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Improving the Efficiency of Taxation of Livestock in Australia

R A Douglas*

In this paper, the neutrality of the income tax provisions for livestock are examined and compared with policies in selected other countries. It is argued that the current system provides significant concessions by deferring the recognition of income. The deferral of recognition of income distorts investment decisions by providing an incentive to invest in livestock which is not available for similar investments. A more efficient system, based in part on the New Zealand National Standard Cost Scheme is suggested, as are possible transition measures.

1. Introduction

The rearing and husbandry of livestock forms an important part of Australian Agriculture, with a gross value of production in 1991-92 of \$10 965 million (ABARE), or approximately half of the total gross value of farm production.

It is important to provide efficient institutional settings for such a large industry sector, and therefore unusual that the effect of tax on livestock production has not been the subject of more study. Perhaps researchers and policy makers have assumed that the current settings provide for efficient taxation of the sector. However, closer examination shows that this is not the case.

The current livestock tax provisions provide large subsidies in the form of deferral of taxes to livestock producers. Douglas and Davenport estimate that the taxable income deferred in 1992 was about \$1 billion in respect of the natural increase born during that year. These incentives have the potential to cause over-investment in livestock, and a disincentive to de-stocking. As such, the provisions may threaten the resource base by encouraging overstocking and retention of livestock during drought.

In the next section, previous literature is reviewed. Principles for the efficient taxation of livestock are then discussed. In the fourth section, the existing Australian income tax provisions for livestock are described, as are taxation provisions for livestock in Canada, New Zealand and the United States. In the

following section, it is argued that the existing tax provisions provide a significant deferral of taxation, and that provisions similar to those for the taxation of livestock in New Zealand may provide a more efficient method of taxing livestock in Australia. Possible transition measures and 'second-best' improvements are suggested. In conclusion, it is argued that the existing system seriously distorts investment choice, and could lead to over-investment in livestock.

2. Previous Australian Studies

There appears to have been only five previous analyses of the taxation of livestock (Glau; Cook; Taxation Review Committee (Commonwealth of Australia); White; Bureau of Agricultural Economics).

Glau assumed that market value was the appropriate valuation method for inventory. He assumed that all livestock should be treated as trading stock, and did not mention that breeding stock could be considered capital, or that some might be plant. He noted that the use of the low arbitrary values for natural increase favoured self-replacing flocks and herds, and that 'when all replacement animals are bred on the property the limiting value (of closing stock) is the arbitrary cost price used for natural increase' (Glau, p. 54). He further noted that when inventory values were low, the cost of purchased livestock effectively became substantially tax deductible, and provided rigorous examples of this process. Glau (p. 23) did not consider the impact of the various livestock elections and concluded:

* The author is an economist with NSW Agriculture. The views expressed are those of the author and are not necessarily those of NSW Agriculture or the NSW Government. This paper has benefited from the helpful comments of John King, Ian Wall-schutzky, Scott Davenport, colleagues within NSW Agriculture, and an anonymous *Review* referee, however, the usual caveat applies.

the peculiar treatment of profits from the livestock trading account in Australian income tax legislation was examined and shown to provide an incentive for net investment in breeding livestock. In representative situations it was shown that more than 50 per cent of the cost of net investment in livestock is deductible from taxable income in the first two years after the investment is made.

If the government desires to encourage investment in livestock, the incentive should be provided in a more direct manner so that farmers will be aware of the incentive involved. It is doubtful that the extent of the current incentive is widely understood by farmers, and hence it is probably of limited effectiveness in stimulating investment.

Cook noted the tax advantage conferred on self-replacing herds compared to trading herds,¹ but accepted low valuation of trading stock as a desirable outcome. Cook (p. 17) recommended that arbitrary minimum values be removed, that is that no cost be ascribed to natural increase:

The removal of these minimum values would simplify accounting procedures, particularly for properties purchasing replacement stock. It could be justified having regard to the fact that livestock values have risen since 1936 to such an extent, that the nominal and relatively insignificant minimum values permitted are now completely out of line with market values.

The alternative solution of increasing the arbitrary minimum values was rejected as it 'may enhance the attractiveness of cropping, thus leading possibly to less efficient resource use' (Cook, p. 14). This conclusion is contrary to the theory that the removal of such distortions will increase the efficiency of resource use. Cook recognised that not ascribing any value to natural increase may cause distortions between the taxation of farm enterprises, and to overcome this, made the unusual recommendation that depreciation be allowed on other trading stock!²

The Taxation Review Committee briefly examined the taxation of livestock, and recommended that arbitrary minimum values for natural increase be increased on a regular basis to reflect the costs of production. They considered that a scheme of arbitrary minimum values had advantages in terms of simplicity. The livestock elections referred to in table 1 were not referred to.

White (1978) constructed a whole-farm model of a North Queensland sheep property, which included detailed modeling of the taxation of livestock. White (p. 59) found that valuing livestock at market value "... resulted in a slight increase in profitability and a decline in variability. ... the average cost method can destabilise taxable income if there is a substantial increase in sales because the inventory loss is much smaller than the trading gain."

The Bureau of Agricultural Economics recommended that market value be used as the basis for valuation of livestock inventories, as this would provide the closest approximation to 'a real income concept'. No comment was made on other options should cost price be accepted as a basis for valuation of inventories, and the average cost method of valuing closing stock was accepted uncritically.

The taxation of livestock was not mentioned in the Draft White Paper *Reform of the Australian Taxation System* (Commonwealth of Australia), while the provisions of the Act were mentioned at the Australian Tax Research Foundation conference *Taxation and the Rural Economy* (Preston), but no analysis undertaken.

3. Principles for Taxation of Livestock

Taxes are commonly based on two approaches, the benefit approach ('user pays') or the 'ability to pay' approach. Income tax is based on the 'ability to pay' approach with 'income' over the assessment period being used as the measure of ability to pay.

Defining 'income' is difficult. Many economists accept the Schanz-Haig-Simons concept which defines income being the net accretion in taxpayer's wealth (economic power) plus consumption over the assessment period (Simons). Under this concept, income is recognised when it accrues, and not when it is realised.

¹ This advantage arises from the low values ascribed to natural increase. If all trading livestock are purchased, the valuation of the herd will approximate cost.

² It is difficult to determine why trading stock should be depreciated. The more obvious solution of ensuring consistency between the valuation of livestock and other forms of trading stock was not investigated.

Whilst conceptually simple, in practice it is difficult³ to tax income according to this concept because of the need for regular valuations of the taxpayers wealth, and measurement of consumption. As a result, income is commonly recognised when realised, rather than when accrued. In Australia, the realisation principle is used.

For the purposes of this paper, efficiency of taxation will be defined in terms of conditional neutrality, that is, the tax system for livestock will be considered to be efficient if the taxation principles applying to livestock are consistent with those applying to similar investments in other sectors of the economy.

Livestock is normally regarded as difficult to account for, and to tax (Cook, p. 3):

...not only may livestock be regarded as a capital input but it also forms part of the output of the rural sector. In addition livestock, because of the gestation period characterising the livestock production process, forms part of the sector's stock in trade or goods in process. Each of these roles may be occupied simultaneously.

Generally, Australian taxpayers may value trading stock (inventories held for resale) at their choice of cost price, replacement value, or market value. The costs of capital assets are amortised over their effective life.⁴

Failure to properly account for inventories in calculating taxable income will result in a divergence between economic income and taxable income, with the result that taxable income may no longer be a good indicator of ability to pay. Similarly, failure to amortise capital costs over the effective life of an asset will also result in a divergence between taxable income and economic income. While absolute neutrality may not be possible, conditional neutrality *vis-à-vis* other business taxpayers should be possible.

To ensure conditional neutrality in the taxation of livestock, two principles should apply:

- (a) if livestock are considered to be trading stock (i.e., held for the purposes of sale), they should be valued at the taxpayers choice of cost price, replacement value or market price, in a similar manner to that which applies to other items of trading stock; and

- (b) if livestock are considered to be of a capital nature (i.e., held for the purposes of breeding, sale of their bodily produce, or as a beast of burden), they should be valued at cost and depreciation should be allowed on an effective life basis.⁵ To the extent that the government may introduce accelerated depreciation provisions or investment allowances generally, they should also apply to such livestock. Where appropriate, capital gains tax provisions should also apply.

In either case, it is clear that if inventories and capital items are to be valued at cost, the costs associated with each animal should be capitalised until it is:

- (a) sold, if it is trading stock;
- (b) placed in the breeding herd; or
- (c) considered a mature fibre-producing animal.⁶

4. Current Provisions for the Taxation of Livestock

Since 1936, all livestock owned by farmers has been classified as trading stock (i.e., held for the purpose of resale) for tax purposes.⁷ This is inconsistent with the principle that livestock held for the purpose of producing natural increase, or for the sale of their bodily produce, should be considered to be items of capital.

³ The impact of compliance costs in arranging regular valuations is an 'obvious' reason for not adopting the Schanz-Haig-Simons concept. However, it is not intuitively clear that this cost will be less than the administrative and compliance costs of the existing system.

⁴ In practise, accelerated depreciation provisions provide for faster amortisation.

⁵ King suggests that it is undesirable that assets should be depreciated past their residual value (J. King, MAF Policy, New Zealand, *pers. comm.*, October 1994). The author agrees with this view. However, the evaluation criteria was conditional neutrality. As depreciation for other assets in Australia is to zero, conditional neutrality indicates that this should also apply to livestock.

⁶ This distinction is necessary for neutered male animals that are held for the production of wool, mohair, etc.

⁷ By definition (s.6) : ... 'trading stock' includes anything produced, manufactured, acquired or purchased for purposes of manufacture, sale or exchange, and also includes livestock; ...

Table 1: Income Tax Provisions Relating to Livestock

Section	Description
26B	Spreads income from insurance recoveries for the loss of livestock or trees over five years.
26BA	Allows deferral of profit from double wool clips until following year.
32	Farmers must elect to value livestock at either cost or market value.
32A	Allows depreciation of horse breeding stock.
33	Farmers must obtain consent of Commissioner before changing basis of livestock valuation.
34	Allows use of arbitrary values for cost price of natural increase.
36(3)	Spreads profit on abnormal disposal of livestock over 5 years.
36AAA	Provides an alternative election to S36 election.
36AA	Spreads profit on death or compulsory destruction of livestock over 5 years.

Provisions of the *Income Tax Assessment Act* which relate specifically to livestock as trading stock, at 30 June 1994, are listed in table 1. These provisions have two purposes, the first purpose being to provide a mechanism to calculate taxable income (sections 32, 32A, 33 and 34), the second allowing for the deferral of income if the disposal of livestock occurs because of certain prescribed events (sections 26B, 26BA, 36(3), 36AAA and 36AA).

Sections 32 and 33, which require taxpayers to elect to use one method of valuing livestock, and obtain the consent of the Commissioner before changing that method, are inconsistent with the general provision that taxpayers have the choice of valuing trading stock at either cost price, replacement value or market price. There appears no reason why farmers should not have the same rights of varying valuation methods as other taxpayers.

Section 34 provides that unless the taxpayer elects to use actual cost, or some value greater than the prescribed minimum values, the prescribed minimum values (shown in table 2) shall be adopted as the cost of natural increase. As noted by the Taxation Review Committee (Commonwealth of Australia, p. 284) the system of arbitrary valuation may provide a simple and efficient method of dealing with a difficult valuation problem. This section also provides that the cost of a foal cannot be less than the service fee. The 1994 amendments require livestock for which a minimum

value has not been prescribed to be valued at full absorption cost.

Table 2: Minimum Values Prescribed by Reg. 10 for Natural Increase

Species	Minimum Cost \$
Sheep	4
Cattle	20
Horses	20
Goats	4
Pigs	12
Deer	20

Section 32A applies to horse breeding stock, and allows depreciation of male and female breeding stock. The depreciation rate for male horses is 25 per cent prime cost method, and for female horses, may be up to $33\frac{1}{3}$ per cent prime cost method. The minimum value to which a horse may be depreciated is \$1. This section provides less generous concessions than were allowed prior to 19 August, 1992. Earlier provisions allowed depreciation rates of up to 50 per cent. It was anticipated that reducing the depreciation rates would save \$8 million revenue foregone in 1993/94 alone (Australian Taxation Office). There appears to be no official explanation of why horses qualify for different taxation treatment to other livestock.

Livestock Elections

Section 26B

This section allows a farmer to elect to spread the proceeds received from certain insurance recoveries in respect of the loss of livestock over five years, that is, 20 per cent of the insurance recovery is included in the current years income and 20 per cent in each of the next four succeeding years of income. This election appears to confer a major benefit upon livestock producers compared to other sectors of the community who may receive insurance recoveries for the loss of trading stock. For example, a grain grower may have a silo of grain destroyed. Any resulting insurance recovery would be assessable income, and taxable in the year that the insurance company accepted the claim.⁸

Further, the reason for the disposal of trading stock should not alter its taxation treatment. In addition, this election is more generous than those to be examined subsequently as the entire recovery may be deferred, rather than just the profit as in the other elections.

Section 26BA

This section allows farmers who carry on business in Australia and who realise profits from two shearings in one fiscal year to defer taxation on the profit arising from the second shearing, if the need for the second shearing was occasioned by fire, flood or drought. It is possible to question why woolgrowers are selected for special treatment over other farmers. Many other forms of primary production may have the profits from two years production fall in one income tax year, an example being cotton where, depending on climatic conditions, harvesting may occur from May to August. It appears that the s26BA election may allow woolgrowers a significant advantage over those other farmers facing similar timing problems. No apparent reason exists for continuing the concession to woolgrowers.

Sections 36 and 36AA

Subject to certain conditions, the s36(3) and s36AA elections allow farmers to elect to spread the profit arising from the forced disposal or compulsory destruction of livestock over five years in a similar manner to s26B. The forced disposal in s36 must be occasioned by lack of pastures caused by fire, flood or

drought. The election applies equally to the sale of breeding stock and trading stock, provided that the sale 'is not in the ordinary course of business'. There is no requirement for an area to be drought declared before the 'drought' provisions are invoked, nor would this be feasible as some States, such as South Australia do not use a system of drought declarations. Therefore, the onus is on the taxpayer to establish that there was a drought, fire, or flood. Anecdotal evidence suggests that some farmers regard a seasonal dry spell as sufficient to invoke the 'drought' provisions.

The s36AA election can be triggered after the receipt of compensation for the death or compulsory destruction of livestock.

The Act requires the taxpayer making these elections to allocate the proceeds wholly or principally to the purchase of replacement livestock, or the maintenance of unsold breeding stock. However there does not appear to be scrutiny of claims to ensure this occurs. In any case, the provisions are interpreted so liberally that the purchase of a tractor to push down scrub qualifies as an appropriate allocation of the proceeds (Income Tax Ruling 211).

Section 36AAA

Section 36AAA provides an alternative to s. 36 and s. 36AA. Again, there is a requirement that the proceeds be used wholly or principally to purchase replacement livestock, or maintain retained breeding stock. Section 36AAA excludes all the profit arising from the forced sale of livestock from the current years taxable income. This profit is carried forward and is applied as follows:

- (a) to reduce the purchase price of replacement livestock by the 'average profit per head' of the livestock disposed of;⁹

⁸ By definition (s.6), farmers carry on a "business of primary production". They should therefore be taxed on an accruals basis, rather than a cash basis.

⁹ The Act provides that the replacement livestock cannot be bought into the livestock account at a value of less than zero, which could otherwise occur if the cost of the replacement livestock was less than the 'average profit' on the forced disposal. If the replacement livestock are of another species, the reduction in value is an appropriate amount in the opinion of the Commissioner.

- (b) if replacement livestock are obtained by breeding, the taxpayer may elect to include any amount of the unapplied profit in their taxable income in that year; and
- (c) any amount of the profit unapplied at the end of five years is included in the taxable income of the farmer.

One impact of this election is to further encourage the farmer to ascribe low values to inventories. The election effectively provides that the taxpayer can defer the payment of taxation until the replacement livestock are sold, or the end of five years if some abnormal profit remains unapplied.

4.1 International Comparisons

Canada

In Canada, farmers are required to account for purchased inventory (including livestock) in loss years. In other years, they may account voluntarily for livestock at the lower of cost or market value (CCH Canada, pp. 209-210).

Generally, inventory will be valued at the lower of cost or fair market value; however, the taxpayer may elect to value 'specified animals' on a diminishing value basis. 'Specified animals' include all horses and any animal registered under the *Livestock Pedigree Act*.

New Zealand

Following changes in 1992-93, the New Zealand legislation requires 'specified livestock' (sheep, cattle, deer, goats and pigs) to be bought to account under one of five methods.¹⁰ Choice of method (with the exception of the high-priced scheme) is the option of the taxpayer. The methods are:

- (a) the herd scheme;
- (b) cost (the taxpayer may choose the National Standard Cost Option, or self-assess cost);
- (c) market value;
- (d) replacement value; or
- (e) the 'high price' scheme.

A taxpayer may use different schemes for different species of livestock, and may use the herd scheme in conjunction with any one other valuation method within a species of livestock (e.g. herd scheme and cost) (J. King, MAF Policy New Zealand, *pers. comm.*, October 1994).

Cost is calculated on the basis of full absorption costing. The farmer has the choice of calculating their individual costs, or using the National Standard Cost Option which allows the use of arbitrary values based on absorption costing, which are shown in table 3. Note that the costs are cumulative. For example, an aged sheep is valued at \$21.10 (\$13.30 + \$7.80). The arbitrary values are updated annually.

The 'herd' scheme values are a prescribed per centage of National Average Market Values. 'Assessable income or deductible expenditure will only arise on a change in the number of livestock units or classes on hand at the end of an income year' (CCH New Zealand, p. 742).

The 'high price scheme' applies to breeding or potential breeding livestock whose cost exceeds \$500 and five times the National Average Market Value declared for that livestock class for the preceding or current income year. (CCH New Zealand, p. 747). This scheme provides for either a straight line or a diminishing value method depreciation of the cost of the animals. The value of closing stock is reduced by the amount of depreciation allowed each year until their depreciated value is equal to herd scheme values in any year.

'Non-specified' livestock (livestock other than sheep, cattle, deer, goats and pigs) may be valued at cost, market, replacement or at a standard value approved by the Commissioner of Internal Revenue.

United States

In the United States, 'cash basis taxpayers' are not required to bring livestock inventories to account.¹¹ Accrual basis taxpayers are only required to inventory

¹⁰ King (1992) provides a good description of these methods.

¹¹ In the United States '... most farmers are probably not required to use the accrual method of accounting, (however) that method is required for certain farming corporations and partnerships and for all farming tax shelters ...' (CCH USA, p. 213).

Table 3: New Zealand National Standard Cost Values for Livestock - 1994

Type of Livestock	Classes of Livestock	National Standard Cost \$
Sheep	Rising 1 year	13.30
	Rising 2 year	7.80
Dairy Cattle	Purchased bobby calves	135.00
	Rising 1 year	268.00
	Rising 2 year	68.20
Beef Cattle	Rising 1 Year	116.00
	Rising 2 year	65.50
	Rising 3 year male non-breeding cattle	65.50
Deer	Rising 1 year	35.90
	Rising 2 year	18.60
Meat and Fibre Goats	Rising 1 year	10.10
	Rising 2 year	6.30
Dairy Goats	Rising 1 year	74.00
	Rising 2 year	10.80
Pigs	Weaners up to 10 weeks of age	75.70
	Growing pigs 10 to 17 weeks of age	56.70
Source: King <i>pers. comm.</i>		

livestock and produce held for sale (CCH USA, p. 213). Methods available are cost, below of cost or market, the 'farm price' method, which provides for the valuation of inventories at market price less the direct cost of disposition (CCH USA, p. 406), and the 'unit-livestock-price' which 'provides for the valuation of different classes of animals at a standard price for each animal within a class' (CCH USA, p. 406). There is no requirement to inventory breeding livestock, which farmers can depreciate.

Relief from Adverse Events

As discussed previously, Australian tax law provides several forms of relief to farmers following an adverse event. By contrast, Canada and the United States tax laws only allow a deferral of one year for income arising from forced sales caused by an adverse event, with the United States law only applying to animals or crops that would normally have been sold in the second year (CCH Canada, p. 214; CCH USA, pp. 212-213).

New Zealand adverse event relief previously applied only to specific events¹² and replaced with an 'Adverse Event Income Equalisation Deposit Scheme' introduced in the 1993/94 fiscal year. This scheme is more generous than the existing New Zealand IED scheme, with no minimum investment period, and refunds payable upon application by the taxpayer (CCH New Zealand, p. 760).

'Any income arising from the forced sale of livestock due to an adverse event may be deposited in this account (no later than one month after balance date) and can be withdrawn immediately in the new financial year. Adverse events will be self assessed, and deposits will be accompanied by a statutory declaration as to the nature and effect of the event' (King).

¹² The events are the 1988-89 drought affecting parts of Marlborough, Canterbury and Otago, the East Coast of the North Island, and extreme rainfall in the vicinity of Kerikeri in 1989.

5. Defects in the Existing Taxation of Livestock

5.1 Low Arbitrary Values for Natural Increase

Currently, farmers are entitled to value natural increase at arbitrary minimum values prescribed by Regulation 10 (see table 2).

Arbitrary valuation in itself may not lead to distortions providing the arbitrary values are close approximations to cost. The current system of arbitrary valuation has two main defects. The first is that the values are not updated regularly. The only updates occurred in the 1984-85 and 1988-89 income years, with the original values having been set in 1936. While the values may have been close approximations of cost in 1936, they are now dated. As a result, they fail to give a true reflection of a farmer's income and provide a significant concession.

The second and more major defect of the current scheme of arbitrary minimum values is that they ascribe the same arbitrary cost to all animals of a species, and fail to consider the effect of ageing. Ageing means that the cost of the animal will continue to increase until sold, or transferred to the breeding herd or flock of mature fibre-producing animals. Under the current scheme, a new-born calf and a four year-old bullock may both be valued at \$20 if they were acquired by natural increase. The result is a greater divergence between the true cost price of the animal and its prescribed value for tax purposes, thus deferring the recognition of assessable income.

If natural increase is to be valued either at replacement value or market price, there does not appear to be any difficulty in establishing that valuation. Valuation becomes more difficult if cost price is used. There is no specific accounting standard that prescribes a method of determining the cost price of natural increase, and no clear indication of what constitutes cost price.

The calculation of cost is difficult, even if it is assumed that only costs following the birth of the animal are to be considered. In tax law, natural increase has no identity before birth. Some would consider it illogical to attribute costs to something that has no existence. If this were the case, only expenses incurred following

the birth of natural increase would be included in determining their cost.

Some natural increase may be the result of expensive service fees (which can exceed \$100 000) or embryo transplant operations. Many would argue that the cost of the natural increase should include these costs, and that failure to do so could give rise to tax avoidance. Analogies could be drawn with work-in-progress in a continuous manufacturing process, such as the manufacture of steel, where it has been established that both direct and indirect costs should be taken into account (*Phillip Morris v Federal Commissioner of Taxation* 1979 10 ATR 44). In this case, full absorption costing would be indicated.¹³ This would certainly include the costs of service fees or embryo transplant operations. However, to include costs associated before birth may imply that some portion of the costs of maintaining the mother during gestation would have to be included. In many cases (e.g. wool producing sheep, dairy cattle), the natural increase will be a by-product, therefore requiring some form of apportionment of the costs between products. These difficulties are not insolvable, but add to the complexity of valuation.

The New Zealand National Standard Cost scheme for closing stock is an example of an improved scheme of arbitrary values. This scheme provides arbitrary values for livestock based on species, sex, age and breed, e.g. a rising one year beef-breed heifer has a different standard value to a rising two year old beef-breed heifer, and these are different for friesian and related breeds, and jersey and other dairy breeds. The standard values are based on the national average cost of production for the appropriate species, breed, age and sex. 'High-priced' livestock are ineligible to participate in the scheme, as this would allow an effective deduction for a substantial portion of the purchase price of these livestock. The values of 'high-priced livestock' are depreciated on a straight line or a diminishing value basis (Inland Revenue (NZ) 1992). The impact of the New Zealand scheme is to ensure that the expenses of breeding and growing livestock are not deducted until there is matching revenue.

¹³ The Government announced on 30 June, 1994, that livestock "for which no minimum value is prescribed is (to be) valued at its actual cost" (Butterworths, pp. 628-29).

5.2 Average Cost Method of Valuation

The present scheme's defects are exacerbated by the common use of the average cost method of calculating closing stock. Douglas used the following examples to show the problems associated with the current system. They show the reduction in tax value associated with self replacing herds, and consequent reduction in taxable profit, and tax deductions for purchased livestock.

Example 1.

Assumed facts: At the commencement of business in the first year, a taxpayer purchases 100 breeding cattle at an average cost of \$500 each. In the first three years, 82 calves are produced, two of the original animals die, and 80 are sold from natural increase for \$300 each. Using cost to value closing stock, the values of closing stock and gross profit on the cattle accounts would be as shown in table 4 (detailed calculations are available from the author).

The continued reduction in the value of closing stock can be seen clearly. As noted earlier, Glau (p. 54) has shown that when all replacement animals are bred on the farm, the limiting value of closing stock is the prescribed minimum value for natural increase.

More importantly, it can be seen that the average cost method has resulted in taxable income being \$37,886 less over a three year period than would have been the case if specific identification of the closing stock had been used. This will be 'clawed-back' in subsequent years, as the older animals are disposed of. In both cases, however, the profit on the trading account is not an accurate reflection of economic gain or loss.

Glau (p. 233), Cook (p. 10) and the Taxation Review Committee (p. 283-284) argued that any deferral of the recognition of income provides a distortion in favor of investment in self-replacing herds compared to other forms of economic activity. This distortion is increased if additional livestock are purchased, as shown in example 2.

Example 2.

Assumed facts. In the third year of example 1, the additional transaction of purchasing a bull for \$5000 is undertaken. If the average cost method is used to value closing stock, this will result in a reduction of gross profit of \$2196 in that year, i.e., the effective depreciation rate for the bull in this example is 44 per cent in the first year.

Glau (1971, p. 233) stated:

In representative situations it was shown that more than 50 per cent of the cost of net investment in livestock is deductible from taxable income in the first two years after the investment is made.

If livestock are considered to be capital, amortisation of their capital cost over their effective life is indicated. However, it would be desirable that such depreciation be provided overtly, rather than being dependent on calculation method. The average cost method of valuation, in conjunction with low arbitrary cost values of livestock, provides an incentive to invest in livestock which may distort investment behaviour. Anecdotal evidence suggests that some farmers are aware of this effect, and utilise it to their advantage.

Table 4: Value of Closing Stock and Gross Profit on Cattle Accounts

Year	Average Cost Method to Calculating Closing Stock		Specific Identification Method of Valuing Closing Stock	
	Closing Stock Value \$	Gross Profit \$	Closing Stock Value \$	Gross Profit \$
1	28 374	2 374	49 040	23 040
2	16 491	12 117	48 080	23 040
3	9 962	17 471	47 120	23 040

It can be seen that the current taxation treatment of livestock provides tax deferral where replacement animals are obtained by breeding. As noted by Glau (p. 233) this provides 'an incentive for net investment in breeding livestock'.

Equally important is the possibility that low values provide an impediment to dis-investment in livestock, as most profit recognition will occur on sale. This may deter farmers from changing enterprises. Further, it can be seen that the taxable income of a farmer using minimum values to value natural increase may have little resemblance to their economic gain or loss over the period.

While the current system of using arbitrary minimum values for natural increase of livestock may have the virtue of simplicity, it is neither efficient nor equitable.

5.3 Consistency of Livestock Elections with Tax Principles

The elections available under sections 26B, 26BA, 36, 36AA and 36AAA are inconsistent with the principle that the sale of trading stock should be taxed when it occurs, irrespective of the reason for the sale. It is arguable that the need, or perceived need, for these elections arises because the current system of arbitrary value of natural increase defers the majority of profit recognition until the sale of natural increase. As a result, all except the minimum value will be assessable when natural increase is sold.

If appropriate livestock were able to be classified as depreciable plant, some 'rollover relief' on the sale of breeding stock would be allowed through a s59 style election process. However, tax deferral cannot be justified in the case of trading stock. As trading stock is held for the purpose of resale, the method or cause of disposal should not alter its tax treatment. Such treatment breaches both the efficiency and equity criteria, as one course of action is favored over another, and taxable income deviates from net economic gain or loss.

Even if it were to be accepted that there is a need for some special tax concession to deal with the impact of natural disasters upon farmers, the provision of elections to spread livestock income specific to drought must be questioned. The National Drought Policy states that drought is a natural event, not a natural disaster. Droughts occur regularly in Australia, and

they should be considered a normal feature of the environment.

The recent amendments to the IED scheme and the introduction of Farm Management Bonds (FMBs) were justified as facilitating increasing financial self-reliance by farmers.¹⁴ Given that IEDs and FMBs are the preferred government policy to allow the farmer to transfer income intertemporally, the continued existence of livestock elections must be questioned.

6. Recommended Changes to the Taxation of Livestock

Consistency with the tax treatment of other capital investments indicates that livestock should be valued as trading stock if they are held for the purpose of resale, or as depreciable capital assets if they are held for the purposes of breeding, or sale of their bodily produce.

If livestock are classified as trading stock, the farmer should be allowed the choice of cost price, replacement value or market price as valuation methods. For purposes of simplicity, and to reduce compliance costs, an arbitrary cost price scheme should be introduced, based on the New Zealand National Standard Cost scheme.¹⁵

Given the large diversity in production systems in Australia, it may be necessary to provide different standard costs for different regions, e.g. beef cattle produced in the rangelands would have different standard costs to those produced in high rainfall areas, etc. These standard costs should be revised annually, and provide different costs for animals of different ages.

Breeding livestock, or livestock held for the production of fibre (being items of capital) would be valued at either cost, or in the case of stock obtained as natural increase, the appropriate arbitrary cost at the time they are transferred to these accounts. Transfer would not

¹⁴ Income Equalisation Deposits Laws Amendment Bill 1992, Explanatory Memorandum.

¹⁵ See Appendix A of Inland Revenue (New Zealand) (1993) for an example of the complexities of establishing 'cost'.

occur until the animals had reached a mature age. These stock could be depreciated under the ordinary depreciation provisions at rates based on the effective life of the species. The requirement for depreciation arises from the treatment of other capital expenditure in the benchmark tax base, rather than observed diminution in value. Often, the animals will increase in value over their life, reduction in price per kilogram being offset by overall weight gains. However, as an increase in nominal values may occur with other depreciated items, allowing depreciation may not create a significant distortion. Such livestock should be eligible for any accelerated depreciation or investment allowance provisions that may be extended to taxpayers generally.

Acceptance of the ordinary depreciation provisions implies that s59¹⁶ will apply to any positive balancing charge upon the disposal of the livestock, and that disposal of depreciated livestock will attract the capital gains provisions if the disposal value exceeded the indexed cost base.

Farmers should be required to maintain separate records for those livestock that are trading stock, and those animals held either for the purposes of breeding or the production of fibre, i.e., those livestock which are primarily held for the sale of their natural increase or produce. In all cases, separate accounts should be required for 'high-priced livestock'.

Should the record keeping requirements be too complex for some farmers, they could elect that all livestock be treated as trading stock. This will have the advantage of simplicity, whilst maintaining taxable income as a reasonable approximation of economic gain or loss over the assessment period. For commercial flocks, 'broadbanding' could apply so that all livestock of a class and age would be depreciated as a flock, rather than there being a requirement for individual records. The broadbanding would mean that all three year old wethers could be treated as a class, all four year old wethers as a separate class, etc. The average cost method of valuation should only be used within such broadbanded classes.

In the case of stock registered in the stud book of a breed society, and 'high-priced livestock', records should be kept on an individual basis. There should be little impact on compliance costs as the taxpayer is already required by the breed society to keep individual records for each stud animal. These animals, and

'high priced' stock, are normally branded or ear-tagged in a manner that allows individual identification.

Livestock elections and livestock income spreading provisions should be removed. There appears to be little justification for them, and period equity problems which may arise because of the forced sale of livestock can be overcome by use of the IED/FMB schemes.

6.1 Transitional Measures

Often major changes to the tax system are not possible in one year, e.g., when s31A (valuation of winemakers trading stocks) was repealed, it was achieved over 10 years. The same approach may be necessary if the system of valuing livestock were to be changed, especially given the current rural recession.¹⁷

Introduction of the proposed changes may substantially increase taxable income in the year of implementation, unless a transition process was adopted. For example, if the New Zealand standard values for the 1994 income tax year were applied, the closing value of sheep could be 300 per cent to 400 per cent greater than the opening value, while with cattle the difference could be in the order of 750 per cent to 1500 per cent. The tax liabilities arising from such increases could impose severe financial burdens on farmers. In any event, it is politically unlikely that sudden changes to the tax system would be possible.

A further consequence of changes in the tax treatment of livestock would be the reduction in wealth of those farmers owning livestock. If it is assumed that in a market economy, after-tax returns from different enterprises tend towards equality over time, any change in the tax treatment of a particular enterprise will affect the after-tax return, and consequently, the capital value

¹⁶ Section 59 provides, *inter alia*, for balancing adjustments on the sale of depreciated property, i.e., the calculation of the difference between the sale price and depreciated value of the asset, with the difference being included (or deducted) from taxable income. If the balancing charge is positive, the taxpayer may elect to use rollover provisions.

¹⁷ Alternatively, it could be argued that many sheep farmers are incurring losses, and radical changes may be painless in the short term.

of the enterprise. The proposed changes would not only change the capital value of the livestock, but could also impact on the capital value of the land upon which the enterprise is carried out. Whilst the proposed changes will lead to a more efficient economy, the costs may be significant for those farmers with livestock.

There are at least three possible transition methods. One method would be to immediately introduce a new scheme of arbitrary values calculated on absorption costing, and based on species, breed, age and sex. The impact of the change could be alleviated by allowing several years for values to be adjusted from the current low base to values which would closely approximate full absorption costing. The advantage of this method is that tax would be collected on income currently deferred. The disadvantage is that during the transition period, farmers taxable incomes would still not be a close approximation of economic gain or loss.

There is precedent for this approach, a similar approach being adopted when winemakers changed from a system of arbitrary valuation of trading stock to the use of cost, market or replacement values (s31B).

A second alternative method would be to introduce the new tax base, but to allow opening stock to be valued under the new system in the year of implementation. The advantage of this method is that farmer's taxable income immediately reflects economic gain or loss, but they escape paying tax on the income deferred under the current scheme.

King argued that the preferred method '... is to go straight to the new system, and allow a five year income spread of assessable income arising (J. King, MAF Policy New Zealand, *pers. comm.*, October 1994). This would mean that the new system is fully operable from year (2), removing all distortions from that point. It also reduces the need for further adverse event income spreads'. This method was used in New Zealand for changes made to livestock valuation in the 1992-93 (King).

Politically, implementation of the proposed tax base for livestock will not be painless, even with transition measures. Farmers, and their representatives, will argue that they are being made to pay tax before they earn it. This, of course, is untrue. The purpose of provisions to account for inventory is to prevent the deduction of expenditure before there is matching

revenue, a position supported by the decision of the High Court in *Coles Myer Finance Ltd v FCT* (1993) 25 ATR 95 in respect of interest income.

Should the implementation of the proposed extension to the benchmark tax base for livestock prove politically unacceptable, there are other changes that could be made to the present system to improve efficiency. These include:

- (a) require that separate livestock accounts be kept for stock that are not normally purchased for resale, such as sires, which are purchased for higher prices than the value of the breeding herd. Sires typically comprise less than five per cent of a breeding herd, and are normally branded in a way that makes specific identification possible. This change should prevent producers from obtaining a partial tax deduction for the purchase of livestock (see Example 2). A case can be argued for depreciating such stock on an economic life basis. If this is desired, it is more appropriate that it be done explicitly, rather than by stealth;
- (b) require that the average cost method of valuation be only used for similar classes of livestock with similar values, rather than the current system of maintaining one livestock account for all sheep, all cattle, etc. The average cost method should not be available to value stud livestock, or sires in commercial herds. Studs have an existing requirement to keep records of individual animals, and therefore can value their stud flock on an individual basis. These two changes would only require the issuance of a ruling, as they are merely complying with the current requirement to value livestock at cost;
- (c) ensure that the minimum values are revised annually, thus gradually increasing the average cost of livestock. This may prove politically difficult, but can be achieved by regulation. Indexation of existing values would not be an acceptable solution because of the current low values. If the values were adjusted to become a close approximation to cost, subsequent indexation could result in the arbitrary values increasing at a faster rate than cost. This would arise because productivity gains should result in costs increasing at a lesser rate than (say) the Consumer Price Index, which is commonly used for indexation pur-

poses. The preferred method of increasing values should be for the Australian Taxation Office to survey the cost of producing animals every year, and publish representative costs for use by taxpayers.

- (d) provide that deductions for the costs incurred prior to livestock coming into existence such as service fees or embryo transplants be deferred until the offspring is sold, or it is clear that there will not be offspring. Legislation will be needed to implement this proposal, although it could be argued that a strict adherence to the decision in *Coles Myer Finance Ltd v FCT* (1993) 25 ATR 95 would alleviate the requirement to legislate.

7. Conclusion

Compared to trading stock requirements for other taxpayers, the current Australian taxation system provides generous concessions to farmers who breed livestock, compared to the inventory requirements for other taxpayers. The Australian system is certainly more generous than the New Zealand system. However, the Canadian and United States systems appear even more generous again.

The benefits in Australia are most generous for those who can utilise the forced sale provisions. The five year period commonly allowed to include income resulting from a forced sale of livestock is longer than that allowed to other Australian taxpayers, or taxpayers in New Zealand, Canada and the United States.

It can be argued that the present system of taxation of livestock may significantly distort investment choice. The incentives for investment in livestock may lead to overstocking, potentially threatening the resource base. Impediments to destocking may reduce the ability of farmers to change enterprises, 'locking them in' to less profitable enterprises and acting as a disincentive to de-stocking in response to drought.

While livestock elections may be justified as a means of conserving the resource base, it should be remembered that they can impose a cost on the farmer. De-stocking decisions may be deferred until the elections can be invoked, rather than occurring when the sale would maximise income. In particular, the elections appear to discriminate against the 'sell early and regret, but sell' strategy, as the optimal time to destock

may well be before the 'trigger' of 'loss of pastures' has occurred.

More fundamentally, the livestock provisions mean that taxable income may no longer be a good indicator of economic income. Not only does this mean that the livestock farmer may pay more or less tax in a year than would be indicated by their ability to pay, but it may also affect their ability to qualify for social security programs, such as Family Payment, or AUSTUDY. If it is assumed that farmers will reduce inventories during periods of financial stress, a result of the concessional valuation of livestock will be that their taxable income will exceed economic income. The result is that at a time when they may well need welfare benefits, and would qualify in terms of economic income, the method of calculating taxable income may render them ineligible.

Adoption of the proposed changes would remove these concessions, and ensure that the measurement of assessable income from livestock was a close approximation to economic gain or loss over the assessment period.

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