RURAL TAXATION AND SELF–SUFFICIENCY

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The re–introduction of the Income Equalisation Deposit (IED) Scheme two years ago was expected to increase the financial self–reliance of farmers. To date, however, the scheme appears to have been underwhelmed, with $54 million being invested in 1989–90 and $25 million in 1990–91. More recently, the Drought Policy Review Taskforce re–emphasised the need for IED's.

The paper examines areas of the tax system which provide alternative concessions to the IED's. It is proposed that alternative income smoothing measures and the averaging scheme represent disincentives to the more widespread use of IED's. It is argued that various tax concessions have conflicting effects and that the distribution of benefits from them is inequitable.

It is noted that the majority of benefits from the averaging system accrue to a minority of high income primary producers. It appears that income equalisation deposits provide a significant benefit to taxpayers who are not on averaging, but are of little benefit for those on averaging.

RURAL TAXATION AND SELF-SUFFICIENCY.

1. INTRODUCTION.

The rationale for the re-introduction of the Income Equalisation Deposit (IED) scheme two years ago was increasing financial self reliance by primary producers. The Drought Policy Review Task Force stressed the importance of IED's:

> ... to assist in evening out income fluctuations for volatile agricultural industries and to encourage primary producers to make financial provisions to meet the uncertainties imposed by unpredictable future events.

To date, the scheme appears to have been underwhelmed, with $54 million being invested in the 1989-90 year and $25 million being invested in the 1990-91 year.

Anecdotal evidence suggests that many farmers and their advisers consider investment in IED's to be a "last resort" method of reducing tax in a high income year. Preferred methods include "do it yourself" averaging by altering the timing of receipts and expenditures, and the utilisation of other available tax concessions. By default, IED's are regarded merely as a means of tax minimisation, rather than a tool to promote financial self-reliance. Furthermore, IED's are thought to offer a low return on investment as interest is only paid on part of the deposit.

This paper examines areas of the tax system which provide alternative concessions to the IED scheme. These include the averaging scheme which allows primary producers to pay tax with reference to their average taxable income and alternative methods of income smoothing such as measures to defer income recognition.

2. INCOME EQUALISATION DEPOSITS

Traditionally, there are three broad principles which can be used to evaluate the design of taxation systems. These are neutrality, equity, and simplicity.

The neutrality criteria and the impact of fluctuating incomes on resource allocation was the justification used by the Hon John Kerin when re-introducing IED's in the second reading speech of the Income Equalisation Deposits Laws Amendment Bill 1989. He stated that the effects of fluctuating income flows were:

> * ... resources are often misdirected as a result of price and production instability;
> * large swings in the level of activity in farming industries result in large swings in demand for associated services,... ;
> * ... risk and uncertainty tend to result in farmers borrowing less and lenders being willing to lend less than would have been the case with stability; and
> * greater stability in farm incomes, however, is likely to ... encourage farmers to adopt more efficient production methods over the long run;

He further stated that:

> * In view of the significance of farm income fluctuations and their wider implications the government accepts that some form of incentive is justified to encourage farmers to provide for them, and

> ... the government, while acting to alleviate the pressures created through fluctuating incomes, believes that the price mechanism, which is transparent and rapidly transmits prevailing conditions, forms the most important base for decision making by producers.

HISTORY OF AUSTRALIAN INCOME EQUALISATION DEPOSITS.

From 1969/70 to 1974/75, a Drought Bond Scheme acted as a precursor to the IED scheme. The Drought Bond scheme provided a tax deduction for subscriptions in the year of subscription, with withdrawals being assessable in the year of receipt. The scheme was restricted to graziers who derived at least ninety percent of their gross income from sheep or cattle. Deposits were restricted to twenty percent of gross farm income, with a maximum total holding of $50,000. The bonds had a ten year currency, and withdrawals could only be made before expiry because of drought, or loss of pastures occasioned by fire or flood. Interest was paid on the Drought Bond at the rate of 3%.

The Drought Bond Scheme was replaced with an Income Equalisation Deposit Scheme, which was introduced into Australia with effect from 1975/76. This scheme was available to all primary producers, and provided that deposits be tax deductible in the year of deposit or if made in the two months following the end of the financial year[1].

The IED deposit was limited to the lesser of taxable income of 40% of gross farm income, with a maximum holding of $100,000. This was liberalised in 1978/79 with the deposit limited to 60% of gross farm income, and a maximum holding of $250,000. The minimum term was twelve months, except where financial hardship occurred. Interest was paid at 5% p.a.

This scheme was phased out from the 1983/84 year, and replaced by a non-tax linked scheme which paid interest at two per cent above the short term Commonwealth Bond rate.

The current IED scheme was introduced in 1989/90. It is similar to the scheme which operated from 1975/76 to 1982/83, the major difference being that deposits are divided into two components, the "investment" component (61%) and the "tax component (39%), which is supposed to represent the typical marginal tax rate of a contributor to the scheme. Interest is paid at the medium term Commonwealth bond rate on the investment component only. A further change is that deposits are now limited to net taxable income from primary production in a year. The $250,000 ceiling on deposits remains.

The Green Paper into the Principles of Rural Policy in Australia listed the advantages of the IED scheme as:

> (i). It would produce similar tax savings to averaging and would tend to stabilise after tax incomes, whilst the present system of averaging tends to destabilise after tax incomes...
> (ii). In very high income years such as 1950-51 and 1973-74 farmers sometimes incur expenditure to minimise tax rather than for normal, economic reasons. This can disrupt the time pattern of long term investment with consequent adverse effects on efficiency. It is widely reported, that at the present time, many farmers are withholding livestock from sale, essentially for tax reasons. Such strategies would be made unnecessary by income equalisation deposits.
> (iii). Such deposits could reduce the necessity for government assistance in periods of low income.

DISCUSSION.

IED's appear to be consistent with the principle of equity, simplicity and neutrality. There advantages over the other concessions examined include:

* the requirement that money be invested, with redemption in low years, thus promoting financial self reliance;
* stabilisation of after tax income; and
* an attractive return from a risk free investment.

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[1] Transition features in the first year allowed deposits made up to the 31 January, 1977 to be deductible in the 1975/76 year.

If use of IED's were to become more prevalent, it would appear that this would relieve the need for government to provide forms of assistance other than welfare assistance.

The low utilisation of IED's over the last 2 years, a time when most primary producers were aware of a strong probability of moving from high incomes to low incomes, indicates that most primary producers, and their advisers, may be ignorant of the advantages of IED's, or alternatively, the other concessions available to primary producers make IED's relatively unattractive.

3. AVERAGING[2].

HISTORY OF AUSTRALIAN INCOME AVERAGING[3].

Primary producers have been entitled to use income averaging since 1921. During the period 1921 – 1937, all individual tax payers were entitled to use averaging. At that time, losses incurred in the current year could not be carried forward as a deduction against future years incomes. In 1927, the law was amended to allow the carry forward of losses.

From 1966/67[4] to 1975/76, the scheme was limited to those primary producers whose taxable income and average income was less than $16,000. Those whose average income or average income exceeded this limit received reduced benefits.

In 1976/77 and 1977/78, taxable incomes in excess of $16,000 were replaced by $16,000 in calculating average income (Butterworths p.3654.1). Since 1/7/78, averaging applies to total taxable income, subject to limitations when non-primary production income exceeds $5,000[5].

Automatic "in-out" averaging[6] applied from 1978/79 to 1982/83. Previous Australian studies on averaging are detailed in Appendix 1.

Subject to certain conditions, primary producers are entitled to have their tax liability calculated on the averaging system. Primary producers using this system pay tax on their taxable income at the average tax rate applicable to their average income. If the averaging system results in a taxpayer paying less tax than is prescribed at the scheduled rates, the difference is called an average rebate.

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[2] Another form of income averaging that is significantly less advantageous is available to artists, composers, inventors, performers, production associates, sport persons, writers and taxable capital gains. The averaging system does not apply to other groups with fluctuating incomes such as small business, persons with periods of unemployment or those who undertake home duties.

[3] Jeffery (1981) notes that "A three year moving average was used for tax assessment purposes in Great Britain from 1799 to 1926, and in the State of Wisconsin (USA) between 1927 and 1934" (p.32).

[4] From 1951/52 to 1965/67, the limit was $8,000, prior to that there was no limit (Trebeck and Barker, 1975).

[5] In any year, non-primary production income less than $5,001 will be subject to averaging, whilst non-primary production income exceeding $10,000 will not. A "shading in" procedure applies for non-primary production incomes between $5,000 and $10,000.

[6] Under this system, primary producers were taxed at the lower liability calculated by applying the averaging system or the normal scheduled rate.

If more tax is paid than is prescribed, it is called complementary tax. The average income is the arithmetic mean of the current years and the preceding four years income.[7] Calculation of marginal tax rates under averaging is detailed in Appendix 2.

Averaging tends to de-stabilise after tax income, primary producers on the averaging system paying less tax than provided by the scheduled rates when their taxable income exceeds their average income, and more than the scheduled rate when their taxable income is less than their average income.

MARGINAL TAX RATES DEPENDENT ON INCOME SOURCE.

The averaging rebate only applies to primary production income where a taxpayer has over $10,000 of off farm income, but applies to all income where non-primary production[8] income is less than $5,000. There are shading in provisions between $5,000 and $10,000 of off farm income. The effect of this is that a primary producer with more than $5,000 of off farm income has three marginal tax rates, one for primary production income and deductions, a second for non-primary production income and deductions, and a third for taxable capital gains. Thus, in 1990 a primary producer with a $40,000 taxable income (including $10,000 off farm income and a $500 capital gain) and a $20,000 average income had a marginal tax rate of 47% for non-primary production income, 21.55% for primary production income, and 29% for taxable capital gains.

The dichotomy in marginal tax rates could lead to distortions in investment, but it is unclear what the effects of these distortions would be. Low marginal tax rates on profits from primary production should lead primary producers to maximise income from this source, but the equally low marginal rates for primary production deductions should discourage investment (perhaps leading to "mining" the land?). This may partially explain why tax deductions for combating and preventing land degradation have not been used to a greater extent by primary producers.

Despite the "obvious" disadvantage of not being paid interest on the whole deposit, IED's can have a better rate of return than a similar investment because of the initial tax deduction, providing the taxpayer is not on averaging. A simple example will illustrate the advantages of investing in IED's.

ASSUMPTIONS.

A primary producer has a (relatively) constant income of $30,000. In year 0, an extra $10,000 income is received, which the primary producer decides to invest in a risk free investment. The Commonwealth Bond and IED interest rate is 9%, and the inflation rate is 4%, giving a real after-tax discount rate of 1.54%. Tax payments are lagged one year. In year 5, the primary producer makes a loss of $10,000 and redeems the bond or IED.

OUTCOMES

At ordinary tax rates, if the primary producer invested directly in Commonwealth Bonds, the discounted cash flow would be $1,916 (an internal rate of return of 5.60%), but an investment in an IED would return a discounted cash flow of $1,777 (an internal rate of return of 7.9%). The higher internal rate of return for the smaller cash flow is because the tax deductibility of the IED reduces the effective investment because the taxpayer should self-assess provisional tax in year 0 to remove the 10% uplift factor, as is shown in table 1. Detailed cash flows are shown in Appendix 3. The base case assumes no investment was made.

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[7] Assuming that the primary producer has been on the system for 5 years. Those who have been on the system for less years may have their average income calculated over a lesser number of years once they have established a "first average year".

[8] Following the decision in Case X82 90 ATC 599, it could be argued that interest form IED's would qualify as income from primary production.

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TABLE 1.
CASH FLOWS RESULTING FROM AN INVESTMENT IN A BOND AND AN IED, NORMAL TAX RATES.

YEAR	BASE CASE	BOND	DIFFERENCE, BOND & BASE CASE	IED	DIFFERENCE, IED & BASE CASE
0	31,558	21,558	-11,134	22,750	-9,491
1	19,608	20,150	603	23,081	3,511
2	22,750	23,293	604	23,081	369
3	22,750	23,293	604	23,081	369
4	22,750	23,293	604	23,081	369
5	-10,000	900	12,136	549	11,745
6	30,000	30,000	0	30,000	0
7	22,563	21,904	-744	15,501	-7,062
8	19,570	19,964	438	22,750	3,180
9	22,750	22,750	0	22,750	0

If the primary producer was on averaging, however, the net present value of the investment in Commonwealth Bonds would be $1,848 (an internal rate of return of 5.61%) whilst an investment in an IED would return a net present value of $902[9] (an internal rate of return of 5.12%). After-tax cash flows are shown in Table 2 and detailed calculations are set out in Appendix 3. The base case assumes no investment was made.

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[9] If taxable income is between $19,601 and $25,540, an IED will have a higher net present value for those taxpayers on averaging.

TABLE 2.
CASH FLOWS RESULTING FROM AN INVESTMENT IN A BOND AND AN IED, AVERAGING APPLIES.

YEAR	BASE CASE	BOND	DIFFERENCE BOND & BASE CASE	IED	DIFFERENCE IED AND BASE CASE
0	32,025	22,025	−10,000	22,750	−9,275
1	20,377	21,025	648	23,149	2,772
2	22,458	23,082	624	23,132	674
3	22,458	23,057	599	23,115	657
4	22,458	23,032	574	23,098	640
5	−10,000	900	10,900	442	10,442
6	30,000	30,000	0	29,883	−117
7	22,230	21,585	−645	17,771	−4,459
8	22,970	23,053	83	23,866	896
9	24,450	24,399	−51	23,892	−558
10	23,895	23,838	−57	23,282	−613
11	21,939	21,964	25	22,219	280
12	22,750	22,750	0	22,750	0

The total net average rebate allowed for the years 1984–89, and the amount allowed to the group classified as "Provisional–Primary Production" is shown in table 3. The diminishing collections of complementary tax possibly reflects accountants developing new methods of minimisation.

TABLE 3.
NET AVERAGE REBATE FOR THE YEARS 1984 –89.

YEAR	TOTAL AVERAGE REBATE ALLOWED $,000	COMPLEMENTARY TAX CHARGED $,0000	NET AVERAGE REBATE ALLOWED $,000	NET AVERAGE REBATE (PROVISIONAL– PRIMARY PRODUCTION TAXPAYERS) $,000
1984–85	108,822	21,683	87,139	80,464
1984–85	102,779	18,808	83,971	77,475
1985–86	112,591	14,667	97,924	88,926
1986–87	176,079	9,447	166,632	154,850
1987–88	275,186	8,817	266,369	253,064
1988–89	290,759	11,081	279,678	267,024

(Source: Australian Taxation Office (1987 to 1990) and Commissioner of Taxation (1986).

The beneficiaries of the average system for the year 1988-89 are shown in table 4. Appendix 4 contains similar tables for the years 1984 to 1988 inclusive. A positive relationship exists between increasing taxable income and the amount of average rebate received. The negative average rebate for low income groups indicates that these groups, on average, paid more in complementary tax than they received in average rebates.

TABLE 4.
BENEFICIARIES OF AVERAGING SYSTEM 1989.

INCOME BRACKET	% OF TOTAL TAXPAYERS	MEAN AVERAGE REBATE PER TAXPAYER	% OF TOTAL REBATE
Non taxable	0.93	159	0.09
<7,500	5.82	-219	-0.87
7,500 - 12,599	13.96	240	2.30
12,600 - 19,499	21.99	601	9.07
19,500 - 27,999	21.54	1,121	16.58
28,000 - 34,999	11.93	1,705	13.97
35,000 - 49,999	12.89	2,627	23.24
>=50,000	10.94	4,745	35.62

(Source: Obtained by subtracting "complementary tax" from "average rebate" for "provisional-Primary Production" taxpayers in Tables 1.18 and 1.19 Australian Taxation Office (1990), then dividing by the total number of taxpayers.)

The regressive effect of the averaging system can be seen in table 5, average rebates increasing with income, whilst complementary tax paid decreases.

TABLE 5.
TOTAL AVERAGE REBATE RECEIVED AND TOTAL COMPLIMENTARY TAX PAID
TAXPAYERS CLASSIFIED PROVISIONAL-PRIMARY PRODUCTION
1988 – 89.

GRADE OF TAXABLE INCOME	NUMBER OF TAXPAYERS	TOTAL AVERAGE REBATE $,000	NUMBER OF TAXPAYERS	TOTAL COMPLIMENTARY TAX $,000	NET REBATE $,000
NON-TAXABLE	848	445	774	172	273
< 7,500	2,185	359	8,473	2,690	-2,331
7,500 – 12,599	17,689	8,392	7,894	2,263	6,129
12,600 – 19,499	34,431	26,025	5,870	1,801	24,224
19,500 – 27,999	36,367	45,459	3,117	1,196	44,263
28,000 – 34,999	20,782	37,764	1,087	472	37,292
35,000 – 49,999	22,889	62,447	732	384	62,063
>= 50,000	19,677	95,274	367	162	95,112
TOTAL	154,020	275,718	28,314	8,967	266,751

(Source: Australian Taxation Office (1990))

OVERSEAS AVERAGING SCHEMES
Currently, neither the U.S., Canada or New Zealand has a tax averaging scheme. Historically, the U.S. had a scheme available to all taxpayers when the current years income exceeded 120% of the average of the previous 4 years income (Steuerle et al p.20). Canadian farmers were entitled to elect to use a 5 year block average until the 1987 tax year.

DISCUSSION
The 1989-90 Industry Commission Annual Report shows income averaging, which cost $290 million of foregone revenue in 1988-89, to be the largest financial assistance measure provided by Government to Agriculture. This is nearly double the $155 million expended on research and over 4 times the $66 million spent on adjustment.

Averaging appears to contravene the principle of neutrality by de-stabilising after tax income and providing multiple marginal tax rates which may affect investment decisions. It is a more complex system than that which applies to non-primary producers, as so may not be consistent with the principle of simplicity. It appears to be inequitable for the following reasons:
  * taxpayers with the same taxable incomes in the same year will pay different amounts of tax depending on their income over previous years;
  * it is a design feature of a progressive income tax system that persons on high incomes pay more tax than those with a low income, averaging effectively removes primary producers from a progressive system;
  * regressivity, the majority of benefits being provided to taxpayers with the largest incomes;

* "farmers in industries where incomes fluctuate very little may actually pay less tax under averaging than they would with completely stable incomes if they were taxed at standard rates." (Curran et al, p.30); and
* as pointed out by McIntyre (p.61), averaging results in a tax collection period different to the tax assessment period.

4. LIVESTOCK CONCESSIONS

Livestock primary producers enjoy a significant benefit in valuing inventory over other taxpayers, who must value inventory at either cost, market or replacement value. This results in the bulk of income recognition being deferred until sale, resulting in a higher profit in the year of sale than otherwise would have been the case. As a result, concessions to further defer the recognition of income following a forced sale have been enacted.

It could be argued that the current system of valuing livestock is contrary to the principles of neutrality and therefore sustainable agricultural development. A consequence of the system of livestock valuation is that a livestock producers taxable income for a year will not necessarily reflect their net income for the year. Further, anecdotal evidence suggests that one reason for primary producers entering a period of below average rainfall tending to retain stock is the tax liability that will follow the sale. This could be resolved by a education campaign to increase primary producer awareness of the livestock elections available, but suggests that the principle of simplicity has been breached.

The current livestock elections provide a significant tax deferral, and are presumably designed to promote income stability in drought years, but increase overall post-tax income instability. As is shown in the following example, they may actually de-stabilise after tax income.

Example: Assume a primary producer normally receives a stable income of $30,000 p.a. In year 1, a drought results in the forced sale of livestock, which results in a profit of $20,000. Because of the drought, taxable income before the forced sale, is zero. Using 1990 – 91 tax rates, and including medicare levy and provisional tax, after tax income has been calculated (detailed calculations are shown in Appendix 5) showing the impact of a Section 36 election (the nine year time horizon is necessary because of the impact of averaging). These are shown in Table 6.

If the inventory valuation concession were to be removed, it would appear that the further concessions to defer profits from forced sales would not be required because of the reduction in profit on disposal. The only concession not affected by removal of the inventory valuation concession would be the concession relating to double wool clips. However, primary producers would be able to defer income recognition by deferring sale of the second wool clip until the subsequent year. In any event, should "excess" profits result from a forced sale, causing a substantial taxation liability, the primary producer would be eligible to make an IED deposit.

If it were proposed to change the method of inventory valuation, transitional arrangements would be necessary to prevent large profits of livestock accounts in the transition year. The easiest method of transition would appear to be to allow opening stock in the implementation year to be valued according to the new method. This would mean that while primary producers would have a reduced liability in respect of existing stock, it would be offset by the earlier recognition of income. Alternatively, the prescribed minimum values of natural increase could be increased, over time, until they approximated the "cost" of an animal 12 months old (or some other arbitrary age).

Given the computational difficulties in determining "cost" of livestock, consideration could be given to introducing a further method of valuing livestock similar to the New Zealand standard value scheme, where each class of livestock is valued at 70% of its 3 year average market value. Such a scheme would minimise compliance costs, whilst ensuring that realistic values are used for livestock.

TABLE 6.
THE IMPACT OF A SECTION 36 ELECTION ON AFTER TAX INCOME.

YEAR	AFTER TAX INCOME WITHOUT SECTION 36 ELECTION	AFTER TAX INCOME WITH SECTION 36 ELECTION	DIFFERENCE
1	15,389	19,214	3,845
2	24,928	29,135	4,207
3	21,240	16,065	–5,175
4	23,084	22,329	–755
5	23,084	22,162	–922
6	22,750	22,300	–450
7	22,750	22,404	–346
8	22,750	22,514	–236
9	22,750	22,629	–121

Should changes be made to the method of livestock valuation, it would appear desirable to allow primary producers an annual choice between use of market value, cost or replacement value, similar to the choice offered in Section 31(1) to those taxpayers with trading stock other than livestock. This would ensure that livestock would not have to be valued above market value, as currently may happen with sheep.

Similarly, it would appear desirable to follow practise in Canada and the United States with respect to depreciation of breeding stock.

In summary, it would appear that the current taxation treatment of livestock lacks neutrality by providing a disincentive for primary producers to sell livestock. They lack equity, sales of identical livestock will have different tax consequences depending on the circumstances leading to the sale and the taxpayer's knowledge of the concessions available. The current system is not simple, with multiple elections, but the possible changes described would not increase simplicity.

OVERSEAS COMPARISONS.
The U.S. and Canada do not have schemes similar to the IED scheme, whilst the New Zealand IED scheme is similar to the Australian, with interest being paid at the rate of 3% on the whole deposit. Note that in the U.S. and Canada, losses can be carried back against previous years incomes for up to three years, which would lessen the justification for the scheme. Further, up to 1987 in Canada, a "forward averaging scheme" operated for primary producers and allowed:
> ... individuals who had a temporary but significant increase in income in a year to reduce the overall tax liability by prepaying tax at the top marginal rate on eligible income earned in the high income year and recouping the tax paid in low-income years. (CCH Canada p.487– 490).

5. CONCLUSION.

Primary producers currently enjoy three forms of tax relief to compensate them for fluctuating incomes. These are in addition to common methods of "smoothing" taxable income such as deferring sales (and income) and bringing forward expenses available to all business taxpayers.

Whilst there may be justification for a scheme to alleviate the effects of a progressive tax scale on fluctuating incomes, the presence of three such schemes causes confusion to primary producers and their investment advisers. It appears each scheme was created without consideration of the interaction between schemes.

Averaging may have been justifiable when losses could not be carried forward, it now appears to be an anachronism. Whilst it is not a welfare scheme, it appears to have significant equity failings. Similarly, the multiple marginal tax rates must lead to investment distortions.

It appears that the concessions relating to livestock valuation have led to further concessions in the form of livestock elections. It is difficult to justify these concessions on economic grounds[10]. Apparent deficiencies include masking of price signals for producers, diminishing the nexus between economic gain and taxable income.

IED's appear to be the easiest of the four schemes to justify, they stabilise after tax income and promote financial self reliance by primary producers. The other concessions only act on tax payable, and therefore, have only an indirect effect on income stabilisation. In fact, both averaging and the livestock concessions may de-stabilise income.

Given the view of farm advisers that IED's are merely means of minimising tax, consideration needs to be given to whether tax minimisation is consistent with long term financial self reliance and to the likely uptake of IED's if the absence of averaging and livestock concessions.

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[10] If there is no change to the methods of livestock valuation, livestock elections may be justifiable on sustainability grounds, as they would prompt early de-stocking in times of drought.

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APPENDIX 1.
PREVIOUS STUDIES ON INCOME AVERAGING.

Chisholm (1971) justified averaging on equity grounds, stating that:

It is well known that the interaction of an annual accounting period and a fixed progressive rate scale causes taxpayers with unstable annual incomes to pay more tax over a span of years than those receiving the same total income in equal annual amounts (p.36).

He stated that:

... the primary function of income averaging should be to attain period equity. That is, over some specific period, equal taxes should be paid on incomes of equal total size, regardless of how the income is distributed over the period (p.49).

The Industries Assistance Commission (IAC) (1975) stated that the justification for averaging schemes was to increase period equity, or to reduce the additional tax burden borne by fluctuation incomes relative to more stable incomes. However, this report was part of a larger inquiry into Rural Income Fluctuations (IAC, 1978), and such schemes were seen as agents to increase the stability of primary producers incomes. Stability of rural incomes was seen as being important in promoting the efficiency and welfare of the agricultural sector.

Trebeck and Barker (1975) stated:

In the absence of averaging, primary producers would generally incur additional tax payments of 15 to 25 per cent, and sometimes as must as 30 per cent. This is the basis for the equity argument in favour of averaging, an argument which is clearcut and widely accepted (p. 119–20).

Jeffery (1981a) provided a detailed analysis of the justification of schemes to relieve period inequity. He argued:

If the proposition that the assessment period of one year is too short for tax equity purposes is rejected, the introduction of period equity measures cannot be justified on equity grounds. Similarly, if the assumption that taxable income is an accurate and consistent index of equality is relaxed, the justification for the introduction of period equity measures on equity grounds is removed. If taxable income is not a precise and consistent index of equity (that is, primary inequities exist) it is not possible to judge whether there will be an improvement in overall tax equity resulting from the introduction of period equity measures. Nevertheless, it is still justifiable, on efficiency (neutrality) grounds, to introduce period equity measures (p.25).

Jeffery saw period inequity as causing distortions in investment decisions, and discriminating against risky investments with variable income streams.

He further argued:

... the reduced tax payments, resulting from the avoidance of period inequity, do not impart a special benefit to individual taxpayers. Such reduced payments are essential, if individual taxpayers are to pay personal taxation according to their social ability to do so (p.27)

and suggested that the reduced revenue yield be offset by increasing marginal rates of taxation.

Lloyd (1986) stated:

On efficiency grounds, income averaging measures are justified in order to ensure neutrality between investments with unstable income flows compared to those with stable income flows. They also ensure neutrality as to when expenditure is undertaken and when income is realised (for example, the timing of the sale of livestock) (p. 157).

However, some doubt must be cast on the appropriateness of attempting to reduce period inequity, and two main arguments are available.

First, it is a design feature of a progressive income taxation system that taxpayers on higher incomes pay a higher proportion of their income in tax than taxpayers on lower incomes, therefore period inequity is a fundamental feature of progressive income taxation systems. Only a flat tax (but not a linear tax) or a poll tax would remove period inequity. This would imply a change from the principle of equal marginal sacrifice as the tax basis to that of equal proportional sacrifice as the basis for tax assessment. It follows that to attempt to alleviate the impact of period inequity on a particular segment of society is to attempt to transfer the basis of taxation of that segment from a progressive system to a proportional system.

Second, Jeffery (1981b) notes that measures to reduce period inequity cannot be justified unless:
    (1) income is the appropriate measure of equality; and
    (2) the manner of measuring taxable income, achieves an accurate determination of the relative situations of taxpayers.

The inclusion of taxable capital gains in taxable income, livestock concessions, Section 59 elections and the availability of tax deductions for capital expenditure (Sections 75B and 75D) indicate that it may be hard to satisfy Jeffery's second condition.

It is considered that the arguments against use of period inequity as a justification for primary producers tax concessions are strong.

APPENDIX 2.

MARGINAL TAX RATES UNDER AVERAGING.

As a primary producers tax liability is a function of both taxable income and average income, it follows that marginal tax rates will not be the same as those of a taxpayer not on tax averaging. The marginal rate of tax can be calculated by apply the formula derived by Bates (1968, p123) :

$$\text{Short term marginal tax rate} = MR + \frac{AN(5AV - TI_0)}{5AV^2}$$

where:

K = The constant term in the tax bracket applicable to the average income

MR = The marginal rate in the tax bracket applicable to the average income

TI_0 = The taxable income in year 0

AV = The average income or $(TI_0 + TI_{-1} + TI_{-2} + TI_{-3} + TI_{-4})/5$

AN = a negative constant that is different for each tax bracket.

The average rate of tax on average income may give a close approximation of the marginal tax rate for a primary producer on averaging.

Marginal tax rates for the 1988–89 year for various combinations of taxable and average income are shown in Table 7.

TABLE 7.
INDICATIVE MARGINAL TAX RATES FOR SELECTED AVERAGE AND TAXABLE INCOMES. Y.E. 30/6/89.

TAXABLE INCOME,	10000	20000	30000	40000	50000	60000	70000	80000	90000	100000
AVERAGE INCOME										
10000	12.43%	14.57%	16.72%	18.86%	21.00%	N.A.	N.A.	N.A.	N.A.	N.A.
15000	14.81%	15.76%	16.72%	17.67%	18.62%	19.57%	20.52%	N.A.	N.A.	N.A.
20000	17.83%	19.07%	20.31%	21.55%	22.79%	24.03%	25.28%	26.52%	27.76%	29.00%
25000	22.28%	23.74%	25.19%	26.64%	28.10%	29.55%	31.00%	32.46%	33.91%	35.37%
30000	24.87%	25.88%	26.89%	27.89%	28.90%	29.91%	30.92%	31.93%	32.94%	33.95%
35000	26.76%	27.50%	28.25%	28.99%	29.73%	30.47%	31.21%	31.95%	32.70%	33.44%
40000	29.56%	30.48%	31.40%	32.31%	33.23%	34.15%	35.07%	35.99%	36.90%	37.82%
45000	31.41%	32.13%	32.86%	33.58%	34.31%	35.03%	35.76%	36.48%	37.21%	37.93%
50000	32.90%	33.49%	34.08%	34.60%	35.25%	35.84%	36.43%	37.01%	37.60%	38.19%
55000	34.26%	34.78%	35.30%	35.81%	36.33%	36.85%	37.37%	37.89%	38.41%	38.93%
60000	35.36%	35.80%	36.24%	36.67%	37.11%	37.54%	37.98%	38.41%	38.85%	39.29%
70000	37.12%	37.44%	37.76%	38.08%	38.40%	38.72%	39.04%	39.36%	39.68%	40.00%
80000	38.44%	38.69%	38.93%	39.18%	39.42%	39.67%	39.91%	40.16%	40.40%	40.65%
90000	39.48%	39.67%	39.87%	40.06%	40.25%	40.45%	40.64%	40.83%	41.03%	41.22%
100000	40.31%	40.47%	40.63%	40.78%	40.94%	41.10%	41.26%	41.41%	41.57%	41.73%

(Source: Douglas et al)

This table is for indicative purposes only. Due to changes in tax brackets, etc, a small change in average income can mean that the marginal rate may change by as much as 2 – 3%.

Typical marginal tax rates for primary producers in 1989 are shown in Table 8.

TABLE 8.
MARGINAL TAX RATES FOR PRIMARY PRODUCERS IN 1989.

INCOME GROUP	NO. OF TAXPAYERS	MEAN TAXABLE INCOME	MEAN AVERAGE INCOME	MARGINAL TAX RATE
NON–TAXABLE[11]	1720	6,383	6,895	9.54%
<7,500	10658	5,301	8,548	11.46%
7,500 – 12,599	25583	10,253	9,284	13.73%
12,600 – 19,499	40301	16,017	12,059	16.55%
19,500 – 27,999	39484	23,475	16,305	20.90%
28,000 – 34,999	21869	31,320	20,638	26.50%
35,000 – 49,999	23621	41,202	25,696	29.43%
50,000 AND OVER	20044	83,821	45,323	39.06%

(Source: calculated by applying Bates formula to data for "Provisional – Primary Producer" taxpayers contained in Tables 1.18 and 1.19, Taxation Statistics 1988–89.)

These marginal rates can be compared with the scheduled rates of 1989 shown in table 9, note that marginal rates under averaging are lower than the prescribed rate.

TABLE 9.
1989 INDIVIDUAL TAX RATES.

INCOME BRACKET	MARGINAL TAX RATE
0 – 5,100	Nil
5,101 – 12,600	24%
12,601 – 19,500	29%
19,501 – 35,000	40%
> 35,000	49%

AVERAGING AND TAXABLE CAPITAL GAINS.
Taxable capital gains are taxed are taxed at special rates. For primary producers utilising the averaging system, the tax liability is determined by:
1. determining the tax on the average income;
2. determining the tax on the average income plus 1/5th of the capital gain;
3. calculating the difference between the tax on the average income and the tax on the average income plus 1/5th of the capital gain; and
4. multiplying the resultant figure by 5.

This method of calculation ensures a higher marginal tax rate for taxable capital gains than for other income from primary production.

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[11] This category comprises taxpayers who have are liable to tax, but receive sufficient rebates or credits (such as spouse rebate, average rebate and dividend imputation credits) to reduce the tax liability to nil.

APPENDIX 3.
CASH FLOWS RESULTING FROM VARIOUS INVESTMENTS.

For a tax-payer paying tax at ordinary rates, the net cash flows after tax and investment or disinvestment resulting from an investment in a Commonwealth bond and IED are shown in Tables 10 - 12. The base case assumes no investment was made.

TABLE 10.
BASE CASE CASH FLOWS, ORDINARY RATES OF TAX.

YEAR	TAXABLE INCOME	PRIMARY TAX	MEDICARE LEVY	PROV. TAX	NET CASH FLOW
0	40,000	6,875	375	8,442	31,558
1	30,000	11,085	500	7,250	19,608
2	30,000	6,875	375	7,250	22,750
3	30,000	6,875	375	7,250	22,750
4	30,000	6,875	375	7,250	22,750
5	0^{12}	6,875	375	0	-10,000
6	20,000	0	0	0	30,000
7	30,000	3,118	250	4,070	22,563
8	30,000	6,875	375	7,250	19,570
9	30,000	6,875	375	7,250	22,750

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[12] As a loss was made in this year, taxable income will be zero, but income is still $-10,000.

TABLE 11.
CASH FLOWS INCLUDING INVESTMENT IN BOND, AVERAGING APPLIES.

YEAR	TAXABLE INCOME	AVERAGE INCOME	PRIMARY TAX	MEDICARE LEVY	PROV.TAX	CASH FLOW
0	40,000	32,000	6,875	375	7,975	22,025
1	30,900	32,180	9,556	500	7,793	21,025
2	30,900	32,360	7,407	386	7,818	23,082
3	30,900	32,540	7,432	386	7,843	23,057
4	30,900	32,720	7,457	386	7,868	23,032
5	0	24,720	7,481	386	0	900
6	20,900	22,720	0	0	0	30,000
7	30,000	22,540	3,746	261	4,408	21,585
8	30,000	22,360	5,327	375	5,652	23,053
9	30,000	22,180	5,277	375	5,601	24,399
10	30,000	28,180	5,226	375	6,162	23,839
11	30,000	30,000	6,573	375	7,250	21,964
12	30,000	30,000	6,875	375	7,250	22,750

TABLE 12.
CASH FLOWS INCLUDING AN INVESTMENT IN IED, AVERAGING APPLIES.

YEAR	TAXABLE INCOME	AVERAGE INCOME	PRIMARY TAX	MEDICARE LEVY	PROV.TAX	CASH FLOW
0	30,000	30,000	6,875	375	7,250	22,750
1	30,549	30,110	6,875	375	7,400	23,149
2	30,549	30,220	7,018	382	7,417	23,132
3	30,549	30,329	7,035	382	7,434	23,115
4	30,549	30,439	7,052	382	7,451	23,098
5	549	24,549	7,069	382	107	442
6	30,000	24,439	107	0	117	29,883
7	30,000	24,329	5,811	375	6,160	17,771
8	30,000	24,220	5,785	375	6,134	23,866
9	30,000	24,110	5,759	375	6,108	23,892
10	30,000	30,000	5,733	375	6,718	23,282
11	30,000	30,000	6,875	375	7,250	22,219
12	30,000	30,000	6,875	375	7,250	22,750

APPENDIX 4.
BENEFICIARIES OF THE AVERAGING SYSTEM 1984 – 1988.

TABLE 13.
BENEFICIARIES OF THE AVERAGING SYSTEM 1984.

INCOME BRACKET	% OF TOTAL TAXPAYERS	MEAN AVERAGE REBATE PER TAXPAYER	% OF TOTAL REBATE
Non taxable	0.96	–149	–0.28
<6,000	14.41	–296	–8.59
6,000 – 8,999	18.81	89	3.36
9,000 – 11,999	16.61	298	9.97
12,000 – 15,999	16.40	407	13.42
16,000 – 21,999	15.30	509	15.69
22,000 – 31,999	10.65	1,176	25.23
>=32,000	6.86	2,986	41.20

TABLE 14.
BENEFICIARIES OF AVERAGING SYSTEM 1985.

INCOME BRACKET	% OF TOTAL TAXPAYERS	MEAN AVERAGE REBATE PER TAXPAYER	% OF TOTAL REBATE
Non taxable	2.60	–23	–0.11
<7,500	22.51	–169	–7.46
7,500 – 12,599	28.26	230	12.74
12,600 – 19,499	23.61	428	19.82
19,500 – 27,999	13.02	908	23.20
28,000 – 34,999	4.58	1,601	14.40
35,000 – 49,999	3.58	2,670	18.74
>=50,000	1.84	5,169	18.67

TABLE 15.
BENEFICIARIES OF AVERAGING SYSTEM 1986.

INCOME BRACKET	% OF TOTAL TAXPAYERS	MEAN AVERAGE REBATE PER TAXPAYER	% OF TOTAL REBATE
Non taxable	2.08	-3	-0.01
<7,500	18.45	-165	-5.00
7,500 - 12,599	27.82	256	11.70
12,600 - 19,499	25.28	470	19.49
19,500 - 27,999	14.43	954	22.59
28,000 - 34,999	5.32	1,627	14.20
35,000 - 49,999	4.18	2,629	18.03
>=50,000	2.44	4,745	19.00

TABLE 16.
BENEFICIARIES OF THE AVERAGING SYSTEM 1987.

INCOME BRACKET	% OF TOTAL TAXPAYERS	MEAN AVERAGE REBATE PER TAXPAYER	% OF TOTAL REBATE
Non taxable	1.15	98	0.10
<7,500	10.24	-146	-1.52
7,500 - 12,599	24.01	305	7.46
12,600 - 19,499	27.08	646	17.83
19,500 - 27,999	19.32	1,191	23.47
28,000 - 34,999	7.92	1,878	15.18
35,000 - 49,999	6.66	2,862	19.44
>50,000	3.62	4,887	18.04

TABLE 17.
BENEFICIARIES OF AVERAGING SYSTEM 1988.

INCOME BRACKET	% OF TOTAL TAXPAYERS	MEAN AVERAGE REBATE PER TAXPAYER	% OF TOTAL REBATE
Non taxable	0.98	118	0.09
<7500	6.8	−169	−0.81
7,500 − 12,599	17.05	324	3.92
12,600 − 19,499	24.24	685	11.78
19,500 − 27,999	21.40	1,250	18.96
28,000 − 34,999	10.78	1,899	14.51
35,000 − 49,999	10.82	2,884	22.13
>=50,000	7.93	5,235	29.42

(Source: Obtained by subtracting "complementary tax" from "average rebate" for "provisional-Primary Production" taxpayers in Tables 1.18 and 1.19 of the appropriate years Taxation Statistics, then dividing by the total number of taxpayers.)

APPENDIX 5.
IMPACT OF A SECTION 36 ELECTION ON AFTER TAX INCOMES.

Example: Assume a primary producer has a constant income of $30,000. In year 0, a drought forces the sale of livestock, resulting in a profit of $20,000, and reduces the constant income to zero. The taxable income for year 0 is therefore $20,000. It is assumed that the taxpayer will always vary provisional tax when it is to their advantage. If the taxpayer does not make a Section 36 election, taxable income, average income and tax payable (lagged one year) will be as shown in Table 18.

TABLE 18. CASH FLOWS RESULTING FROM THE FORCED SALE OF LIVESTOCK.

YEAR	TAXABLE INCOME	AVERAGE INCOME	PRIMARY TAX	MEDICARE LEVY	PROV. TAX	AFTER TAX INCOME
1	20,000	28,000	6,875	375	4,611	15,389
2	30,000	28,000	4,361	350	5,072	24,928
3	30,000	28,000	6,541	375	6,916	21,240
4	30,000	28,000	6,541	375	6,916	23,084
5	30,000	28,000	6,541	375	6,916	23,084
6	30,000	30,000	6,541	375	7,250	22,750
7	30,000	30,000	6,875	375	7,250	22,750
8	30,000	30,000	6,875	375	7,250	22,750
9	30,000	30,000	6,875	375	7,250	22,750

If however, a Section 36 election is made, taxable income, average income and tax payable will be as shown in table 19.

TABLE 19. CASH FLOWS RESULTING FROM THE FORCED SALE OF LIVESTOCK, USING A SECTION 36 ELECTION.

YEAR	TAXABLE INCOME	AVERAGE INCOME	PRIMARY TAX	MEDICARE LEVY	PROV. TAX	AFTER TAX INCOME
1	4,000	24,800	6,875	375	786	19,214
2	34,000	25,600	786	0	865	29,135
3	34,000	26,400	6,881	425	7,494	16,065
4	34,000	27,200	7,069	425	7,671	22,329
5	34,000	28,000	7,246	425	7,838	22,162
6	30,000	33,200	7,413	425	7,700	22,300
7	30,000	32,400	7,325	375	7,596	22,404
8	30,000	31,600	7,221	375	7,486	22,514
9	30,000	30,800	7,111	375	7,371	22,629
10	30,000	30,000	6,996	375	7,250	22,750

Note that after tax income is defined as being income less tax, not taxable income less tax.