	83	100%
Medium	36	47%	13	17%	27	36%	76	100%
Large	5	26%	1	5%	13	68%	19	100%
<i>Total</i>	<i>87</i>	<i>49%</i>	<i>29</i>	<i>16%</i>	<i>62</i>	<i>35%</i>	<i>178</i>	<i>100%</i>

(Chi-Square =12.17, df = 4, p = 0.016)

TABLE 12
Increased Returns from Deregulation through Improvements in Efficiency

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	44	52%	12	14%	28	33%	84	100%
Medium	34	44%	12	16%	31	40%	77	100%
Large	5	26%	0	0%	14	74%	19	100%
<i>Total</i>	<i>83</i>	<i>46%</i>	<i>24</i>	<i>13%</i>	<i>73</i>	<i>41%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 11.50, df = 4, p = 0.021)

An interesting feature of Tables 11 & 12 is that there are statistically significant differences between the responses by grower size (at the 5% significance level). In general, a greater proportion of the large growers (about 70%) agree that deregulation will result in increased returns from improvements in innovation and efficiency compared with the small growers (about 30%) and medium size growers (about 40%). Nevertheless growers from all size groups envisage both positive and negative impacts, including cognisance of the strength that the single desk provides.

Some representative comments include:

Small growers:

“There are some advantages”

“Single desk is the preferred option. ENZA have yet to convince me they have cut their costs enough.”

“Deregulation will not effect trade negotiations. Other countries will not open because we deregulated.”

Medium growers:

“Any improvements gained in innovation and efficiency will be more than lost by lower selling prices”

“The industry will become more innovative as a result of competition but I can't see any benefits to trade negotiations.”

“If ENZA are not generating extra benefit now, why would they in a deregulated environment?”

Large growers:

“ENZA are currently failing to award innovation and is grossly inefficient but it's strength lies in its single desk”

“The economic advantages may be off set to a degree by the closure of uneconomic packhouses and pull out of some orchards.”

“We may benefit from innovation but we will not sustain our industry size and benefits of scale and concentration.”

TABLE 13
Increased Returns from Deregulation through Improvements in Trade Negotiations

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	56	67%	15	18%	12	14%	83	100%
Medium	53	69%	14	18%	10	13%	77	100%
Large	12	63%	0	0%	7	37%	19	100%
<i>Total</i>	<i>121</i>	<i>68%</i>	<i>29</i>	<i>16%</i>	<i>29</i>	<i>16%</i>	<i>179</i>	<i>100%</i>

(Chi-Square = 9.16, df = 4, p = 0.057)

Turning to the issue of trade negotiations, the majority of growers regardless of size are doubtful of any advantages occurring from trade renegotiations if the market is deregulated. However, nearly 20 percent of small and medium size growers are neutral on this issue, whereas nearly 40 percent of large growers expect some improvements in trade negotiations to occur. Generally, growers claim that other countries have subsidies and tariffs whereas New Zealand has a single desk market as their strength. In sum, growers contend that New Zealand is a small player and no change to New Zealand's market controls will have much influence over other countries policies etc.

Small growers:

"Deregulation will not affect trade negotiations"

"Overseas buyers will play one grower off against the other. No amount of innovation, efficiency and trade negotiations will make up for that."

"Deregulation will not effect trade negotiations. Other countries will not open because we deregulated."

Medium growers:

"There is no evidence that trading partners will alter subsidies or tariffs"

"Who cares about what the USA and Russia think. Europe and USA subsidies their growers. They should act before we do anything."

"Harnessing the entrepreneurial, which starves under the present environment. Trade negotiations offer a wider range per variety - larger market share."

Large growers:

"No countries are following New Zealand's example"

"Trade negotiations include Government to Government agreements."

"This is the only area where improvements may come."

- (e) *Deregulation will have a destabilising effect on the New Zealand Pipfruit Industry through:*
- (i) *a threat to the quality of fruit being exported*
 - (ii) *the inability to deliver in a cost effective manner to our external markets*
 - (iii) *threat to grower returns.*

Respondents were asked whether they agreed or disagreed with these statements. The responses to these questions are summarised in Tables 14 to 16 below.

TABLE 14
Deregulation will Threaten Quality of Fruit Exported

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	11	13%	11	13%	62	74%	84	100%
Medium	13	17%	9	12%	55	71%	77	100%
Large	7	37%	3	16%	9	47%	19	100%
<i>Total</i>	<i>31</i>	<i>17%</i>	<i>23</i>	<i>13%</i>	<i>126</i>	<i>70%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 6.88, df = 4, p = 0.142)

Quality is seen as a key component to the success of the New Zealand product, with the small and medium growers particularly concerned as to how this aspect will be managed in a deregulated market place. Over 70 percent of these growers (and nearly half of the large growers) believe that quality will be threatened if the market is deregulated. Comments include:

Small growers:

"There will be less quality control and research"

"You only have to look at the bad quality local fruit under deregulation to see how quality will be effected."

Medium growers:

"The market demands quality"

"Exporters will fight over volumes for export then go bust. Quality will be sacrificed for quantity. More exports mean more overheads."

"Lack of consistency in NZ product quality. Lower volumes will lower cost effectiveness."

Large growers:

"Quality will increase as this will be the main prerequisite that the market buys on"

"... quality and "NZ" brand very important."

TABLE 15
Deregulation will Threaten Ability to Deliver Cost Effectively to External Markets

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	19	23%	17	20%	48	57%	84	100%
Medium	22	29%	16	21%	39	51%	77	100%
Large	10	53%	3	16%	6	32%	19	100%
<i>Total</i>	<i>51</i>	<i>28%</i>	<i>36</i>	<i>20%</i>	<i>93</i>	<i>52%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 7.11, df = 4, p = 0.130)

Small and medium growers are keen to retain the single desk marketing approach which they believe provides the best coordinated delivery approach to international markets (ie marketing, shipping, storage etc). On the other hand a number of the larger growers are confident they could perform these duties better than ENZA.

Small growers:

"If we are exporting fruit over long distances we must have quality systems in place"
"Large volumes via one negotiator creates a drop in shipping costs overseas buys will play off one seller against another."

Medium growers:

"Export companies etc will not be working in the interests of the grower"
"It is a known fact that with another middle man growers tend to lose."
"We are too small internationally to segregate ourselves - we have strength in numbers and our size - enabling us to compete internationally."

Large growers:

"Only the weaker performers will fail"

TABLE 16
Deregulation will Threaten Growers Returns

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	11	13%	6	7%	67	80%	84	100%
Medium	12	16%	5	7%	59	78%	76	100%
Large	6	33%	2	11%	10	56%	18	100%
<i>Total</i>	<i>29</i>	<i>16%</i>	<i>13</i>	<i>7%</i>	<i>136</i>	<i>76%</i>	<i>178</i>	<i>100%</i>

(Chi-Square = 5.33, df = 4, p = 0.256)

Again there is generally strong agreement that returns will be threatened in a deregulated market, although about 33 percent of large growers do not agree that their returns will be threatened. Comments from the smaller growers were particularly of a more blatant nature:

Small growers:

"Quick sales by a few mean disaster"

"It will fragment the industry and make it open to attack."

Medium growers:

"Growers returns will be threatened due to competition between exporters and purchasers trading one exporter off against another."

"Overseas buyers want guaranteed quality and quantity. With multi exporters all pushing their own agenda buyers will go for the cheapest price and re-neg if quality is poor".

Large growers:

"Quality will increase as this will be the main prerequisite that the market buys on and grower cannot afford to cheat the system."

- (f) *Deregulation of the New Zealand Pipfruit Industry will prompt a breakdown of tariffs and subsidised exports in countries competing in the Global Pipfruit market in the near future (1-2 years).*

The responses to this question have been generally negative with very little variance resulting from

TABLE 17
Deregulation will Result in a Breakdown of Tariffs & Subsidies in Competitor Countries

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	56	67%	23	27%	5	6%	84	100%
Medium	60	78%	11	14%	6	8%	77	100%
Large	12	63%	5	26%	2	11%	19	100%
<i>Total</i>	<i>128</i>	<i>71%</i>	<i>39</i>	<i>22%</i>	<i>13</i>	<i>7%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 4.81, df = 4, p = 0.308)

grower size. The most prevalent comments surrounded the small size of the New Zealand crop in relation to the world production. There is little/no confidence that a small producer, far from its competition and markets, will be able to influence any of the larger producers' trade policies. Far from this, most New Zealand growers contend that other countries will not even take any notice.

Small growers:

"Most of the world don't even know where New Zealand is"

"The rest of the world couldn't care less about NZ example - we are already way ahead on lack of subsidies/incentives."

"NZ is only a small player in the pipfruit market. What we do will have no effect on other countries."

Medium growers:

"Large countries wouldn't even notice."

"You have got to be joking."

"Why would they do this - what benefit to them if we deregulate - they would rub their hands together in glee - look at Australians efforts to keep us out of their market."

Large growers:

"We are too small to influence other countries"

"Free trade is a joke and present NZ attempts to rectify are not successful, eg Australia, Taiwan, Korea, Japan and Europe."

"The moral 'high ground' will not lead to tariff reductions."

- (g) *New Zealand as a deregulated market place will continue to be competitive if tariffs and subsidises continued in the Global Pipfruit market.*

TABLE 18
Deregulated NZ Growers Remain Competitive if Tariffs & Subsidies Remain in Global Markets

Growers	Disagree / Strongly Disagree		Neutral		Agree / Strongly Agree		Total	
Small	49	58%	19	23%	16	19%	84	100%
Medium	46	60%	19	25%	12	16%	77	100%
Large	6	33%	5	28%	7	39%	18	100%
<i>Total</i>	<i>101</i>	<i>56%</i>	<i>43</i>	<i>24%</i>	<i>35</i>	<i>20%</i>	<i>179</i>	<i>100%</i>

(Chi-Square = 6.17, df = 4, p = 0.187)

It was interesting to note that nearly 25 percent of the respondents did not provide a firm opinion to this statement. Of those that did respond, it was generally accepted that New Zealand would continue to operate in a deregulated market regardless of any change in competitors' tariffs or subsidies. However, it was believed that returns would comprehensively reduce with deregulation, faced with increased competition and New Zealand's relative lack of bargaining strength without the single marketing desk (especially given the small size of the New Zealand crop). Nevertheless nearly 40 percent of large growers did hold a more positive outlook. Comments include:

Small growers:

"With a weakened and fragmented base other countries will play us off"

"Free trade is a joke and present NZ attempts to rectify are not successful, eg Australia, Taiwan, Korea, Japan and Europe."

"The moral 'high ground' will not lead to tariff reductions."

Medium growers:

"We have to be (competitive), the global market isn't going to change"

"It is blatantly unfair - getting into Australia and Japan will be the solution for us."

"What has changed overseas? Its only NZ that wants to change anything."

Large growers:

"The New Zealand industry will continue to export anyway"

"To many factors can influence returns."

4.3 Support for the Proposed Deregulation

In this sub-section, the views of the Hawkes Bay apple and pear growers are summarised regarding: their level of support for the proposed deregulation of the New Zealand Pipfruit Industry; the time frame for this deregulation to occur; and whether they support a single desk marketing approach for the industry.

(a) *Do you support the proposed legislation to deregulate the Pipfruit Industry in New Zealand?*

TABLE 19
Support for Proposed Deregulation

Growers	Yes		No		Don't Know		Total	
Small	14	17%	64	76%	6	7%	84	100%
Medium	16	21%	59	77%	2	3%	77	100%
Large	8	42%	11	58%	0	0%	19	100%
<i>Total</i>	<i>38</i>	<i>21%</i>	<i>134</i>	<i>74%</i>	<i>8</i>	<i>4%</i>	<i>180</i>	<i>100%</i>

(Chi-Square = 8.35, df = 4, p = 0.080)

The results show that approximately 75% of the respondents do not want to have the industry deregulated. Of those who support deregulation this was predominantly from the larger growers (42%) who believe that they could manage the complete supply chain better themselves. However, an important factor is the general dissatisfaction with ENZA from all growers regardless of size. This dissatisfaction stems from claims of inefficiency and a lack of accountability.

Small growers:

"I don't believe the board (ENZA) is perfect, but this is a problem for the growers to contend with. Our industry our choice"

"I think if deregulated - growers will be competing against each other which will reduce returns."

"We don't know how lucky we are until we lose it!"

Medium growers:

"I support a single desk but the present system is not working"

"Deregulation should only be on the agenda when it can be shown that the advantages far outweigh the status quo. The current situation is damaging to the industry and needs to be removed from the public (international) arena."

"We don't want deregulation ever."

Large growers:

"Deregulate as soon as possible, as we are going broke while ENZA strengthens it's position"

"The longer the arguments against deregulation continue the more divided the growers will become and more harden the attitudes rather than focusing on growing high quality fruit and marketing for the highest returns to growers."

(b) *If you answered yes to 3.3(a) above (ie you support the proposed deregulation), what is your recommended timeframe for deregulation of the New Zealand Pipfruit Industry?*

TABLE 20
Recommended Time Frame for Deregulation

Growers	0-6 mths		7-12 mths		> 1 yr		Total	
Small	5	42%	2	17%	5	42%	12	100%
Medium	7	44%	4	25%	5	31%	16	100%
Large	5	63%	2	25%	1	13%	8	100%
Total	17	47%	8	22%	11	31%	36	100%

(Chi-Square = 2.11, df = 4, p = 0.716)

Of those who do support deregulation of the industry, the majority (nearly 70%) want it to happen within the next twelve months. Primarily they do not want uncertainty to drag on and damage relationships with overseas customers, and the large growers in particular don't want ENZA to get a head start in the management of the end to end supply chain.

Small growers:

"A drawn out process will de-stabilise"

"Doing it slowly will give more time to find pitfalls."

Medium growers:

"If deregulation is sanctioned we must get on with it quickly"

Large growers:

"ENZA are endeavouring to put controls in place to make it more difficult for others to operate, and they shouldn't get too much time"

(c) *Do you favour a single desk marketing approach for the New Zealand Pipfruit Industry?*

TABLE 21
Support for a Single Desk Marketing Approach

Growers	Yes		No		Don't Know		Total	
Small	68	82%	10	12%	5	6%	83	100%
Medium	61	80%	15	20%	0	0%	76	100%
Large	13	68%	6	32%	0	0%	19	100%
<i>Total</i>	<i>142</i>	<i>80%</i>	<i>31</i>	<i>17%</i>	<i>5</i>	<i>3%</i>	<i>178</i>	<i>100%</i>

(Chi-Square = 9.88, df = 4, p = 0.043)

The responses to this question were similar to that in Table 19 above. However, the Chi-Square tests indicate that responses by grower size are statistically different at the 5% significance level.

Overall, about 80% of the respondents support the current system of a single desk marketing approach, as they perceive this as a strategic advantage when negotiating with the overseas customers. However, nearly one third of the large growers do not support this. Again considerable comment was made that this and ENZA was not synonymous. The nature of the smaller growers comments were particularly sensational and emotional.

Small growers:

"Leave our industry alone"

"Single desk is the only bargaining power we have."

"This system of marketing is still working. There are more pluses than minuses."

Medium growers:

"Our industry is too small for multiple exporters"

"A single desk market structure is the best system for NZ pipfruit however we must make ENZA more accountable and efficient and unfortunately the only way to do this is to provide some competition."

"The question you have not asked - I support a single desk approach but the present system is not working. The Boards has become a bureaucratic monster."

Large growers:

"Total monopoly creates contempt"

"The single desk should not be threatened, however ENZA fruits performance is not good enough and must dramatically improve for NZ growers to survive."

"I do not support the loss of single desk selling mechanism. But ENZA are grossly out of line as regard growers requirements and ENZA must change or move aside."

5. Concluding Comments

Although the apple and pear growers are major stakeholders in the current debate about the proposed deregulation of the Producer Boards in New Zealand, there does not appear to have been any systematic attempt to find out what their attitudes are to the proposed deregulation of the boards, and of the NZ Apple and Pear Marketing Board (ENZA) in particular. This paper attempts to address this need and presents the results of a postal survey of Hawkes Bay pipfruit growers about their perceptions of the effects of a deregulated apple and pear market. Although the findings contained in this report do not represent the views of all pipfruit growers in New Zealand, they represent the Hawkes Bay pipfruit growers, who constitute about 55 percent of the total number of NZ pipfruit growers and account for about 60 percent of NZ's pipfruit exports.

The main conclusions that can be drawn from this research are:

- Although most growers are aware of the proposed deregulation, only 35 percent of growers indicated that they had received any information from Government. They particularly want more information about the expected financial and economic implications of the deregulation, and more information about the experiences of overseas countries that have introduced competitive export marketing of pipfruit.
- The majority of growers do not think that the deregulation will result in any economic or competitive advantages for NZ growers or any additional economic benefits for their districts.
- Although large growers generally believe that deregulation will result in increased returns from improvements in innovation and efficiency, the majority of small growers don't think there will be increased returns, with medium growers holding balanced views.
- The majority of small and medium growers are concerned that the quality of fruit exports will be threatened, whereas large growers are not so convinced.
- Small and medium growers are more concerned that market deregulation will result in less cost effective delivery services to international markets, whereas a significant number of large growers believe they can do better than ENZA.
- The majority of growers do not believe that market deregulation will result in improved trade negotiations or a breakdown of tariffs and subsidised exports in competitor countries, and most small and medium size growers believe that they will be worse off in international markets.

- The majority (75%) of growers do not support the proposed deregulation of the NZ pipfruit industry, although about 40 percent of large growers do. However, if deregulation does proceed, then most growers want it to happen over the next 12 months.
- Finally, a clear majority of growers (80%) support the single desk marketing approach, although over 30 percent of large growers do not. However, there were a number of concerns expressed about the performance of ENZA, and some growers that supported single desk marketing indicated that did not mean they supported ENZA in its present form.

There are a number of limitations to this study that should be noted. Firstly, this was a single shot survey undertaken in October 1998, and because of the seasonal nature of pipfruit growing, a number of potential respondents may not have received the questionnaire. Secondly, it must be stated that it was not the objective or practical to determine all of the drivers and economic effects of deregulation. Finally, this research is only representative of Hawkes Bay growers, and therefore it does not cover New Zealand as a whole.

Notwithstanding these limitations, we believe that the research findings presented in this paper can be of value to:

- The pipfruit growers in New Zealand to help share the concerns of their colleagues from the Hawkes Bay regarding the proposed deregulation of the pipfruit industry (marketing board);
- The New Zealand Apple and Pear Marketing Board (ENZA) in terms of helping ENZA to understand the needs and concerns expressed by their suppliers (ie the growers); and
- The New Zealand Government Select Committee and Government departments that are presently considering issues associated with deregulating the Producer Boards.

Finally, it is hoped that this study will also provide a benchmark of growers opinion if deregulation of the Producer Boards does proceed. It will be interesting and informative to evaluate the opinion of the Hawkes Bay apple and pear growers in the future, if they do have choices for exporting their produce (ie pipfruit) through organisations other than just the NZ Apple & Pear Marketing Board (ENZA) as at present.

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References

- Alison, P. (1998) From - Don't penalise us, growers tell Peters. *Hawkes Bay Herald Tribune*, 5 June.
- Chaplin, G. (1997). *Restructuring of Israeli citrus fruit export marketing*. Unpublished report to the Minister of Finance. (released under the Official Information Act). The New Zealand Treasury, 6 June.
- Chaplin, G. (1998) *Summary of Business Roundtable's submission on the Producer Board Acts Reform Bill*. Unpublished report to the Treasurer. (released under the Official Information Act). The New Zealand Treasury, 23 October.
- Collin, R. (1998) Farming : Orchardists fear deregulation. *The Dominion*, 28 August, p11.
- du Fresne, K. (1998) Producer Board Reforms : Farmers know what's best for them.. *The Evening Post*, 30 November.
- Easton, R. (1998) Apple growers support single desk marketing. *Evening Standard*, 9 September, p12.
- Edlin, B. (1998a) Producer Boards : Will they meet the reform Deadline ? *The Independent*, 3 June.
- Edlin, B. (1998b) Producer Boards : The nine statutory producer boards. *The Independent*, 10 June, p24.
- ENZA (1998) *Website of the New Zealand Apple and Pear Marketing Board*.
<http://www.enza.co.nz/>
- Fouhy, P. (1998) Farm View : The proposal is being driven by free market ideology. *The Daily News*, 12 November, p16.
- Hall, T. (1997) The producer board war. *Chartered Accountants Journal of New Zealand*, November, p76.
- Kitchin, P. (1998) Farming : Orchardists fear deregulation. *The Dominion*, 28 August, p11.
- Levine, D.M., Berenson, M.L. and Stephan, D. (1998) *Statistics for Managers using Microsoft Excel*, Upper Saddle River, New Jersey: Prentice Hall.
- Marris, J. (1998) Minister's anti-producer board stance "off beam". *Marlborough Express*, 24 August.
- McCliskie, J. & Smith, G. (1998) *Where to from Here*. New Zealand Apple and Pear Marketing Board, Wellington (ENZA & PGNZD), 29 September.
- McCliskie, J. (1998a) From - Apple chief talks with growers. *Daily Telegraph*, 28 May, p6.
- McCliskie, J. (1998b) From - Cover Story : Producer Boards take stock for November deadline - Real gain for growers yet to be proved. *Straight Furrow*, 6 June, p21.
- Mercer, G. (1998) Pip-fruit not exempt from deregulation. *Hawkes Bay Herald Tribune*, 5 June.
- Microsoft (1996) *Microsoft Excel Version 7*, Microsoft Corporation, Redmond WA, USA.
- Morgan, G. (1998) The Bottom Line: Dairy's privilege costs others. *The Evening Post*, 25 November.
- NZPA (1998a) *Producer boards meet report deadline*. New Zealand Press Association (Reuters) 15 November.
- NZPA (1998b) *ENZA and govt meet over reform plan*. New Zealand Press Association (Reuters) 16 November.
- Papesch, M. (1997) *South African Producer Board reforms*. Unpublished report to the Minister of Finance. (released under the Official Information Act). The New Zealand Treasury, 13 October.
- Sekaran, U. (1992) *Research Methods for Business: a skill building approach*, 2nd ed. New York: Wiley.
- Shiple, J. (1998) From - Rural news : Little rhyme reason or research behind producer board reforms. *Agribusiness*, 1 June, p20.
- Sinclair, G. & Papesch, M. (1998) *Producer Boards : Current status and strategy*. The New Zealand Treasury, 9 April.

- Smeaton, G. (1998) From - Deregulation of apple industry will affect local orchardists and economy. *The Guardian*, 8 June, p1.
- The Orchardist (1998) Trade Remedies have been weak, say Federations. *Journal of the New Zealand Fruitgrowers Federation*, June, p7.
- Venter, N. (1998a) Politics - News : Mixed signals to pipfruit growers. *The Dominion*, 5 June, p2.
- Venter, N. (1998b) *Open season on boards ends with routed Luxton ducking for cover*. *The Dominion*, 16 November, p2.
- Weinburg, Y. (1996) *From one hand to free enterprise : the Israeli experience*. 25 October 1996. In: Chaplin, G. (1997). *Restructuring of Israeli citrus fruit export marketing*. Unpublished report to the Minister of Finance. (released under the Official Information Act). The New Zealand Treasury, 6 June, p6.
- Young, A. (1998) MP relieved at backdown on boards. *New Zealand Herald*, 13 November.

Appendix

Hawkes Bay Apple & Pear Growers Deregulation Attitudes Survey

Date

Dear Grower,

As part of the Diploma of Business Administration course of study at the Graduate School of the Victoria University of Wellington, it is a requirement that a piece of market research is undertaken.

The subject that has been identified and developed by my study group is *"the perceived effect of deregulation on the pipfruit industry in the Hawkes Bay"*. We have formulated a questionnaire to address two specific issues within this topic, which are outlined within the document itself.

You will find a copy of this questionnaire attached, which as a Hawkes Bay pipfruit grower we would like you to complete. Your honest impressions and opinions are vital to ensure the effective completion of this research.

We would like to stress that the researchers undertake to ensure complete confidentiality, and that there will be no means of identifying individual responses. The responses will be summarised and aggregated in a final report.

We encourage you to complete the questionnaire, and if possible please return in the pre-paid return envelope provided by **Thursday the 24th of September 1998**.

It is our intention to publish the results of our study in a trade publication in due course. A copy of a summary report will be made available on request.

Thanking you in advance for your valuable assistance.

Regards,

Paul Carroll
Research Co-ordinator

About this survey....

The purpose of this survey is to gain an understanding of the level, to which growers are informed about the effects of deregulation of the New Zealand Pipfruit Industry, and also the level of support for the Government's direction for deregulation.

In the process, we want to compare the attitudes of Large, Medium and Smaller growers and, in a similar dimension, the length of time the respondents have been in the industry.

Your response will be completely confidential as individual responses will not be identifiable in the survey results.

Thank you for taking the time to complete this survey. Please tick the box and write your comments where appropriate.

About you and your business :

1) What was the tray carton equivalent produced by your orchard last year?	Under 12,000	12,000 to 49,999	50,000 and over
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2) How many years have you been a producer in the Pipfruit Industry?	0-5 years	6-10 years	11-20 years	21-30 years	31 plus years
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3) Orchard ownership	<input type="checkbox"/> Personally own the orchard
	<input type="checkbox"/> Manage the orchard on behalf of another party
	<input type="checkbox"/> Own the orchard with another party
	<input type="checkbox"/> Other (please specify)

4) Age group	under 20	20-29	30-39	40-49	50 plus
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

5) Gender	Female	Male
	<input type="checkbox"/>	<input type="checkbox"/>

This section is designed to gain an understanding of the information you have acquired in relation to the proposed deregulation of the New Zealand Pipfruit Industry.

6. Are you aware of the proposed legislation for deregulation of the New Zealand Pipfruit Industry?	Yes No <input type="checkbox"/> <input type="checkbox"/>
7. Where have you gained knowledge in relation to the proposed legislation to deregulate the New Zealand Pipfruit Industry? (Please tick appropriate boxes)	<input type="checkbox"/> Newspaper <input type="checkbox"/> Other Growers <input type="checkbox"/> ENZA <input type="checkbox"/> Hawkes Bay Pipfruit Assc <input type="checkbox"/> Local MP <input type="checkbox"/> NZ Government <input type="checkbox"/> Trade Publications <input type="checkbox"/> Other (please specify)
8. Has the New Zealand Government clearly articulated the effects of deregulation on the Pipfruit Industry to you?	Yes No Don't Know <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
9. Are you interested in gaining more information as to the effects of deregulation on the Pipfruit Industry?	Yes No Don't Know <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
If so, what additional specific information would you like to know?	

This section is to gauge your views as to the effects of deregulation.

10. Deregulation of the New Zealand Pipfruit Industry will create further economic advantage for your orchard.	Strongly Disagree Disagree Neutral Agree Strongly Agree <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Please comment:</i>	
11. New Zealand growers will benefit from deregulation of the Pipfruit Industry through further: a) competitive advantage b) economic advantage.	Strongly Disagree Disagree Neutral Agree Strongly Agree <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Please comment:</i>	
12. Economic benefit for your provincial district will be generated as a result of deregulation (eg additional revenue generated via coolstores, packhouses and in the transport industries).	Strongly Disagree Disagree Neutral Agree Strongly Agree <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Please comment:</i>	

13. Increased returns as a result of deregulation in the Pipfruit Industry will come from improvements in:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please comment:

14. Deregulation will have a destabilising effect on the New Zealand Pipfruit Industry through:	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please comment:

15. Deregulation of the New Zealand Pipfruit Industry will prompt a breakdown of tariffs and subsidised exports in countries competing in the Global Pipfruit market in the near future (1-2 years).	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please comment:

16. New Zealand as a deregulated market place will continue to be competitive if tariffs and subsidises continued in the Global Pipfruit market.	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please comment:

Finally, can you tell us;			
17. Do you support the proposed legislation to deregulate the Pipfruit Industry in New Zealand?	Yes	No	Don't Know
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18. Do you favour a single desk marketing approach for the New Zealand Pipfruit Industry?	Yes	No	Don't Know
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19. If you answered yes to question 17 what is you recommended timeframe for deregulation of the New Zealand Pipfruit Industry:	0-6 mths	7-12 mths	1-2 years
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	2-3 years	3-5 years	
	<input type="checkbox"/>	<input type="checkbox"/>	

Please comment:

We appreciate you taking the time to complete this questionnaire

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