

AGRICULTURAL
ECONOMICS
RESEARCH UNIT



Lincoln College

STABILISING POST-TAX
INCOMES OF
NEW ZEALAND SHEEP FARMS

by

P. D. CHUDLEIGH

M. J. BLACKIE

J. B. DENT

Research Report No. 75

1976

THE AGRICULTURAL ECONOMICS RESEARCH UNIT

THE UNIT was established in 1962 at Lincoln College, University of Canterbury. Its major sources of funding have been annual grants from the Department of Scientific and Industrial Research and the College. These grants have been supplemented by others from commercial and other organisations for specific research projects within New Zealand and overseas.

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PREFACE

The Unit has a continuing interest in farm income stabilisation and the effects of the taxation system on the stability and tax equity of post-tax farm incomes.

With the continuation into 1976 of the debate on farm income stabilisation, and especially with the recent proposals for product price smoothing schemes, we consider it appropriate to carry out further research in this area.

This report is not intended to answer such questions as income sufficiency versus income distribution from year to year, or the merits of stabilising post-tax income as opposed to gross farm income. However, we have set out to assess the implications of a number of farm income smoothing schemes (including product price smoothing) with respect to post-tax incomes of individual farms.

Owen McCarthy
Director

May 1976

SUMMARY

Investigations into the effects of various measures aimed at stabilising sheep farmers' incomes were initiated in 1975 using historical data from 15 farms. Stabilising measures compared included:

- (i) Price smoothing for wool and lamb.
- (ii) Income averaging for taxation purposes.
- (iii) Use of the current income equalisation scheme.
- (iv) Use of the self-assessment provision when calculating provisional tax payments.

Schemes were compared with respect to their effect on reducing variability of post-tax income for each farm. Comparisons were also made in terms of each scheme's contribution to an improved tax equity situation for farmers on variable incomes.

The income equalisation scheme yielded the greatest potential for reducing post-tax income variability. Considerable reduction in variability was also achieved when provisional tax was based on an estimate of income in the current year. Price smoothing for wool and lamb and income averaging for tax purposes produced only small reductions in post-tax income variability.

Income averaging created the most equitable tax situation of all schemes considered. The effect of price smoothing on the tax equity situation was negligible whilst use of the income equalisation scheme improved the situation to some degree.

The major policy implications arising from the study were:

- (i) Farmers and accountants should be encouraged to a greater degree to utilise the self-assessment provision in calculating provisional tax.
- (ii) Price smoothing for wool and lamb appear not to have a marked effect on the stability of post-tax incomes. However, real effects of price smoothing schemes on post-tax income stability may be somewhat greater than

inferred from this study. In addition, benefits other than post-tax income stability may arise from price smoothing schemes (e.g. more efficient farm planning, greater income stability at the industry or national level).

- (iii) Income averaging for tax purposes yields a significant improvement in the inequitous tax situation faced by farmers on variable incomes. However, income averaging does little to stabilise post-tax incomes. The additional tax paid by individual farmers on variable incomes is not high in absolute terms and is probably not worth the administrative burden of introducing schemes to reduce it.
- (iv) The income equalisation scheme has a great potential for stabilising post-tax incomes and also some potential for reducing tax inequity. However, the current opportunity cost on deposits bearing no interest must be a deterrent to current use. The scheme should be made more attractive to farmers and it is recommended that an appropriate interest rate should be paid on deposits.

1. INTRODUCTION

A range of Government and industry stabilisation policies aimed at combating the effects of variable climatic conditions and severe fluctuations in product prices on farmers' incomes have been practised in varying degrees in many countries. A recent account of past and current schemes to effect such policies within the New Zealand context is given in the report of the Farm Incomes Advisory Committee, hereafter referred to as the Zanetti Report (Zanetti et al. 1975).

The disadvantageous effects of highly variable farm incomes have been described by Stewart (1967) and in the Zanetti Report. Apart from the disrupting effect on planning and investment for the individual farm, variable farm incomes can produce considerable waste and inefficiency in the agricultural service industries and in other sectors of the economy. Much of this inefficiency is created by the variable demand for goods and services arising from farmers' changing economic circumstances.

It might appear that stabilisation measures should be aimed at stabilising gross farm receipts so that investment can be maintained at a more constant level. However, farmers' investment decisions are probably not only related to expected levels of gross farm income but also to their expected post-tax incomes. Greater stability in post-tax incomes (either through some form of income equalisation or directly through the taxation system) should result in more confidence and hence more stable investment levels with beneficial effects to the individual farmer and to other sectors of the community. In addition, the social and welfare benefits to the farming community of more stable post-tax incomes (e.g. continuity of employment for farm workers, more stable personal consumption patterns for the farm family) could be considerable.

The taxation system can influence both post-tax income variability and the fairness (equity) with which the taxation burden is distributed between different groups of taxpayers. Under a system of progressive taxation such as exists in New Zealand, variable incomes are subject to higher overall tax than a constant income series with the

same average; similar situations in other countries have resulted in the introductions of schemes aimed at eliminating or reducing this inequity. Thus, although the major point of interest in this study is post-tax income variability, the equity effects of different schemes also receive some consideration.

The following report is primarily concerned with mechanisms for the stabilisation of individual farmers' incomes rather than stabilisation at the industry or national level. In addition, stabilisation as considered here refers to the reduction in year to year variation in post-tax income levels of individual farmers rather than the maintenance of incomes at any specific or desirable level relative to other members of the community.

The work described in this report is an empirical attempt to investigate various procedures and schemes aimed at reducing post-tax income variability of New Zealand sheep farmers. Section 2 of this report is a brief review of some measures aimed at reducing post-tax income variation and includes a description of the schemes selected for this study. Section 3 describes the data and the procedures adopted in comparing the various selected schemes. Section 4 presents the results of empirical analyses in terms of the degree of variation in post-tax income achieved under the different schemes; average post-tax incomes are also reported in order to assess the tax equity producing attributes of the various schemes. Finally, a discussion of these results and their implications for policy is given in Section 5 of the report.

2. SELECTION OF SCHEMES FOR COMPARISON

Variation in annual farm expenditure stems principally from variation in gross farm income. Expenditure usually rises in high income years and falls in low income years, this pattern being reinforced through a desire to minimise taxable income. Whilst the disadvantageous effects of this high income - high spending relationship have been mentioned earlier, the relationship does have a stabilising effect on post-tax incomes and the resulting expenditure pattern could be viewed as a means by which farmers currently attempt to stabilise their post-tax income. This study explores a number of mechanisms that could be viewed as alternatives to farmers modifying their expenditure pattern in order to minimise tax payments in individual years.

2.1 Product Price Smoothing

The first area considered here is that of product price stabilisation which was viewed in the Zanetti Report as the principal area of importance in income stabilisation. However, while the Zanetti Report examined the effects of price smoothing procedures on prices, the effects on incomes were not studied in detail.

Most price stabilisation schemes for export produce rely on some form of price smoothing from year to year and necessitate the use of buffer stocks or buffer accounts. The schemes assumed for the purposes of this study refer to moving average prices where, for example, a wool payout price is calculated as the average of wool prices over a number of previous years. An earlier study using historical records from a Lincoln College sheep farm (Dent and McArthur, 1975) showed that the averaging of only one product price (e.g. lamb) had a much lesser stabilising effect than when two product prices were smoothed. Thus, price smoothing in this report refers to the smoothing of both wool and lamb prices. It is assumed that such schemes are accompanied by buffer accounts which would be self balancing in the long term. It was decided that extensions into schemes where floor and/or ceiling prices operate would have lesser stabilising virtues than the simple moving average scheme and have therefore not been explicitly included in the current exercise.

Moving averages for product prices were calculated over both two and three years. Two other variations of price smoothing were studied:

- (i) the payout price for the current year included an estimate of the export price for the current year. In each case it was assumed the estimate was correct; the net effect was to calculate the moving average for the current year as the average of the export price of the current year and the export price(s) of the previous year(s).
- (ii) the payout price for the current year excluded any estimate of the export price for the current year. Thus, a two year moving average for the current year was calculated as the average of prices for the two previous years.

2.2 Calculation of Provisional Tax

A second potential area for stabilisation of post-tax incomes is through the taxation system. In this regard the necessity of farmers to pay provisional tax and the resulting choice of the basis upon which provisional tax is calculated are key factors in the taxation system. Taxable income variation is transformed into even higher variation in post-tax incomes due to the present way that the provisional and terminal tax provision is met. However, post-tax income variability may be reduced substantially by calculating provisional tax from an estimate of the current year's income instead of from the previous year's income (McArthur, 1970; Dent and McArthur, 1975; Charlton, 1975). It follows that benefits may accrue to an early estimate of income which in turn may imply a need for more efficient farm recording and accounting practices. Alternatively, McArthur (1970) has suggested that the Tax Department should utilise a moving average income as the basis of provisional taxation rather than the income of the previous year.

A comparison of income stability for three methods of calculating provisional tax is made in the present study:

- (i) provisional tax based on the income from the previous year.

- (ii) provisional tax based on an estimate of the income of the current year when the latter is expected to be lower than income in the previous year.
- (iii) provisional tax based on an estimate of the income of the current year in all circumstances.

2.3 Income Averaging

Although income averaging for tax purposes is not practised in New Zealand, countries such as Australia, Canada and U.S.A. all have income averaging schemes. These schemes are all aimed at reducing the extra tax burden carried by variable incomes. An excellent account of various income averaging procedures is given in Chisholm, (1971).

The current Australian income averaging system uses the average taxable income over the past four years and the current year to determine an average tax rate; this average tax rate is then applied to the current year's taxable income. In recent years this scheme has come under considerable criticism, not for its equity producing attribute but because it has been held that the system accentuates post-tax income variability by forcing a higher tax payment in low income years than would be the case without averaging (Chisholm, 1971; Harris *et al.*, 1974). The most popular alternative averaging system proposed in Australia to overcome this disadvantage has been termed the 'marginal adjustment scheme'. The advantages of the marginal adjustment scheme (M.A.S.) have been listed in Harris *et al.*, (1974). Under the scheme, current tax liability is calculated on the average taxable income over a pre-set number of years. If the actual taxable income for the current year is higher than the average, an extra tax component is calculated by applying the marginal rate of tax on the average income to the difference between the actual and average income; if the actual income is lower than the average, the same component is calculated but is subtracted from the tax payable on the average income. Thus, the system approaches a pay-as-you-earn (P.A.Y.E.) system with higher tax being paid in high income years and lesser amounts of tax paid in low income years. However, Trebeck and Barker (1975) suggest the scheme does not operate successfully when a provisional/terminal tax system is operating and where estimation of income for the current year is not practised. Also, the Australian

Taxation Office has pointed out that the system could be abused by manipulation of income between years influencing the average income by a small margin and so changing the marginal tax rate which increases or decreases in discrete steps (Anon, 1975). Although the MAS has perhaps waned in popularity in Australia, it is selected here as a viable averaging alternative since as well as lessening the tax inequity, it was expected to stabilise post-tax incomes to some degree.

In the current study, the MAS has been evaluated using a 3, 5, and 7 year average. It has been assumed that the average is derived from an estimate of the current year's taxable income and actual taxable incomes of the previous 2, 4, and 6 years respectively. The MAS has been evaluated under the assumption that taxable income for the current year can be correctly estimated.

2.4 Income Equalisation Scheme

An income equalisation scheme has been in operation in New Zealand since 1965. Hinkley and Taplin (1966) used trend free data from ten properties in the pastoral zone of western N.S.W. in Australia to compare the equity improving attributes of the current Australian income averaging scheme with the New Zealand income equalisation scheme. The study concluded that the income equalisation scheme (IES) had a greater effect in reducing variability of post-tax income than income averaging. However, it was found that the tax saving was greater under averaging than equalisation except when average incomes were high; averaging of incomes resulted in tax payable roughly equal to that paid under a constant income series. Without averaging the extra amount of tax paid on a mean taxable income of \$6,000 and with a standard deviation of \$3,000 (as compared with a constant taxable income of \$6,000) was calculated by Hinkley and Taplin for the Australian situation as \$189 p.a. McArthur (1969) reported that the same comparison under New Zealand conditions resulted in the variable income attracting an extra tax commitment of \$266 p.a.; the higher penalty in New Zealand was explained as resulting from more progressive New Zealand tax rates. However, McArthur concluded that the expected extra tax payments for many farmers would only be small in absolute terms and therefore that the inequity created was of little significance. McArthur (1971) has compared the tax saving gains from using the IES against the opportunity cost of tying

up money in an account bearing no interest. He suggests that only a small gain can be achieved unless incomes are highly variable. However, McArthur did not assess the scheme in terms of reducing post-tax income variability.

Charlton (1975) has provided guidelines for efficient use of the current IES in New Zealand, suggesting that only limited deposits should be made and then made only on a short term basis. He suggests that where the scheme bears no interest, benefits are likely to be small.

In the present study the IES was investigated under two assumptions relating to the proportion of taxable income that may be deposited in the scheme in any one year (25% and 100%). It was also assumed that the minimum deposit or withdrawal was \$200 and that no interest was paid on deposits. In addition to the above assumptions different operator decision rules were evaluated. It could be argued that equalisation accounts should have ceilings since most farmers would be unwilling to build up large reserves in an account that was bearing no interest. Two maximum levels of accounts (\$5,000 and \$15,000) were investigated. Two sets of decision rules for deciding how much an operator would deposit or withdraw from an account in any year were examined following Hinkley and Taplin (1966).

- (i) that the operator would deposit one half of the difference between his long term average taxable income and actual taxable income if his actual income was above the average; if the actual income was below the average, it was assumed that the operator would withdraw one half of the difference provided this was available in his account.
- (ii) that the operator would deposit or withdraw the whole difference between the actual and average taxable income.

2.5 Summary of Schemes Selected

A summary of all schemes studied is given in Table 1. It should be noted that various combinations of schemes were also evaluated.

TABLE 1SUMMARY OF SCHEMES INVESTIGATED

TYPE OF SCHEME	DESCRIPTION OF SCHEME
BASIS FOR PROVISIONAL TAX	(i) Provisional tax based on taxable income from previous year
	(ii) Provisional tax based on estimate of taxable income of current year when latter is expected to be less than previous year
	(iii) Provisional tax based on estimate of taxable income of current year
PRICE SMOOTHING FOR WOOL AND LAMB (a)	(i) Two year price smoothing including an estimate of price for current year
	(ii) Two year price smoothing using historical prices only
	(iii) Three year price smoothing including an estimate of price for current year
	(iv) Three year price smoothing using historical prices only
MARGINAL ADJUSTMENT AVERAGING SCHEME (MAS) (b, c)	(i) Averaging taxable income over 3 years
	(ii) Averaging taxable income over 5 years
	(iii) Averaging taxable income over 7 years
INCOME EQUALISATION SCHEME (IES) (a, c)	(i) A maximum of 25% or 100% of taxable income can be deposited
	(ii) A maximum of 50% or 100% of the difference between actual and average taxable income can be deposited or withdrawn from the account
	(iii) The equalisation account has a maximum level of \$5,000 or \$15,000.
(a)	Evaluated for all methods of calculating provisional tax.
(b)	Evaluated for provisional tax based on estimate of income of current year.
(c)	Evaluated with and without two and three year price smoothing with estimate.

3. DATA AND ANALYTICAL PROCEDURES UTILISED

3.1 Data Assembly

In order to investigate the effects on individual farms of the different schemes considered, a simulation model was built that used historical farm data obtained with the assistance of the Economic Service of the Meat and Wool Board. The data referred to 15 farms drawn from the eight farm types as defined by the Economic Service; two farms were drawn from each of the eight farm types, except that only one set of farm data referred to the high hill country of the South Island. The eight farm types and a brief description of each are given in Appendix I. Data available for each farm varied over a period of 15-22 years; the last year for which data were extracted was 1971/72.

The information extracted for each farm for each year included:

- (i) Price received for wool.
- (ii) Weight of wool sold.
- (iii) Number of lambs sold.
- (iv) Price received for lambs.
- (v) Other income including sheep trading account profits and all beef trading profits.
- (vi) Expenditure.

Data on beef prices and output proved difficult to standardise due to the different beef age and type categories involved and an apparent year to year variation in the beef product turned off an individual farm. Hence, income from beef was included in the 'other income' category.

3.2 Removal of Trend in Gross Income and Expenditure

Since the schemes under examination here are not primarily intended to reduce income variability related to inflationary trends, it was considered appropriate to remove any time trends in the data. Thus, all expenditure and income components were adjusted so that all were expressed in 1971/72 terms. An advantage of equating all incomes to 1971/72 was that only one tax schedule was required for tax calculations. The removal of trend from gross income and expenditure

also meant that long term changes in output due to development or intensification were also removed. Simple linear regression with time as the independent variable was used to remove the trend effects; trend coefficients for gross income were positive for all farms and significant for 13 of the 15 farms. The 15 coefficients varied between \$165 and \$997 per annum. Trend coefficients for expenditure were positive and significant for all farms, coefficients varying between \$69 and \$796 per annum.

3.3 Other Assumptions

Perhaps the most critical assumption made before the analysis was carried out was that all production systems, output and marketing decisions of the farm operator would remain unchanged. This could be regarded as somewhat unrealistic since many of such decisions would likely be altered to take account of any price or income stabilising schemes that were introduced. Of particular concern was the possibility that decisions affecting output may have been different given a product price smoothing scheme. Also of concern was the suspected relationship between expenditure and gross incomes. Farmers undoubtedly spend more in high income years than in low income years and since price smoothing schemes would modify the gross income patterns the expenditure patterns should reflect the changing gross income. Thus, the actual expenditure for each year was adjusted to take into account any change in gross income occurring as a result of price smoothing schemes. The basis for such an adjustment was a simple linear regression equation fitted for each farm between the trend free gross income and the trend free expenditure; significant positive relationships were derived in seven of the fifteen sets of data examined.

3.4 Criteria for Comparison

The principal objective of the analyses was to compare the post-tax income stability achieved by the various selected schemes. The standard deviation of post-tax income was taken as a measure of the stabilising effect of the different schemes. A secondary objective was to compare the taxation equity effects of the different schemes. The post-tax income mean for each scheme was compared with a benchmark; this benchmark was the post-tax income that would have been achieved if taxable income had been constant each year at the mean taxable income level.

Because of the 'lead-in' period necessary to achieve correctly constructed price and income averages for a particular year, results for the first four years were not used in the calculation of means and standard deviations. 'Carry-over' effects were expected in results for the IES, and also for price smoothing. Under the IES, deposits held in the account at the end of the last year affected the calculation of the mean post-tax income. It was assumed that the difference between the final year deposits and the deposits held at the end of the fourth year of the series would be taxed at the marginal rate of tax for the average taxable income received. The post-tax proceeds were then added to or subtracted from the post-tax income series in the calculation of the mean. For the price smoothing schemes, any abnormally high prices in the first four years of the series would boost both taxable and post-tax incomes; this was compensated for by applying the marginal rate of tax for the average taxable income received to the difference between mean taxable incomes with and without price smoothing; this amount was then added or subtracted to the mean post-tax income calculated.

4. RESULTS OF COMPARISONS BETWEEN SCHEMES

Results are presented in three categories:

- (i) a comparison of variation in post-tax incomes between different schemes.
- (ii) a comparison of mean post-tax incomes between different schemes.
- (iii) a comparison of the different assumptions concerning the income equalisation scheme.

4.1 Variation in Post-Tax Incomes

Standard deviations of the post-tax income series for each farm for each stabilisation measure examined are shown in Appendix 2. An aggregated summary of these results is given in Table 2.

4.1.1 Price Smoothing

For each method of calculating provisional tax, only five farms gained more than a 5% reduction in the standard deviation of post-tax income under a two year price smoothing scheme with estimate. For three year price smoothing with estimate eight of the fifteen farms gained more than a 5% reduction. For four farms post-tax income variation was actually increased by price smoothing; it appeared that high gross incomes were not always associated with high prices for wool and lamb; this meant that a low price for these products may be received in a relatively high income year and smoothing the price (that is, increasing it) causes income in that year to reach even higher levels. The converse is true for low income years when high prices have been achieved. This negative correlation may have been brought about by the relatively large contribution made to gross income from sources other than wool and lamb; namely from sheep trading profits, and from cattle. It is not suggested here that price smoothing would actually destabilise post-tax incomes on some farms but under the assumptions made in this study price smoothing contributes very little to post-tax income stability on some farms.

A similar pattern of post-tax income variation appeared when an estimate of the current year's price was not included in the payout price calculation.

TABLE 2 MEAN STANDARD DEVIATIONS OF POST-TAX INCOME FOR
DIFFERENT SCHEMES OVER ALL FARMS

	MEAN STANDARD DEVIATION (\$)
<hr/>	
PROVISIONAL TAX BASED ON INCOME FOR PREVIOUS YEAR	
Actual Situation	3,652
Two Year Price Smoothing with Estimate	3,451
Three Year Price Smoothing with Estimate	3,344
Income Equalisation Scheme ¹	2,099
Income Equalisation Scheme ¹ + Two Year Price Smoothing with Estimate	1,980
Income Equalisation Scheme ¹ + Three Year Price Smoothing with Estimate	1,966
<hr/>	
PROVISIONAL TAX BASED ON ESTIMATE OF INCOME OF CURRENT YEAR IF LATTER EXPECTED TO BE LOWER THAN PREVIOUS YEAR	
Actual Situation	2,682
Two Year Price Smoothing with Estimate	2,497
Three Year Price Smoothing with Estimate	2,444
Income Equalisation Scheme ¹	1,526
Income Equalisation Scheme ¹ + Two Year Price Smoothing with Estimate	1,419
Income Equalisation Scheme ¹ + Three Year Price Smoothing with Estimate	1,439
<hr/>	
PROVISIONAL TAX BASED ON ESTIMATE OF INCOME OF CURRENT YEAR	
Actual Situation	1,790
Two Year Price Smoothing with Estimate	1,687
Three Year Price Smoothing with Estimate	1,664
Income Equalisation Scheme ¹	1,049
Income Equalisation Scheme ¹ + Two Year Price Smoothing with Estimate	979
Income Equalisation Scheme ¹ + Three Year Price Smoothing with Estimate	969
Marginal Adjustment Income Averaging over 3 Years	1,736
Marginal Adjustment Income Averaging over 5 Years	1,723
Marginal Adjustment Income Averaging over 7 Years	1,709
Marginal Adjustment Income Averaging over 3 Years + Two Year Price Smoothing with Estimate	1,642
Marginal Adjustment Income Averaging over 5 Years + Two Year Price Smoothing with Estimate	1,623
Marginal Adjustment Income Averaging over 7 Years + Two Year Price Smoothing with Estimate	1,605
<hr/>	

¹ Assuming a maximum account level of \$15,000, that up to 100% of taxable income can be deposited in the account, and that the operator would deposit/withdraw up to 50% of the difference between actual and average taxable income.

4.1.2 Income Equalisation Scheme

Given the operator decision rule that up to half of the difference between actual and average income may be deposited in or withdrawn from the equalisation account, the use of the IES reduces post-tax income variability far more than the price smoothing schemes considered (Table 2). This holds for all farms, and for all methods of calculating provisional tax.

When the IES was applied to price smoothed incomes, variation was reduced further than equalisation alone, provided price smoothing itself had lowered variation in income for a particular farm. Where the latter was not so, the income equalisation scheme had a similar effect with or without price smoothing.

4.1.3 Marginal Adjustment Averaging

Income averaging over 3 years with marginal adjustment reduced variation in post-tax income by a margin of greater than 5% on only three of the 15 farms; the effects of income averaging on variability of post-tax incomes of other farms was insignificant. The results indicate that the averaging scheme has only small effects on post-tax income stability; similar results were reported in Anon (1975, pp. 57, 58). However, it should be kept in mind that the averaging system applied here assumed that income was estimated each year, and therefore comparisons refer to the situation where provisional tax is based on an estimate of income in the current year. The analysis was not carried out for the case when provisional tax is based on the previous year's income; however, analyses by the Industries Assistance Commission in Australia suggest that income averaging schemes, including the MAS, may stabilise or destabilise post-tax income relative to non averaging, depending on characteristics of the income series being averaged (Anon, 1975, pp. 57, 58). These studies have found that the differences in the degree of stability or instability arising from different averaging schemes are small. A particularly significant finding was that when provisional tax is based on the previous year's income, the current Australian averaging system is preferable in terms of post-tax income stability to the MAS.

When income averaging is combined with price smoothing, variation in post-tax income was reduced more than with income averaging alone,

provided price smoothing itself had been effective in reducing variation in taxable incomes (Table 2).

4.1.4 Basis for Calculation of Provisional Tax

When provisional tax is based on an estimate of current income which is likely to be lower than the previous year's income, a substantial reduction in post-tax income variability is achieved (Table 2). Even greater stability results if estimates of income are made every year. However, under the current tax legislation, farmers would be unlikely to estimate every year since they would forego the tax benefits of the provisional tax system in a year of increased income.

4.2 Mean Post-Tax Incomes

Shown in Table 3 for each scheme are the mean taxable income for each farm, the number of years over which the means were calculated, the mean post-tax income actually achieved, and the mean post-tax income that would have been achieved if taxable income had been constant from year to year. The mean amount of additional tax paid per annum over that paid under a constant income series, was calculated for each farm for each scheme (Table 3).

Some differences occurred in mean post-tax incomes between different methods of assessing provisional tax; however, such differences were due to the rounding effect of the final year of each data series. Hence, mean post-tax incomes reported in the results referred to the situation where provisional tax was paid on an estimate of current income. Theoretically, the same amount of tax should be paid in total no matter how provisional tax is calculated; however, the advantages and disadvantages related to the timing of tax payments due to different methods of calculating provisional tax have not been considered in this study.

Table 3 shows that over all farms considered an additional tax payment of \$119 per annum was actually incurred due to variable incomes. This varied between farms quite considerably (\$20-351 per annum). Farms with high coefficients of variation of taxable income tended to incur the greatest tax penalties (see Figure 1). Hence, farms with low mean taxable incomes and/or high income variation were most susceptible to greater amounts of additional tax. This finding is consistent with that of McArthur (1969).

TABLE 3 TAX EQUITY EFFECTS OF DIFFERENT SCHEMES EXPRESSED AS ADDITIONAL TAX PAID PER ANNUM (\$) OVER THAT PAID UNDER A CONSTANT INCOME SERIES

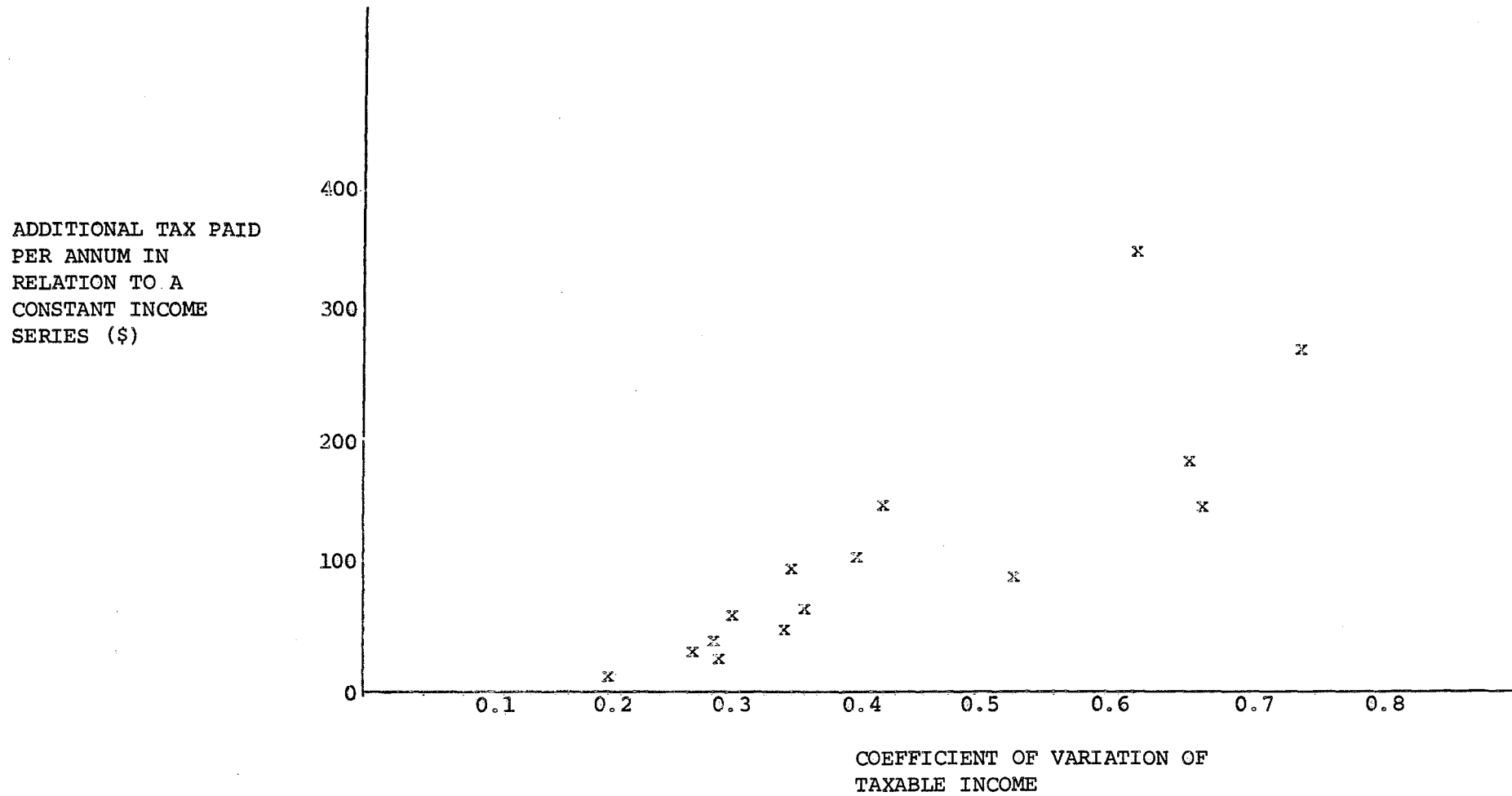
Farm No.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Average over all farms
Mean Taxable Income	9070	4272	5157	7905	6355	10200	5819	10643	8782	7924	7039	10028	6760	3612	4773	7223
No. of Years Over Which Means Calculated	18	16	16	18	18	15	17	18	18	18	18	13	12	17	12	
Actual Mean Post-Tax Income	6340	3357	4071	5424	4747	6880	4461	7168	6201	5718	5017	6852	5035	2917	3874	5204
Mean Post-Tax Income if Constant Taxable Income	6391	3548	4148	5775	4905	6977	4576	7205	6240	5785	5302	6888	5143	3071	3894	5323
Mean Additional Tax Paid Per Annum	+51	+191	+71	+351	+158	+97	+115	+37	+39	+67	+285	+36	+108	+154	+20	+119
Mean Additional Tax Paid Per Annum for Price Smoothing (with estimate) Over Two Years	+18	+116	+95	+335	+145	+81	+205	+23	+27	+54	+307	+25	+79	+152	+18	+112
Mean Additional Tax Paid Per Annum for Price Smoothing (with estimate) Over Three Years	+27	+180	+135	+314	+142	+81	+99	+28	+25	+47	+295	+22	+77	+155	+19	+110
Mean Additional Tax Paid Per Annum for Marginal Adjustment Income Averaging Over Three Years	+10	+61	+20	+163	+31	+29	+47	+3	+11	+21	+153	+5	+42	+36	+6	+43
Mean Additional Tax Paid Per Annum for Marginal Adjustment Income Averaging Over Five Years	+12	+31	-4	+126	+21	+16	+27	0	+7	+13	+71	+2	-3	+16	+3	+23
Mean Additional Tax Paid Per Annum for Marginal Adjustment Income Averaging Over Seven Years	+6	+22	+11	+58	+22	+9	+17	+2	+6	+4	+12	0	-3	+27	+4	+13
Mean Additional Tax Paid Under Income Equalisation Scheme ¹	+22	+55	+18	+247	+69	+25	+44	+7	+16	+27	+99	+7	+39	+44	+7	+48

16.

¹ Assuming a maximum account level of \$15,000, that up to 100% of taxable income can be deposited in the account, and that the operator would deposit/withdraw up to 50% of the difference between actual and average taxable income.

FIGURE 1

RELATIONSHIP BETWEEN ADDITIONAL TAX PAID PER ANNUM AND COEFFICIENT OF VARIATION OF TAXABLE INCOME FOR THE 15 FARMS



Price smoothing might be expected to reduce additional tax payments by reducing taxable income variation. However, the tax equity gains for price smoothing shown in Table 3 are only small. When price smoothing was effected without using an estimate of the price of the current year the additional tax payments averaged \$116 and \$115 per annum for two and three year price smoothing respectively (not shown in Table 3).

The length of the income averaging period affected the additional tax paid; as the averaging period increased, additional tax payments decreased almost to the complete equity situation. However, even under a 3 year averaging system, gains were quite significant, the average annual tax saving over all farms being \$76 (\$119 - \$43).

Under the conditions described in the footnote to Table 3, the IES yielded tax savings of \$71 (\$119 - \$48) per annum over all farms considered. However, it should be remembered that use of an equalisation account alters the timing over which incomes become available to the operator. Since deposits bear no interest, this delay in assuming use of the deposits represents an important cost against the scheme (McArthur, 1971; Charlton, 1975).

4.3 Effects of Different Assumptions Regarding the Income Equalisation Scheme

4.3.1 Variation in Post-Tax Income

Eight variations of the IES were examined. Standard deviations of post-tax income for each farm under each assumption of the IES are presented in Appendix 3. An aggregated version of these results is given in Table 4.

Raising the proportion of taxable income that can be deposited in the equalisation account from 25% to 100% has a significant effect only when the account limit is high (\$15,000) and when the operator deposits substantial sums of money. Since at any point of time the average income for the farm is not known with any certainty, it is likely that operators will not deposit or withdraw much more than 50% of the difference between actual and average income. The results here show that greater stability in post-tax income is achieved when the

TABLE 4 AGGREGATED MEAN STANDARD DEVIATION OF
POST-TAX INCOME FOR VARIATIONS OF THE
INCOME EQUALISATION SCHEME

MAXIMUM ACCOUNT LIMIT	OPERATOR DECISION RULE : PROPORTION OF DIFFERENCE BETWEEN ACTUAL AND AVERAGE INCOME THAT CAN BE DEPOSITED OR WITHDRAWN	PROPORTION OF TAXABLE INCOME THAT CAN BE DEPOSITED	MEAN STANDARD DEVIATION OF POST-TAX INCOME OVER ALL FARMS ¹
(\$)	(%)	(%)	(\$)
15,000	100	100	1,073
15,000	100	25	1,611
15,000	50	100	2,099
15,000	50	25	2,160
5,000	100	100	2,095
5,000	100	25	2,152
5,000	50	100	2,339
5,000	50	25	2,341

¹ Results assume provisional tax is based on the income of the previous year.

limit is raised to 100%. Operators who are prepared to allow their accounts to rise to over \$5,000 gain slightly more stability but perhaps not so much as expected. This can be explained by the relatively low mean levels of the account for each farm under the 50% difference decision rule. Results showed that the mean level of deposits held over all farms was only \$2,620 (Table 5). Considering the large benefits to be gained in the form of reduction of post-tax income variation, this amount is not high.

Results for the IES reported here have been calculated without any constraint on the maximum period of time deposits can be held in the equalisation account. It was probable that for the majority of farms, some deposits would be held for over the current maximum period operating in New Zealand of 5 years. If interest is paid on deposits a system of holding monies more or less permanently in the account could be attractive to many farmers; given current legislation, it is unlikely that holding deposits for any longer than two or three years would be a worthwhile proposition (Charlton, 1975).

4.3.2 Mean Post-Tax Incomes

Mean post-tax incomes under each set of assumptions of the IES were derived for each farm. An aggregated version of these results is shown in Table 6. Only very small changes in the tax equity position are revealed.

If the 25% of taxable income limit to deposits is extended to 100%, only a small improvement in the tax equity position occurs. The \$15,000 limit on the equalisation account gives slightly higher mean post-tax incomes than does the \$5,000 limit; however, the magnitude of this effect depends to some extent on which operator decision rule is selected. The assumption that as much as 100% of the difference between average and actual taxable income would be deposited or withdrawn from the account gives slightly improved tax equity than the 50% assumption. In summary, results did not vary significantly for each set of assumptions made.

TABLE 5 MEAN ACCOUNT LEVELS FOR INCOME EQUALISATION
SCHEME¹

FARM	NUMBER OF YEARS OVER WHICH MEANS CALCULATED	MEAN LEVEL OF EQUALISATION ACCOUNT (\$)	HIGHEST LEVEL OF EQUALISATION ACCOUNT (\$)	NUMBER OF YEARS ACCOUNT IS ZERO
1	18	4,133	6,816	2
2	16	2,923	5,888	2
3	16	1,424	4,193	1
4	18	7,089	13,938	2
5	18	2,087	4,543	1
6	15	3,905	8,808	3
7	17	1,838	4,552	3
8	18	1,258	4,744	3
9	18	1,899	4,122	3
10	18	2,516	7,258	5
11	18	4,319	11,956	3
12	13	2,193	5,771	4
13	12	971	3,382	3
14	17	2,068	5,539	2
15	12	678	1,638	1
	MEAN OVER ALL FARMS	2,620	6,210	

¹ Assuming operator can deposit or withdraw 50% of the difference between actual and average income and that up to 100% of taxable income may be deposited in any year.

TABLE 6

AGGREGATED MEAN POST-TAX INCOMES FOR VARIATIONS
OF THE INCOME EQUALISATION SCHEME

ACCOUNT LIMIT	OPERATOR DECISION RULE : PROPORTION OF DIFFERENCE BETWEEN ACTUAL AND AVERAGE TAXABLE INCOME THAT CAN BE DEPOSITED OR WITHDRAWN	PROPORTION OF TAXABLE INCOME THAT CAN BE DEPOSITED	MEAN POST-TAX INCOME OVER ALL FARMS
(\$)	(%)	(%)	(\$)
15,000	100	100	5,299
15,000	100	25	5,286
15,000	50	100	5,275
15,000	50	25	5,274
5,000	100	100	5,269
5,000	100	25	5,267
5,000	50	100	5,267
5,000	50	25	5,267

5. IMPLICATIONS FOR POLICY

5.1 Tax Equity

The average annual extra tax payment per farm due to variable incomes calculated in this study was \$119. Farmers on low and highly variable incomes suffer greater inequity than farmers on higher or less variable incomes. McArthur (1969), using a theoretical approach calculated extra tax payments of slightly greater magnitudes to those reported earlier in this report. McArthur concluded that the additional tax payments are relatively small and that income smoothing schemes could not assist farmers very much with respect to tax equity. However, if it is assumed there are 23,000 sheep and wool farmers in New Zealand (Anon, 1974), and if the farms in the current study approximate a random sample from this total, it would mean that the Inland Revenue Department is receiving close to an additional \$3 million per annum in tax from sheep and wool farmers simply because they endure variable incomes. If all farmers in New Zealand were taken into account, this figure would be much larger.

The current study has shown that price smoothing, the MAS, and the IES all reduce these additional tax payments. The MAS has the most significant effect, the additional tax payments decreasing as the averaging period increased; under a seven year averaging scheme, the additional tax paid was approaching zero on many farms. The effect of price smoothing on the tax equity position was very small.

IES had a significant effect; the additional tax payment was an average of only \$48 per annum for all farms when the operator followed a decision rule that could be considered realistic. Given the previous assumptions regarding representation, when this sum is aggregated over all sheep farms, the total additional tax payment falls to just over one million dollars per annum.

The additional tax payments incurred by sheep farmers (and others on highly variable incomes) can be viewed as inequitable and a strong case can be made for their removal. This is clearly the situation in Australia where there exists a form of income averaging which reduces

tax inequity. A summary of how Australian primary producers see the two problems of inequity and variability is stated in the 1975 Report of the Industries Assistance Commission (Anon, 1975):

'The evidence received by the Commission indicated that while primary producers are generally concerned about the impact which fluctuating incomes have on their investment and consumption decisions, their interest in tax averaging and income equalisation deposits is derived mainly from the inequitable effect which income fluctuations may have upon their tax liability.'

McArthur (1969), in comparing results of additional tax payments of New Zealand and Australian farmers, suggested that given similar income variability the New Zealand farmer was in a more inequitable position than his Australian counterpart due to the more progressive tax rates in New Zealand. To compensate, McArthur suggested that Australian farm incomes are more variable than those of New Zealand, a conclusion not fully supported by the results of the present study (compare a coefficient of variation of trend-free taxable income of 0.42 across all the New Zealand farms in the current study with an average of 0.57 for ten properties in the western pastoral zone of New South Wales, a region of extremely variable climatic conditions (Hinkley and Taplin, 1966)).

The lesser pre-occupation of New Zealand primary producers with tax inequity appears to be more in perspective considering the small absolute amounts of extra tax involved for the individual, and particularly in relation to the commonly held view that primary producers are eligible for considerable tax advantages over other persons and business operations in the community.

5.2 Post-Tax Income Variation

Price smoothing schemes for lamb and wool did not have any substantial effect on post-tax income variation. However, it is likely that the real effect could be greater than that reported in this study. This is so for three reasons.

- (i) Many of the farms in this study received small but highly variable amounts of income from beef. Beef prices were not smoothed in this study due to difficulties with the data as explained in Section 3.1.
- (ii) Some income was derived from sheep trading account profits. It is likely that if wool and lamb prices were smoothed, more stability would appear in the sheep trading account than has been achieved in the past.
- (iii) If payout prices are known for some period into the future, different production decisions may be made on the farm resulting in more stable post-tax incomes.

The MAS does not appear to yield any stabilisation benefits over the current situation in New Zealand if provisional tax is paid on an estimate of the current year's income. Income averaging for the situation where provisional tax is paid on the basis of the previous year's income has not been investigated in the current study. However, conclusions from studies carried out in Australia on income averaging have concluded that when provisional tax is based on the income of the previous year, the MAS, and other income averaging schemes, are not particularly valuable. Thus, the major advantage of any income averaging scheme is the reduction in the amount of additional tax to be paid.

Basing provisional tax on an estimate of income for the current year when the current year's income is expected to be lower than the previous year results in high post-tax income stability relative to the situation when income from the previous year is used as a basis for provisional tax. However, it is reported that very few farmers take advantage of the estimation provision (Charlton, 1975) and therefore any procedures Government could devise to encourage this practice would be beneficial. The lack of use of the estimation option is not peculiar to New Zealand. It is reported that in Australia the majority of primary producers do not estimate, 'either because of insufficient knowledge on their part or lack of advice from their tax agents or accountants' (Anon, 1975). The considerable advantages of self-assessment, and the insignificant penalties incurred by an inaccurate assessment for New

Zealand primary producers have been suitably dealt with by Charlton (1975, pp. 32, 33) and are endorsed in this study.

Estimating every year regardless of the relativity between income from the current and previous year creates even higher post-tax income stability. However, this would not be a rational procedure for most farmers given the current taxation provisions. In high income years, no estimation is made and provisional tax is paid on the basis of income of the previous year, giving the farmer a tax advantage since tax obligations can be delayed. Conversely, it is in the interests of farmers to self-assess when incomes are expected to be low. This one-sided estimation provision could be viewed as inequitous in favour of the farmer. It could be argued that the estimation provision should be discontinued altogether or that legislation should be extended to ensure that self-assessment is mandatory every year. The latter alternative would appear favourable in view of the extra stability achieved in post-tax incomes reported in this study. Should estimation of income prove to be unacceptable, an improvement to the present system would be to base provisional tax on an average of income over previous years rather than on the income of the previous year. If such a scheme were to create undue demands on data storage and retrieval systems of the Inland Revenue Department, it may be possible to use a constant weighting factor as described by Chisholm (1971); such a system would require only the most recent average income figure to be carried forward each year.

5.3 Income Equalisation Scheme

The IES has been shown to be very effective in reducing variability in post-tax incomes. However, the major problem is that the scheme has not been well utilised by farmers in New Zealand (Anon, 1967). An important reason suggested for this is that the tax equity and post-tax income stability advantages often are more than outweighed by the opportunity cost of deposits held at zero interest rate.

It is difficult to defend the current policy of not paying interest on deposits. It has been shown that under the operator decision rules considered here the use of the IES does not achieve anything like complete tax equity given sustained use of the scheme but it does ease the situation; for some farms in particular years it could save significant

inequitable tax payments. However, in most cases deposits can be considered as an interest free loan to the Government and many farmers would be better off paying the higher tax of a higher income year and placing excess funds in a term deposit earning interest.

A recommendation has been made to the Australian government to establish an IES similar to that existing in New Zealand. (Anon, 1975.) The question of interest payments has naturally arisen and the recommendation that has been made by the Industries Assistance Commission is that interest should be paid on the investment portion of a deposit but not on the deferred tax component of the deposit. Other consensus at the Industries Assistance Commission hearing in Australia were that the maximum amount of the deposits in any year be restricted to the taxable income in that year and that deposits should be made for a minimum period of 12 months (as in New Zealand).

Of all schemes considered in this study, the IES has the greatest potential for reducing the variability of post-tax incomes. Results of the foregoing analyses show that the average level of equalisation deposits held by farmers need not be large in order to achieve significant reductions in post-tax income variability. The IES also reduces to some degree the additional tax attracted to variable incomes, involves the principle of cash transfers from high income years to low income years thus stabilising both taxable and post-tax incomes, and is flexible for the individual farmer.

If the IES is to play a role in stabilisation of incomes, it is essential that farmers be persuaded to use the scheme. Charlton (1975) has shown that the past reluctance of farmers to use the scheme as it currently stands is quite justified in financial terms. It must be concluded that an appropriate interest rate should be paid on deposits in the scheme in order to assist income stabilisation in the farm sector.

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APPENDIX 1THE EIGHT FARM TYPES FROM WHICH FARMS WERE SELECTED

<u>Farm Type</u>	<u>Description</u>	<u>Farm Numbers Referred to in Text</u>
High Country, South Island	Large extensive pastoral farms carrying fine wool sheep with wool as the major source of income.	1
Hill Country, South Island	Mainly half-bred and Corriedale sheep with wool and store sheep sales being major sources of income.	2,3
Hard Hill Country, North Island	Mainly Romney sheep with some cattle. Wool, cattle and store sheep provide most income.	4,5
Hill Country, North Island	Mainly Romney sheep with some cattle. Wool, cattle and both store and fat sheep sales provide most income.	6,7
Intensive Fattening Farms, North Island	Intensive fat lamb producing farms.	8,9
Fattening - Breeding Farms, North Island	Extensive fattening farms with some cash cropping	10,11
Intensive Fattening farms, South Island	Intensive fat lamb producing farms.	12,13
Mixed cropping and Fattening farms, South Island.	Grain and small seeds provide a significant proportion of income.	14,15

APPENDIX 2 STANDARD DEVIATION OF POST-TAX INCOME FOR EACH FARM FOR DIFFERENT SCHEMES

FARM NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Average over all farms
<u>Provisional Tax Based on Income from Previous Year:</u>																
No Scheme	3723	3388	1675	5740	3021	6445	2634	4568	3203	2378	6759	4257	3332	2558	1096	3652
Two Year Price Smoothing with Estimate	2608	3280	1671	5611	3161	5780	2548	4125	2879	2313	7014	4175	2759	2762	1083	3451
Three Year Price Smoothing with Estimate	2206	3016	1866	5581	3392	5363	2506	3916	2256	2282	7005	3828	3152	2790	998	3344
Two Year Historical Price Smoothing	2349	3104	2163	5305	3442	5168	2631	3877	2439	2154	7240	3800	3227	3217	1055	3411
Three Year Historical Price Smoothing	2620	3071	2401	5713	3448	5295	2516	3718	3071	2395	7037	4047	2925	2808	995	3471
Income Equalisation Scheme ¹	2201	1838	861	4285	1949	3396	1449	2466	1783	1421	3322	2457	2021	1402	636	2099
Income Equalisation Scheme with Two Year Price Smoothing with Estimate	1672	1807	857	4194	2009	2954	1340	2119	1508	1382	3540	2493	1730	1494	608	1980
Income Equalisation Scheme with Three Year Price Smoothing with Estimate	1589	1699	1005	4200	2178	2861	1289	2018	1399	1367	3485	2486	1814	1521	586	1966
<u>Provisional Tax Based on Estimate of Income of Current Year if Latter Expected to be Lower than Previous Year:</u>																
No Scheme	2880	2800	1458	4552	2477	4602	2074	2801	2160	1568	4839	2696	2286	2175	857	2682
Two Year Price Smoothing with Estimate	1721	2691	1439	4383	2534	4155	1958	2594	1740	1469	4917	2795	1916	2304	844	2497
Three Year Price Smoothing with Estimate	1511	2556	1736	4402	2676	3688	1955	2387	1522	1506	4847	2662	2057	2380	769	2444
Two Year Historical Price Smoothing	1591	2536	2095	4173	2681	3559	2009	2398	1630	1364	4977	2596	2023	2731	817	2479
Three Year Historical Price Smoothing	2129	2588	2231	4352	2694	3642	1891	2314	2100	1561	4744	2723	1905	2406	764	2536
Income Equalisation Scheme	1658	1474	747	3388	1560	2356	1163	1490	1253	888	2337	1558	1367	1175	480	1526
Income Equalisation Scheme with Two Year Price Smoothing with Estimate	1115	1423	724	3284	1591	2093	1070	1303	917	833	2389	1630	1195	1259	461	1419
Income Equalisation Scheme with Three Year Price Smoothing with Estimate	1144	1365	913	3293	1700	1934	1050	1223	995	925	2361	1728	1202	1306	442	1439
<u>Provisional Tax Based on Estimate of Income of Current Year:</u>																
No Scheme	1601	2096	1182	3444	1808	2752	1432	1573	1247	1337	3072	1478	1419	1787	628	1790
Two Year Price Smoothing with Estimate	1204	2041	1334	3337	1707	2555	1367	1258	1112	1210	3164	1402	1232	1756	623	1687
Three Year Price Smoothing with Estimate	1098	1955	1596	3220	1669	2557	1329	1213	1067	1139	3133	1330	1235	1802	615	1664
Two Year Historical Price Smoothing	1364	1926	1987	3132	1624	2508	1335	1241	1172	1069	3210	1310	1322	1876	609	1712
Three Year Historical Price Smoothing	1514	2018	2080	3132	1557	2674	1260	1400	1308	1109	3047	1285	1080	1793	613	1725
Income Equalisation Scheme	946	1066	604	2779	1172	1470	843	849	777	760	1543	803	794	966	358	1049
Income Equalisation Scheme with Two Year Price Smoothing with Estimate	705	1048	668	2669	1135	1321	796	646	613	687	1565	800	700	999	340	979
Income Equalisation Scheme with Three Year Price Smoothing with Estimate	650	1033	794	2613	1116	1404	746	590	594	621	1539	776	656	1060	339	969
Marginal Adjustment Income Averaging Over Three Years	1579	2034	1201	3239	1702	2715	1460	1513	1233	1229	2991	1444	1356	1727	623	1736
Marginal Adjustment Income Averaging Over Five Years	1583	1998	1191	3211	1624	2705	1472	1522	1230	1220	2925	1446	1346	1755	615	1723
Marginal Adjustment Income Averaging Over Seven Years	1584	2015	1170	3102	1630	2710	1442	1521	1229	1212	2847	1439	1331	1784	619	1709
Marginal Adjustment Income Averaging Over Three Years and Two Year Price Smoothing with Estimate	1196	2020	1328	3130	1620	2529	1389	1228	1106	1127	3029	1389	1194	1722	617	1642
Marginal Adjustment Income Averaging Over Five Years and Two Year Price Smoothing with Estimate	1197	1932	1314	3059	1581	2526	1390	1231	1108	1115	2964	1387	1174	1760	609	1623
Marginal Adjustment Income Averaging Over Seven Years and Two Year Price Smoothing with Estimate	1204	1903	1327	2929	1574	2525	1371	1232	1109	1111	2842	1383	1184	1770	613	1605

¹ Assuming a \$15,000 account limit, up to 100% of taxable income can be deposited in any one year, and up to 50% of the difference between actual and average income would be deposited or withdrawn in any one year.

APPENDIX 3

STANDARD DEVIATION OF POST-TAX INCOME FOR EACH FARM FOR VARIATIONS OF INCOME EQUALISATION SCHEME

VARIATION OF SCHEME

Maximum Account level	Maximum Proportion of Taxable Income Deposited in One Year	Maximum Proportion of Difference Between Actual and Average Income Deposited or Withdrawn in One Year																
(\$)	(%)	(%)																
FARM NO.			1	2	3	4	5	6	7	8	9	10	11	12	13	14	15 Average over all Farms	
PROVISIONAL TAX BASED ON INCOME FOR PREVIOUS YEAR:																		
15000	100	100	1173	499	106	3629	1182	1716	626	967	934	805	1841	1072	873	387	299	1073
15000	25	100	1591	1440	824	4125	1704	2622	974	1205	1183	853	4059	1106	1083	1295	299	1624
15000	100	50	2201	1838	861	4285	1949	3396	1449	2466	1783	1421	3322	2457	2021	1402	636	2099
15000	25	50	2201	1912	861	4356	1949	3425	1449	2466	1783	1421	4154	2457	2021	1444	636	2169
5000	100	100	2214	1069	1055	4440	1621	4330	1320	1952	1044	1472	5457	2143	1404	1406	299	2082
5000	25	100	2359	1640	869	4415	1885	4330	1363	1952	1290	1389	5460	2143	1453	1534	299	2159
5000	100	50	2351	1944	861	4708	1949	4304	1449	2466	1783	1659	5044	2537	2021	1501	636	2350
5000	25	50	2351	1992	861	4697	1949	4304	1449	2466	1783	1659	5044	2537	2021	1501	636	2350
PROVISIONAL TAX BASED ON ESTIMATE OF INCOME FOR CURRENT YEAR IF LATTER EXPECTED TO BE LOWER THAN PREVIOUS YEAR:																		
15000	100	100	829	412	68	2867	801	1184	526	552	690	533	1277	685	568	286	196	765
15000	25	100	1194	1253	623	3298	1253	2206	858	1030	974	582	3000	719	734	1074	196	1266
15000	100	50	1658	1474	747	3388	1560	2356	1163	1490	1253	888	2337	1558	1367	1175	857	1551
15000	25	50	1658	1544	747	3475	1560	2397	1163	1490	1253	888	2951	1558	1367	1204	480	1582
5000	100	100	1483	871	804	3382	1132	3436	1102	1421	899	1081	4045	1579	1039	1130	196	1573
5000	25	100	1632	1353	696	3420	1386	3436	1182	1421	1064	926	4046	1579	1084	1268	196	1646
5000	100	50	1732	1523	747	3713	1560	3279	1163	1490	1253	1031	3598	1561	1367	1244	480	1716
5000	25	50	1732	1583	747	3710	1560	3279	1163	1490	1253	1031	3598	1561	1367	1244	480	1720
PROVISIONAL TAX BASED ON ESTIMATE OF INCOME FOR CURRENT YEAR:																		
15000	100	100	542	376	42	2574	687	920	460	393	478	457	962	370	329	264	158	601
15000	25	100	683	841	519	2635	1001	1356	726	646	626	498	1614	392	437	873	158	867
15000	100	50	946	1066	604	2779	1172	1470	843	849	777	760	1543	803	794	966	628	1067
15000	25	50	946	1098	604	2788	1172	1489	843	849	777	760	1779	803	794	982	358	1069
5000	100	100	943	823	673	2938	953	1945	900	777	667	790	2560	950	665	1869	158	1107
5000	25	100	977	955	628	2916	1070	1945	934	777	685	752	2564	950	682	984	158	1132
5000	100	50	1009	1094	604	2990	1172	1957	843	849	777	822	2251	839	794	1003	358	1157
5000	25	50	1009	1113	604	2990	1172	1957	843	849	777	822	2251	839	794	1003	358	1159

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