TIB Appendices

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Contents

Appendix A

Livestock Production - Establishing a Self Assessed Cost
Guidelines for Farmers and Livestock Dealers

1. Background

In its report to Government, the Livestock Valuation Consultative Committee recommended that a simplified method for valuing the cost of producing livestock should be introduced. The Government accepted this recommendation.

The following Guidelines set out the new valuation method. Farmers can use this method for 1991-92 and following income years.

All legislative references in this Appendix refer to the Taxation Reform Bill (No.6) 1992, which is currently before Parliament. This Bill is due to be passed into law before the end of March 1993.

2. Introduction

Any taxpayer may value inventory on hand at the end of an income year at its cost. These guidelines explain how to work out the cost of production for sheep, cattle, deer and goats. The methods are the same as those used to establish National Standard Costs (section 86C of the Income Tax Act), except that they use costs derived from the taxpayer's own costs of production. These guidelines relate directly to section 86B of the Income Tax Act.

These Guidelines set out the method for sheep, cattle, deer and goats. Similar guidelines for establishing a cost of production for pigs will be released separately.

3. Summary of Guidelines

These are the main steps in the method for determining the production cost of sheep, cattle, deer and goats:

1. Identify and specify the direct costs of livestock production, and assign identifiable costs to each particular livestock type.
2. Calculate the total farm livestock units (LSUs).
3. Apportion the undivided direct costs of livestock production between the livestock types. Do this based on the proportion of LSUs associated with each type and age grouping of livestock.
4. Use dual product multipliers to allocate some of the costs to the production of wool, fibre, milk or velvet.
5. Include the costs of livestock purchased.
6. Calculate an average cost per head and use it to value that year's intake of stock in each age group-ing on hand at the end of the income year. Where mature livestock of mixed ages and intake years are valued at cost, you will need an inventory system to account for livestock over their lifetime on the farm.

You can get forms from any Inland Revenue office to help with calculating the cost of livestock production. These forms are all reproduced at the end of this Appendix. Later in the year we will also develop computerised spreadsheets for this purpose.

4. Direct costs of livestock production

4.1 Costs to be Taken into Account

Taxpayers can take into account all tax deductible costs of production and business operation on a farm when determining the cost of livestock production. These include depreciation, but exclude taxation and any capital expenditure.

However, taxpayers may exclude certain categories of costs, and apportion other costs between livestock and non-livestock enterprises. This is known as partial absorption costing (PAC), and it is used for inventory costings in other sectors.

The costs that taxpayers can exclude from the total deductible farm costs in any year are:

- Costs of harvesting and selling livestock products (e.g., shearing expenses, milking expenses, labour associated with these activities, velvet harvesting)

- Costs of producing, harvesting and selling non-livestock production, where these costs are clearly identified (e.g., cash crop expenses, forestry or horticultural expenses, costs associated with a separate business such as contracting, poultry, fitch farming or horse breeding)

- Repairs and maintenance of all farm buildings except buildings associated with pig production

- Depreciation on all farm buildings

- Depreciation and repairs and maintenance on plant primarily used in producing secondary (dual) livestock products or non livestock enterprises (e.g., depreciation on milking machines, shearing plant, machinery used in crop production)

- Outward freight from the farm

- Deductible share of car expenses

- Accounting and legal fees, consultancy fees, rates and general farm (non livestock) insurance

- Interest, rent and bailment fees (Note that the lease of livestock, but not the bailment of livestock, is included in partial absorption costs.)

- Livestock purchase costs (these are treated sepa-rately within the cost of production formulae.)

- Imputed costs of labour or livestock depreciation (other than actual depreciation associated with the High Priced Livestock Scheme)

- The livestock owner may apportion the cost of wages, salary or management fees paid (which are tax-deductible) over all the farming operation on a fair and reasonable basis. This would apply regardless of whether the payment was made to an individual, a partner, a shareholder-employee or anyone else. These expenses could be apportioned to the following activities:

  - activities excluded from partial absorption costs, such as accounting and administration;

  - other farm enterprises, such as forestry and cropping (see "Allocation of Costs to Non-Livestock Enterprises" below);

  - specified livestock production

Partial absorption costs worked out by excluding the above expenses can be classified as direct production costs, since they don't include the overhead costs of operating a farm business. This net cost represents the minimum cost of producing livestock; it must be included in the total livestock production costs. A livestock owner can also choose to include any or all of the above costs.

4.2 Allocating Specific Costs to Livestock Types

If any costs included in the partial absorption cost total clearly belong to one group or type of livestock, the taxpayer should allocate these costs directly to that livestock group. Costs such as stud fees for a sheep flock should be assigned directly to the rising one year group of sheep. All pig production costs should be assigned directly to pigs. Allocating these specific costs directly will reduce the total of partial absorption costs which must be shared between the livestock types.

Taxpayers should allocate all livestock purchase costs directly to the age group and type of livestock concerned. The only exception is the cost of breeding sires, if the taxpayer is using the herd scheme for any livestock of that type. When a taxpayer is using the herd scheme for a livestock type, s/he must include all breeding sires of that type in the herd scheme unless they are subject to the high-priced livestock scheme.

The forms provided by Inland Revenue have specific sections for the costs directly allocated to any livestock type, including the cost of any stock purchases.

Show all other costs which are to be included in column one of Form One (Undivided Partial Absorption Costs Form). This form is reproduced at the back of this Appendix.

4.3 Allocating Costs to Non-Livestock Enterprises

Many farms have enterprises which are not related to livestock farming (e.g., cash cropping and forestry).

Although these guidelines allow exclusion of identifiable costs associated with these enterprises, some of the costs are not separately recorded. These may include vehicle expenses, fertiliser, wages, repairs and maintenance, etc.

Taxpayers should allocate these costs between the livestock and non livestock enterprises on a fair and reasonable basis. This approach includes allocation based on logbooks and other records, or allocation on an area basis (e.g., where 20 hectares of cash crops are grown on a 100 hectare farm, then 20% of the undivided costs may be allocated to cash cropping). Allocation on the basis of gross receipts will not be accepted.

Once a taxpayer has settled on an allocation basis, s/he can make an adjustment to the cost categories concerned in column three of Form One (reproduced at the back of this Appendix).

A taxpayer cannot apportion PAC costs on a crop s/he is producing for consumption by livestock on the farm (e.g., hay, silage, feed grain crops). If a taxpayer is carrying forward feed supplies (other than growing feed crops) to a future income year s/he can apportion the costs of those supplies, providing the supplies are valued in the end of year accounts.

4.4 Example of an Undivided Partial Absorption Costing

Form One excludes any costs allocated directly to a livestock type, or which are allowed as exclusions from the costings as listed under "Costs to be Taken into Account" above. Taxpayers can record details of adjustments made (including actual exclusions, assignment of specific costs, private use adjustments, and the method for allocating costs to non livestock enterprises) on the back of this form. Keeping details of the basis for any allocations will maintain consistency between years, and will help with any questions during an Inland Revenue audit.

Taxpayers can expand the expenditure categories on the form to incorporate any other cost items which should be included, and any other additional categories which they wish to include.

There is an example of Form One completed for a hypothetical farm on pages 4 and 5.

5. Apportioning Costs between Livestock Types

Section 3 of this appendix sets out Guidelines for identifying the costs of producing livestock.

- Specific costs associated with particular livestock types should be directly assigned to those types.

- Specific costs associated with non-livestock producing enterprises or activities should be removed from the livestock costs.

- Costs that arise partly from livestock activities and partly from non-livestock activities should be

Undivided Partial Absorption Costs (Form One)

Farm: `Example Farm`   Year Ending: `31 March 1993`

Farm Expenses	Amount (Business only) $	Private Use Adjustment Y/N	Allocated to Livestock %	Comment	Adjusted PAC $
Wages	10,000	N	85	Crop and Forest 15%	8,500
Managerial salary	5,000	N	50		2,500
Animal health	2,100	N	100		2,100
Breeding (general)	100	N	100		100
Electricity	1,200	Y	90	Crop 10%	1,080
Feed purchased	2,000	N	100		2,000
Hay making	400	N	100		400
Silage making	3,000	N	100		3,000
Feed crops grown		N			0
Fertilser	9,500	N	90	Crop 10%	8,550
Lime	200	N	100	All pastoral	200
Seeds	400	N	100	Crops excluded	400
Freight inwards	800	N	100	Estimated	800
Weed and pest	500	N	100	Excludes crop	500
Vehicles	4,000	Y	85	Crop and forest 15%	3,400
Fuel	2,700	Y	85	Crop and forest 15%	2,295
Repair.maintenance	5,500	N	85	Crop and forest 15%	4,675
Administration	0	N	0		0
Livestock insurance	500	N	100	Not split by type	500
Depreciation	1,400	N	100	Pastoral only	1,400
Other:					
(1) New fence	1,400	N	100	Deduction claimed	1,400
(2) Scrub clearance	600	N	100	Deduction claimed	600
(3) Contracts	600	N		Forestry Exp.	100
(4)					
(5)					
(6)					
Total	$51,900				$44,500
					(PAC)

Completed example of Form One. The (PAC) total in the right hand column is the undivided Partial Absorption Costs associated with sheep, cattle, deer and goat enterprises on this farm for this income year. Allocate this (PAC) total between livestock types in Forms Three to Five.

Details of Adjustments to Costs

Allocation to Non-Livestock Expenses

Enterprise	Adjustment Basis	Use by Enterprise	Total Farm Use	% Allocated	Actual Amount
Cash crop	Area	30 ha	300 ha	10	
Cash crop seeds	Actual	–	–	–	$2,100
Forestry	Area	15 ha	300 ha	5	
Contract hay baling	Logbook hours	250 hours	1,000 hours	25	
Hay baling wages	Actual	–	–	–	$5,000
Managerial salary	Admin hours	250 hours	500 hours	50	

Specific Costs Allocated to Livestock Types

Age Group (Years)	Sheep 0 - 1 $	Sheep 1 + $	Cattle 0- -1 $	Cattle 1 + $	Bobby $	Deer 0 - 1 $	Deer 1 + $	Goats 0 - 1 $	Goats 1 + $	Pigs 0 - 1 $
Purchase costs	7,500	1,200	4,000	1,800	–	–	–	–	–	–
Animal health	–	–	–	–	–	–	–	–	–	–
Vet fees	–	–	–	700	–	–	–	–	–	–
Stud and A.I.	–	–	–	–	–	–	–	–	–	–
HP depreciation	400	–	–	–	–	–	–	–	–	–
Feed	–	–	–	–	–	–	–	–	–	–
Insurance	–	–	–	–	–	–	–	–	–	–
Other										
1.										
2.										
3.										
4.										

Private Use Adjustment

Item	% Adj	$
1. Private car	–	400
2. Fuel (car)	10	300
3. Electricity	–	800
4.		
5.		
6.		

Other Adjustments/Comments

Crop seeds of $1,200 excluded

Freight inwards estimated at 30% of total

Hay baling wages of $5,000 deducted

Weed and pest pastoral costs only

Crop fertiliser not separated

Shearing wages of $3,000 excluded

Forestry contract of $500 to be excluded

Completed example of the reverse side of Form One.

from page 3

apportioned using Form One. This will leave a total undivided cost which is the Partial Absorption Cost of producing livestock - shown as total [PAC] on the form.

This undivided [PAC] must be apportioned between the specific livestock types and age groupings for sheep, cattle, deer, goats and any other livestock owned or grazed for which a livestock unit conversion is available (e.g., horses).

The system of apportioning production costs to the different livestock types (sheep, cattle, deer and goats) is based on the equal treatment of these livestock types. The assumption underlying this approach is that specific livestock of these types and ages can be expressed in terms of LSUs. This is the widely accepted method of measuring farm carrying capacities and performance, and overcomes difficulties in comparing different types of livestock. The common definition of a LSU is:

One LSU is equivalent to one ewe producing one lamb to weaning age and an average of 5 kg of wool. It has a live weight of about 55kg and, on average, consumes 520 kg of DM per year in achieving its production cycle.

Based on this definition of a livestock unit, conversions are made for all other ages, types and classes of specified livestock. See Form Two at the back of this Appendix for a full list of these coefficients.

5.1 Calculating Livestock Units and Numbers

You can use Form Two (reproduced at the back of this Appendix) to calculate the LSU equivalents for livestock. There is a completed example of this form on pages 8 and 9.

The main points of the method are:

1. The layout of the form is important in calculating the number of livestock units associated with growing livestock.

2. You should use the preset livestock unit coefficients unless you have a good case for adopting different indices (These are detailed on the third page of Form Two at the back of this Appendix).

3. Taxpayers do not have to assign livestock units to purchased livestock except in such circumstances where this treatment seriously distorts the allocation of costs between livestock types. However, taxpayers may allocate a proportion of the full livestock unit coefficient according to the time they keep purchased livestock on the farm in an income year.

4. There is a livestock unit coefficient for dairy-bred bobby calves which are purchased and reared. This coefficient accounts for the period between purchase and weaning, after which there is no further allocation required (this is consistent with the

treatment of other purchased livestock). Taxpayers must include dairy bred bobby calves that they purchase in the beef cattle section of Form Two.

5. Taxpayers may assign livestock units to non-specified livestock carried on the farm (e.g., horses). Any livestock which is grazed but not owned should also be included, with an adjustment to livestock units to account for the proportion of the year they were on the farm.

6. Homebred rising one year stock are counted on a survival to sale basis.

7. For each specified livestock type included in Form Two, the totals calculated represent the following:

    Total [A] is the number of rising one year stock which passed through the farm that year.

    Total [B] is the number of growing livestock older than one year, plus other adult stock purchases which passed through the farm that year (total [BB] is a separate total for rising three year male non-breeding beef cattle)

    Total [C] is the total LSUs associated with rising one year stock in that year.

    Total [D] is the total LSUs associated with growing livestock older than one year in that year. (Total [DD] is a separate total for rising three year male non-breeding beef cattle)

    Total [E] is the total LSUs carried on the farm in that year.

    These are the important indices used to allocate the undivided [PAC] between livestock types and age groups for that income year.

8. All livestock that a taxpayer owns (except livestock subject to bailment, lease or a share-farming agreement) must be included whether or not they have been grazed on or off the farm.

9. Male non-breeding cattle in the rising three year and older class carried on dairy farms must be accounted for as beef cattle.

10. Where a taxpayer purchases nurse cows during the year for rearing bobby calves, these are to be entered under the beef cattle section with a LSU co-efficient of 4.0.

5.2 Breeding Sires - Treatment under Self Assessed Cost

As mentioned in section 4.2 above, where a taxpayer values some livestock of any type under the Herd Scheme (section 86D of the Act), then s/he must account for all breeding sires of that livestock type under the Herd Scheme at the end of that income year (unless they are subject to the high-priced livestock scheme). This means that the taxpayer must exclude the cost of any breeding sires purchased in that income year from the Self Assessed Cost calculations. This rule

prevents double counting the cost of sires under this scheme where a taxpayer intended to value them under the Herd Scheme anyway. The number of sires purchased must also be excluded from the calculation (Form Two). This treatment applies to each livestock type separately.

5.3 High Priced Livestock - Exclusion

If a taxpayer buys any livestock which must be valued under the provisions of the High Priced Stock Scheme (section 86I of the Act), s/he must exclude them from the Self Assessed Cost calculations in the year of purchase. Both their number and their cost price must be excluded. Any specified writedown (depreciation) arising in any year from livestock valued on the High Priced Stock Scheme will be allocated as a cost of production to the rising one year group of livestock of that type.

5.4 Transfer of High Priced Stock to Self Assessed Cost

Under the provisions of the High Priced Stock Scheme, an animal is depreciated until its book value is equal to or less than the herd value (National Average Market Value under section 86G of the Act). In the year in which an animal's written down value will reach NAMV, the taxpayer should stop accounting for it under the high priced stock scheme. If the taxpayer still owns the animal at the end of the income year, s/he should account for it under the Herd Scheme if s/he is using that scheme for any other livestock of that type.

If the taxpayer is not using the Herd Scheme for that livestock type, and all of the animals older than one year of that type are being valued under Self Assessed Cost, then the taxpayer should account for the animal under this option. The animal must be included as a normal purchase in the calculation at a deemed cost equal to the NAMV for its age class in the income year concerned. This treatment will allow the full writedown from the High Priced Stock Scheme to the SAC cost for that year.

5.5 Dual Product Multipliers

The calculations include allowances to exclude the cost of producing wool, fibre, milk and velvet. These allowances are called dual product multipliers. The rates are:

Product	Dual Product Multiplier
Sheep's wool South Island Merino)	0.7
Sheep's Wool (all other types)	0.8
Goat fibre	0.9
Dairy goat and sheep milk	0.67
Deer velvet	0.98
Dairy cow milk	See calculation in next column
All other stock	1.0

The dual product multiplier for dairy cattle is calculated separately using actual figures for the farm concerned. All of the necessary figures will already be entered in the dairy section of Form Two. Follow the steps in the formula on Form Three to complete the calculation.

The following table is an example of the dairy dual product multiplier for an example farm.

Dual Product Multiplier - Dairy Cattle

Use the following indices and formulae to calculate the Dual Product Multiplier for dairy cattle. The dairy cattle section of Form Two contains all the indices.

a = no. of homebred calves weaned	70
b = average LSU per cow bred from	6.5
c = opening number of rising 1 yr heifers	40
d = opening number of rising 1 yr male cattle	5
e = opening number of breeding cows	180
f = opening number of breeding bulls	1

Complete the following calculations

1. $a \times \left(\dfrac{b}{2} + 0.5\right)$ = [L]

$70 \times \left(\dfrac{6.5}{2} + 0.5\right)$ = [L] = 262.5

2. $(c \times 4.3) + (d \times 4.7)$ = [M]
$(40 \times 4.3) + (5 \times 4.7)$ = [M] = 195.5

3. $(e - a) \times b$ = [N]
$(180 - 70) \times 6.5$ = [N] = 715

4. $\left(a \times \dfrac{b}{2}\right) + (f \times 6)$ = [Q]

$\left(70 \times \dfrac{6.5}{2}\right) + (1 \times 6)$ = [Q] = 233.5

Dual Product Multiplier =

$\dfrac{[L] + [M]}{[L] + [M] + [N] + [Q]}$ = [K]

$\dfrac{262.5 + 195.5}{262.5 + 195.5 + 715 + 233.5}$ = [K] = 0.326

This multiplier applies to both rising one year and two year stock, and fully accounts for bobby calves sold.

All multipliers are calculated on a weight of production basis, and should be used as stated. There is no dual product multiplier for dairy bred bobby calves which are purchased. The dual product multipliers for dairy cows and dairy goats or sheep apply to the rising one and two year groups of these livestock.

5.6 Allocation of Undivided [PAC]

Use the following formula to allocate the undivided PAC between livestock types and age groups. This formula is included in Forms Three to Five, which

Stock Numbers and Livestock Unit Co-Efficients (Form Two)

(Note: LSUs may be assigned to purchased stock at the taxpayer's option)

Farm: Year Ending:

Sheep	No.		LSU/head	Total LSU	Group LSU	
Lambs homebred (S/S)	2,000		x 0.18 =	360		
Lambs purchased	300		x 0 =	0		
Total lambs	2,300	[A]			2,360	[C]
Breeding Stock	2,000		x 1.00 =	2,000		
Hoggets (opening)	600		x 0.70 =	420		
2 Tooths purchased	0		x 0 =	0	420	[D]
Other adults pirchased	100		x 0 =	0		
Total Intake	700	[B]				
Non-breeding Adults (opening)	100		x 0.70 =	70		
			Total Sheep LSUs	2,850		

Deer (Breed:)	No.		LSU/head	Total LSU	Group LSU	
(Insert LSU co-efficients associated with the breed)						
Fawns homebred (S/S)			x =			
Fawns purchased			x 0 =			
Total fawns		[A]				[C]
Breeding Stock			x =			
Rising 1 yr (opening)			x =			
Rising 2 yr purchases			x 0 =			[D]
Other adults purchased			x 0 =			
		[B]				
Non-breeding adults (opening)			x =			
			Total Deer LSUs			

Beef Cattle and Bobby Calves Purchased	No.		LSU/head	Total LSU	Group LSU	
Calves homebred (S/S)	90		x 0.5 =	45		
Bobby calves purchased	0		x 0.5 =	0		
Weaners purchased	10		x 0 =	0		
Total calves	100	[A]			645	[C]
Breeding stock	100		x 6.0 =	600		
Nurse cows purchased	0		x 4.0 =	0		
Rising 1 yr heifers (opening)	20		x 4.3 =	86		
Rising 1 yr males (opening)	30		x 4.7 =	141	227	[D]
Rising 1 yr olds purchased	3		x 0 =	0		
Other adults purchased	2		x 0 =	0		
Total intake	55	[B]				
Rising 2 yr males (opening)	0		x 5.0 =	0		
Rising 3 yr males purchased	0		x 0 =	0	0	[DD]
Total rising 3 yr	0	[BB]				
Other beef cattle (opening)			x 5.0 =			
			Total Beef Cattle LSUs			

Completed example of the front of Form Two

Dairy Cattle	No.	LSU/head	Total LSU	Group LSU
Calves homebred (S/S)		x 0 =		
Waners purchased		x 0 =		
Total calves	[A]			[C]
Fresian cows		x 7.0 =		
Jersey cows		x 6.0 =		
Breeding bulls		x 6.0 =		
Rising 1 yr heifers (opening)		x 4.3 =		
Rising 1 yr males (opening)		x 4.7 =		[D]
Rising 2 yr olds purchased		x 0 =		
Other adults purchased		x 0 =		
Total Intake	[B]			
Other dairy cattle (opening)		x 5.0 =		
		Total Dairy Cattle LSUs		

* Exclude bobby calves sold

Goats (All purposes)	No.	LSU/head	Total LSU	Group LSU
Kids homebred (S/S)		x 0.1 =		
Kids purchased		x 0 =		[C]
Total Kids	[A]			
Breeding Stock				
Dairy Goats		x 1.8 =		
Other Goats		x 0.7 =		
Hoggets (opening)		x 0.5 =		
Rising 1-2 yr purchases		x 0 =		[D]
Other adults purchsed		x 0 =		
Total intake	[B]			
Non=breeding adults (opening)		x 0.6 =		
		Total Goat LSUs		

Livestock grazed but not owned, and non-specified livestock (e.g. horses)	No.		LSU/head (specify)		Proportion of Year on Farm		Total LSU
Type and Age:							
MA Horses	6	x	6.0	x	100%	=	36
Hoggets (grazed)	100	x	0.7	x	20%	=	14
		x		x		=	
			Total Other LSUs				50

Total LSUs on Farm	
Total Sheep LSUs	2,850
Total Deer LSUs	0
Total Beef LSUs	872
Total Dairy LSUs	0
Total Goat LSUs	0
Total Other LSUs	50
	3,772 [E]

Completed example of the back of Form Two

from page 7

calculate the average cost per head for each age grouping and livestock type. All these forms are reproduced at the back of this Appendix.

$$\frac{[PAC] \times [C]}{[E]} \times [K] = \text{amount allocated}$$

Where:

[PAC] is the total of the undivided costs of livestock production calculated on Form One;

[C] is the LSU total for rising one year group of a livestock type as calculated on Form Two (This variable is [D] and [DD] for older age groupings);

[E] is the total LSUs carried on the farm in that income year as calculated on Form Two.

[K] is the dual product multiplier.

This formula is part of the final step in calculating the average cost per head for an income year. There are examples of its use in the following section of this Appendix.

6. Calculating the Average Cost Per Head

Calculating the average cost per head is the final step in the Self Assessed Cost calculation. This calculation involves the following:

1. Share of undivided [PAC] adjusted by the dual product multiplier; plus

2. Specific costs allocated to that age grouping of livestock adjusted by the dual product multiplier; plus

3. Purchase costs of any stock bought for that age grouping of livestock; plus

4. Opening book value growing livestock in the age groupings older than the rising one year group; divided by

5. The number of animals in that age grouping which passed through the farm in that income year as calculated on Form Two.

There are two examples of this calculation on pages 12 and 13, which are based on the data in the examples on pages 4 and 5 (representing Form One) and pages 8 and 9 (representing Form Two). These examples are for rising one year and the maturing age groupings of sheep. These calculations are the same as those for other livestock types, including the special group of rising 3 year old male, non-breeding beef cattle.

The forms to use in these calculations are:

Form Three: Rising one year group for sheep, cattle, deer and goats.

Form Four: Maturing age grouping all livestock types for sheep, cattle, deer and goats.

Form Five: Rising 3 year old grouping of male non-breeding cattle.

All these forms are reproduced at the back of this Appendix.

The examples on pages 12 and 13 calculate (hypothetical) average costs per head of:

rising one year sheep	$13.08/head
maturing groups of sheep	$19.94/head

These are the costs which would be used to value those age groupings of stock on hand at the end of the income year. The same calculations are made using the appropriate forms for each of the other livestock types and age groupings owned. Dairy cattle and beef cattle must be calculated separately.

7. Splitting Age Groupings into Separate Inventories

The age groupings contained in these guidelines are the minimum requirements. Taxpayers may increase the number of groupings they use. Farmers who have substantial livestock trading policies may wish to do this, particularly if they buy and sell any stock in the same year, or if they buy growing male cattle. Farmers may also wish to separate adult wether flocks from their adult ewe flocks.

We have not prepared any special forms for this separation of inventory groups. Instead, farmers can make this calculation on Forms Two to Five simply by filing in extra copies of the same forms. For example, a farmer may wish to separate stock destined for breeding purposes from true trading stock, and identify them separately as stock on hand at the end of the income year. The livestock unit Form Two would have the sheep section filled in twice:

• Once for the stock in each age grouping which are destined for breeding purposes; and

• Once for the true trading stock in each age grouping.

Then, the farmer would complete two copies of Form Three, with specific costs and purchases assigned to the appropriate groups.

8. Inventory Requirements

If a farmer is going to value mature livestock of mixed ages and years of intake under Self Assessed Cost (or National Standard Cost), s/he must use an inventory control system. The minimum requirement is the average cost inventory system (described in this section), but farmers can use more sophisticated inventory systems. Such systems include FIFO (First In, First Out), and full livestock tracing. The usual guidelines for these inventory systems should be applied for livestock valued at cost.

8.1 Average Cost Inventory System

This system simply calculates an average closing cost for all the mature mixed age livestock valued at cost.

The method of calculation is described in formula form as follows:

$$\text{Average Cost (per head)} = \frac{((a - b) \times c) + ((e - (a - b)) \times d)}{e}$$

Where:

a is the opening number of mature livestock;

b is the sales and deaths of mature livestock during the income year;

c is the average cost of livestock calculated for the previous year;

d is the average cost of this year's intake of maturing livestock (1-2year age group except for fattening male cattle);

e is the closing number of mature livestock.

The formula averages the cost of surviving inventory livestock at the end of the income year with that year's new intake of livestock. The following example demonstrates this procedure. The opening number of mature sheep is 4,000, at an average cost of $20. During the year, 1,000 are sold or die. The closing number of mature sheep is also 4,000, and the calculated cost of the new year's intake is $24 per head. The averaging method takes the 3,000 surviving inventory at the end of the year, and averages their cost with the 1,000 sheep entering the flock that year. Using the formula, the calculation is:

$$\text{Average Cost} = \frac{((4,000 - 1,000) \times \$20) + ((4,000 - 1,000)) \times 24}{4,000}$$

$$= \frac{(3,000 \times \$20) + (1,000 \times 24)}{4,000}$$

$$= \frac{84,000}{4,000}$$

$$= \$21 \text{ per head}$$

This average cost of $21 per head is then used to value all of the mixed age sheep on hand at closing balance date in that income year. Farmers can apply this average cost on a class-by-class basis (the same average cost for each class), or they can apply it to the whole of that inventory as a single group.

A simpler layout of this same calculation is:

Surviving number (opening number less sales and deaths: 4,000 - 1,000)	=	3,000
Total value of surviving number (3,000 @ $20)	=	$60,000
New intake this year (4,000 - 3,000)	=	1,000
Total value of new intake (1,000 @ $24)	=	$24,000
Total Closing value	=	$84,000
Average cost per head ($84,000/4,000 sheep)	=	$21

This example shows how to calculate stock values using the average cost inventory system. This is the minimum standard of inventory system for use with either Self Assessed Cost or National Standard Cost.

Farmers may change the inventory system they use without advising Inland Revenue, providing they follow the normal consistency rules that generally apply to inventory systems.

8.2 Opening Inventory Costs in First Year of SAC (or NSC) Use

When a farmer changes from any other option to Self Assessed Cost (or National Standard Cost), his/her opening inventory values in the year of change will be deemed to be the closing values of those livestock in the previous year. If the farmer uses the average cost inventory system, s/he must calculate an average opening cost per head. If s/he uses a FIFO type system, s/he should phase out the opening values over a period of years in this order:

1. Breeding sires;
2. Mixed age male non-breeding stock;
3. Oldest female age classes in order.

9. Using SAC in Association with other Valuation Options

The following rules relate to the use of Self Assessed Cost (SAC) in association with other valuation options. These rules are contained in the appropriate sections of the Income Tax Act.

1. If a farmer uses SAC, s/he cannot use National Standard Cost (NSC) in that business in the same income year.

2. A farmer must notify Inland Revenue two income years before changing valuation options between SAC and NSC (section 85A of the Act).

3. A farmer can use SAC in association with the herd scheme, market value or replacement price. Where s/he uses market value or replacement price, she must use it to value a complete inventory age grouping, for any livestock type for which the option is to be used.

4. Whenever a farmer uses SAC as an option for any livestock, s/he must make the calculation according to these guidelines on a whole farm basis. S/he must then use the average cost per head thus calculated to value those stock on hand at the end of the income year which are to be valued under the SAC option.

5. Where a farmer is using SAC in association with the herd scheme, s/he must include all breeding sires of that type of livestock in the herd scheme, and completely exclude any purchase costs of those breeding sires from the SAC calculation.

10. Sharemilking Arrangements

In agreements in which the sharemilker does not own the milking herd, the livestock owner will calculate SAC for livestock as if the share of the milk proceeds paid to the sharemilker were wages. Thus, the remuneration that the sharemilker receives would be included as wages in the partial absorption costs

Costs to Rising One Year - All Livestock Types (Form Three)

Farm: Example Farm   **Year Ending:** 31/3/93

Livestock Type: Sheep (Not Merino Breed)

Use the following formula to calculte the cost per head of rising one year livestock of this type. Enter actual figures in place of the variables, and make the calculation accordingly.

Total Cost for Livestock Type

$$\frac{\$44,500 \ [PAC] \ x \ 2,360 \ [C]}{[E] \ 3,772} \ x \ 0.8 \ [K] \quad = \quad \$ \qquad 22,274$$

Plus Specific costs allocated to this group:

$400   x 0.8 [K]   = $ 320

Plus Cost of rising one year purchases   = $ 7,500

Total Cost of all rising one year livestock   = $ 30,094 [G]

Average Cost per Head

$$\frac{\$30,094 \ \text{Total Cost [G] above}}{[A] \ 2,300} \quad = \quad \$ \qquad 13.08 \ \text{per head}$$

Variables and Multipliers

[PAC] is the total undivided cost from Form One

[C] is the stock unit total from Form Two

[E] is the total farm stock units from Form Two

[K] is the dual product multiplier, which is:

     0.70 for South Island merino sheep
     0.80 for all other sheep
     0.67 for rising one year dairy bred goats
     0.90 for fibre goats
     0.98 for deer (red, wapiti, elk and related crossbreeds)
     see the calculation below for dairy cattle
     1.00 for all other types and age groupings

[A] is the stock number total from Form Two

Dual Product Multiplier for Dairy Cattle

Use the followung indices and formulae to calculate the dual produce multiplier for dairy cattle. All these indices are contained in the dairy cattle section of Form Two.

a = the number of homebred calves weaned   _____   d = the opening number of rising one year male cattle _____

b = the average LSU per cow bred from   _____   e = the opening number of breeding cows   _____

c = the opening number of rising one year heifers _____   f = the opening number of breeding bulls   _____

Complete the following calculations:

1.   a _____   x $\left(\dfrac{b}{2} + 0.5 \right)$ = [L] _____

2. (c _____ x 4.3) + (d _____ x 4.7)   = [M] _____

3. (e _____ - a _____) x b _____   = [N] _____

4. $\left(a \text{_____} \ x \ \dfrac{b}{2} \right)$ + (f _____ x 6)   = [Q] _____

Dual Product Multiplier =

$$\frac{[L] \text{_____} + [M] \text{_____}}{[L] \text{_____} + [M] \text{_____} + [N] \text{_____} + [Q] \text{_____}} = [K] \text{_____}$$

Completed example of Form Three

Costs to Rising Two Years - All Livestock Types (Form Four)

Farm: Example Farm   **Year Ending:** 31/3/93

Livestock Type: Sheep (not merino breed)

Use the following formula to calcute the cost per head of rising one year livestock of this type. Enter actual figures in place of the variables, and make the calculation accordingly.

Total Cost for Livestock Type

$$\frac{\$44,500 \ [PAC] \times 420 \ [C]}{[E] \ 3,772} \times 0.8 \ [K] \quad = \quad \$ \underline{\hspace{2cm} 4,955}$$

Plus   Specific costs allocated to this group:

$\$0 \quad \times \ 0.8$ [K]   = $ \underline{\hspace{2cm} 0}

Plus   Opening value of rising 1 year stock   = $ \underline{\hspace{2cm} 7,800}

Plus   Cost of rising two year and older purchases   = $ \underline{\hspace{2cm} 1,200}

Total Cost of all rising two yr and mature livestock = $ \underline{\hspace{2cm} 13,955} [G]

Average Cost per Head

$$\frac{\$13,955 \ \text{Total Cost [G] above}}{[A] \ 700} \quad = \quad \$ \underline{\hspace{2cm} 19.94} \ \text{per head}$$

Variables and Multipliers

[PAC] is the total undivided cost from Form One

[C] is the stock unit total from Form Two

[E] is the total farm stock units from Form Two

[K] is the dual product multiplier, which is:

0.70 for South Island merino sheep
0.80 for all other sheep
0.67 for rising one year dairy bred goats
0.90 for fibre goats
0.98 for deer (red, wapiti, elk and related crossbreeds)
see the calculation below for dairy cattle
1.00 for all other types and age groupings

[A] is the stock number total from Form Two

Dual Product Multiplier for Dairy Cattle

Use the followung indices and formulae to calculate the dual produce multiplier for dairy cattle. All these indices are contained in the dairy cattle section of Form Two.

a = the number of homebred calves weaned   _____   d = the opening number of rising one year male cattle _____

b = the average LSU per cow bred from   _____   e = the opening number of breeding cows   _____

c = the opening number of rising one year heifers _____   f = the opening number of breeding bulls   _____

Complete the following calculations:

1. $a \ \underline{\hspace{1.5cm}} \times \left(\dfrac{b}{2} + 0.5 \right)$ = [L] _____

2. $(c \ \underline{\hspace{1.5cm}} \times 4.3) + (d \ \underline{\hspace{1.5cm}} \times 4.7)$ = [M] _____

3. $(e \ \underline{\hspace{1.5cm}} - a \ \underline{\hspace{1.5cm}}) \times b \ \underline{\hspace{1.5cm}}$ = [N] _____

4. $\left(a \ \underline{\hspace{1.5cm}} \times \dfrac{b}{2} \right) + (f \ \underline{\hspace{1.5cm}} \times 6)$ = [Q] _____

Dual Product Multiplier =

$$\frac{[L] \ \underline{\hspace{1.5cm}} \ + \ [M] \ \underline{\hspace{1.5cm}}}{[L] \ \underline{\hspace{1.5cm}} \ + \ [M] \ \underline{\hspace{1.5cm}} \ + \ [N] \ \underline{\hspace{1.5cm}} \ + \ [Q] \ \underline{\hspace{1.5cm}}} = [K] \ \underline{\hspace{1.5cm}}$$

Completed example of Form Four

from page 11

associated with producing livestock. The dual product multiplier would account for the proportion of wages paid which was associated with milk production.

In agreements in which the sharemilker owns the stock, SAC would be calculated using the partial absorption costs actually incurred by the sharemilker.

In agreements in where there is mixed ownership of stock, SAC would be calculated on a whole farm basis incorporating all partial absorption costs incurred by either party to the agreement. If this was not satisfactory to either party and the full partial absorption costs were not disclosed, then they could not use SAC.

11. People who may not use Self Assessed Cost

These taxpayers may not use Self Assessed Cost:

• owners of bailed stock;
• owners of leased stock;
• non-farming parties to a sharefarming agreement.

12. Feedlot Operations

Operators of feedlots who purchase livestock for intensive finishing before sale or slaughter may use average or actual purchase costs of livestock on hand at the end of any income year to value these livestock. No allocation of other costs of production is required, this being consistent with the treatment applied to other livestock purchases within these guidelines.

13. Livestock Valuation Forms

The following pages contain the guideline forms for completing the calculation of the costs of livestock production. These forms are:

Form Number	*Title*
One	Undivided Partial Absorption Costs
Two	Stock Numbers and Livestock Coefficients
Three	Costs to Rising One Year
Four	Costs to Rising Two Years (Maturing Group)
Five	Costs of Rising Three Year Male Non-breeding Beef Cattle

Undivided Partial Absorption Costs (Form One)

Farm: Year Ending:

Farm Expenses	Amount (Business only) $	Private Use Adjustment Y/N	Allocated to Livestock %	Comment	Adjusted PAC $
Wages					
Managerial salary					
Animal health					
Breeding (general)					
Electricity					
Feed purchased					
Hay making					
Silage making					
Feed crops grown					
Fertilser					
Lime					
Seeds					
Freight inwards					
Weed and pest					
Vehicles					
Fuel					
Repair.maintenance					
Administration					
Livestock insurance					
Depreciation					
Other:					
(1)					
(2)					
(3)					
(4)					
(5)					
(6)					
Total					
					(PAC)

Details of Adjustments to Costs

Allocation to Non-Livestock Expenses

Enterprise	Adjustment Basis	Use by Enterprise	Total Farm Use	% Allocated	Actual Amount

Specific Costs Allocated to Livestock Types

Age Group (Years)	Sheep		Cattle			Deer		Goats		Pigs
	0 - 1 $	1 + $	0- -1 $	1 + $	Bobby $	0 - 1 $	1 + $	0 - 1 $	1 + $	0 - 1 $
Purchase costs										
Animal health										
Vet fees										
Stud and A.I.										
HP depreciation										
Feed										
Insurance										
Other										
1.										
2.										
3.										
4.										

Private Use Adjustment

Item	% Adj	$
1.		
2.		
3.		
4.		
5.		
6.		

Other Adjustments/Comments

Stock Numbers and Livestock Unit Co-Efficients (Form Two)

(Note: LSUs may be assigned to purchased stock at the taxpayer's option)

Farm: Year Ending:

Sheep	No.	LSU/head	Total LSU	Group LSU
Lambs homebred (S/S)		x 0.18 =		
Lambs purchased		x 0 =		
Total lambs	[A]			[C]
Breeding Stock		x 1.00 =		
Hoggets (opening)		x 0.70 =		
2 Tooths purchased		x 0 =		[D]
Other adults pirchased		x 0 =		
Total Intake	[B]			
Non-breeding Adults (opening)		x 0.70 =		
		Total Sheep LSUs		

Deer (Breed:)	No.	LSU/head	Total LSU	Group LSU
(Insert LSU co-efficients associated with the breed)				
Fawns homebred (S/S)		x =		
Fawns purchased		x 0 =		
Total fawns	[A]			[C]
Breeding Stock		x =		
Rising 1 yr (opening)		x =		
Rising 2 yr purchases		x 0 =		[D]
Other adults purchased		x 0 =		
	[B]			
Non-breeding adults (opening)		x =		
		Total Deer LSUs		

Beef Cattle and Bobby Calves Purchased	No.	LSU/head	Total LSU	Group LSU
Calves homebred (S/S)		x 0.5 =		
Bobby calves purchased		x 0.5 =		
Weaners purchased		x 0 =		
Total calves	[A]			[C]
Breeding stock		x 6.0 =		
Nurse cows purchased		x 4.0 =		
Rising 1 yr heifers (opening)		x 4.3 =		
Rising 1 yr males (opening)		x 4.7 =		[D]
Rising 1 yr olds purchased		x 0 =		
Other adults purchased		x 0 =		
Total intake	[B]			
Rising 2 yr males (opening)		x 5.0 =		
Rising 3 yr males purchased		x 0 =		[DD]
Total rising 3 yr	[BB]			
Other beef cattle (opening)		x 5.0 =		
		Total Beef Cattle LSUs		

Dairy Cattle	No.	LSU/head	Total LSU	Group LSU
Calves homebred (S/S)		x 0 =		
Waners purchased		x 0 =		
Total calves	[A]			[C]
Fresian cows		x 7.0 =		
Jersey cows		x 6.0 =		
Breeding bulls		x 6.0 =		
Rising 1 yr heifers (opening)		x 4.3 =		
Rising 1 yr males (opening)		x 4.7 =		[D]
Rising 2 yr olds purchased		x 0 =		
Other adults purchased		x 0 =		
Total Intake	[B]			
Other dairy cattle (opening)		x 5.0 =		
Total Dairy Cattle LSUs				

* Exclude bobby calves sold

Goats (All purposes)	No.	LSU/head	Total LSU	Group LSU
Kids homebred (S/S)		x 0.1 =		
Kids purchased		x 0 =		[C]
Total Kids	[A]			
Breeding Stock				
Dairy Goats		x 1.8 =		
Other Goats		x 0.7 =		
Hoggets (opening)		x 0.5 =		
Rising 1-2 yr purchases		x 0 =		[D]
Other adults purchsed		x 0 =		
Total intake	[B]			
Non=breeding adults (opening)		x 0.6 =		
Total Goat LSUs				

Livestock grazed but not owned, and non-specified livestock (e.g. horses)	No.	LSU/head (specify)	Proportion of Year on Farm	Total LSU
Type and Age:				
		x	x	=
		x	x	=
		x	x	=
			Total Other LSUs	

Total LSUs on Farm	
Total Sheep LSUs	
Total Deer LSUs	
Total Beef LSUs	
Total Dairy LSUs	
Total Goat LSUs	
Total Other LSUs	
	[E]

Livestock Unit Co-Efficients by Livestock Type and Age

These are the livestock unit (LSU) co-efficients for all classes of livestock by type and age. You will need to get Inland Revenue approval to depart from these indices.

Livestock Type	Age Group	LSU per head		
Sheep	Homebred lambs	0.18		
	1 to 2 years	0.7		
	2 years and over (breeding)	1.0		
	2 years and over (non-breeding)	0.7		
Cattle (Beef)	Homebred calves	0.5		
	Purchased bobby calves	0.5		
	1 to 2 years female	4.3		
	1 to 2 years male	4.7		
	2 years and over (breeding)	6.0		
	2 years and over (non-breeding)	5.0		
Cattle (Dairy)				
Friesan dairy cows	2 years and over (milking)	7.0		
Jersey dairy cows	2 years and over (milking)	6.0		
Other dairy cattle	All breeds and ages	As for beef cattle		
Deer		**Red**	**Fallow**	**Other**
	Homebred fawns	0.15	0.10	0.20
	1 to 2 years	1.3	0.8	2.0
	2 years and over (breeding)	1.9	1.0	3.0
	2 years and over (non-breeding)	1.9	1.0	2.8
Goats (Fibre)	Homebred kids	0.1		
	1 to 2 years	0.5		
	2 years and over (breeding)	0.7		
	2 years and over (non-breeding)	0.6		
Goats (Dairy)	2 years and over (milking)	1.8		
	All other dairy-bred goats	As for fibre goats		
Pigs		No LSU conversion		

Costs to Rising One Year - All Livestock Types (Form Three)

Farm: _____   **Year Ending:** _____

Livestock Type: _____

Use the following formula to calculte the cost per head of rising one year livestock of this type. Enter actual figures in place of the variables, and make the calculation accordingly.

Total Cost for Livestock Type

$$\frac{[PAC] \times \qquad [C]}{[E]} \quad \times \quad [K] \quad = \quad \$ \text{_____}$$

Plus   Specific costs allocated to this group:

$$\$ \text{_____} \quad \times \quad [K] \quad = \quad \$ \text{_____}$$

Plus   Cost of rising one year purchases   = $ _____

Total Cost of all rising one year livestock   = $ _____ [G]

Average Cost per Head

$$\frac{\text{Total Cost [G] above}}{[A]} \quad = \quad \$ \text{_____} \text{ per head}$$

Variables and Multipliers

[PAC] is the total undivided cost from Form One

[C] is the stock unit total from Form Two

[E] is the total farm stock units from Form Two

[K] is the dual product multiplier, which is:

   0.70 for South Island merino sheep
   0.80 for all other sheep
   0.67 for rising one year dairy bred goats
   0.90 for fibre goats
   0.98 for deer (red, wapiti, elk and related crossbreeds)
   see the calculation below for dairy cattle
   1.00 for all other types and age groupings

[A] is the stock number total from Form Two

Dual Product Multiplier for Dairy Cattle

Use the followung indices and formulae to calculate the dual produce multiplier for dairy cattle. All these indices are contained in the dairy cattle section of Form Two.

a = the number of homebred calves weaned   _____   d = the opening number of rising one year male cattle _____

b = the average LSU per cow bred from   _____   e = the opening number of breeding cows   _____

c = the opening number of rising one year heifers _____   f = the opening number of breeding bulls   _____

Complete the following calculations:

1. a _____ $\times \left(\dfrac{b}{2} \text{_____} + 0.5 \right)$ = [L] _____

2. (c _____ x 4.3) + (d _____ x 4.7)   = [M] _____

3. (e _____ - a _____) x b _____   = [N] _____

4. $\left(a \text{_____} \times \dfrac{b}{2} \text{_____} \right)$ + (f _____ x 6)   = [Q] _____

Dual Product Multiplier =

$$\frac{[L] \text{_____} + [M] \text{_____}}{[L] \text{_____} + [M] \text{_____} + [N] \text{_____} + [Q] \text{_____}} = [K] \text{_____}$$

Costs to Rising Two Years - All Livestock Types (Form Four)

Farm: _____   **Year Ending:** _____

Livestock Type: _____

Use the following formula to calculte the cost per head of rising one year livestock of this type. Enter actual figures in place of the variables, and make the calculation accordingly.

Total Cost for Livestock Type

$$\frac{[PAC] \times \qquad [C]}{[E]} \times \quad [K] \quad = \quad \$ \underline{\hspace{4cm}}$$

Plus Specific costs allocated to this group:

$\qquad \$ \underline{\hspace{1cm}} \times \qquad\qquad [K] \quad = \quad \$ \underline{\hspace{4cm}}$

Plus Opening value of rising 1 year stock $\qquad = \quad \$ \underline{\hspace{4cm}}$

Plus Cost of rising two year and older purchases $\quad = \quad \$ \underline{\hspace{4cm}}$

Total Cost of all rising two yr and mature livestock $= \quad \$ \underline{\hspace{4cm}}$ [G]

Average Cost per Head

$$\frac{\text{Total Cost [G] above}}{[A]} \quad = \quad \$ \underline{\hspace{4cm}} \text{ per head}$$

Variables and Multipliers

[PAC] is the total undivided cost from Form One

[C] is the stock unit total from Form Two

[E] is the total farm stock units from Form Two

[K] is the dual product multiplier, which is:

    0.70 for South Island merino sheep
    0.80 for all other sheep
    0.67 for rising one year dairy bred goats
    0.90 for fibre goats
    0.98 for deer (red, wapiti, elk and related crossbreeds)
    see the calculation below for dairy cattle
    1.00 for all other types and age groupings

[A] is the stock number total from Form Two

Dual Product Multiplier for Dairy Cattle

Use the followung indices and formulae to calculate the dual produce multiplier for dairy cattle. All these indices are contained in the dairy cattle section of Form Two.

a = the number of homebred calves weaned _____   d = the opening number of rising one year male cattle _____

b = the average LSU per cow bred from _____   e = the opening number of breeding cows _____

c = the opening number of rising one year heifers _____   f = the opening number of breeding bulls _____

Complete the following calculations:

1. $\quad a \underline{\hspace{1.5cm}} \times \left(\dfrac{b \underline{\hspace{1cm}}}{2} + 0.5 \right) \qquad\qquad = [L] \underline{\hspace{2cm}}$

2. $\quad (c \underline{\hspace{1.5cm}} \times 4.3) + (d \underline{\hspace{1.5cm}} \times 4.7) \qquad = [M] \underline{\hspace{2cm}}$

3. $\quad (e \underline{\hspace{1.5cm}} - a \underline{\hspace{1.5cm}}) \times b \underline{\hspace{1.5cm}} \qquad = [N] \underline{\hspace{2cm}}$

4. $\quad \left(a \underline{\hspace{1.5cm}} \times \dfrac{b \underline{\hspace{1cm}}}{2} \right) + (f \underline{\hspace{1.5cm}} \times 6) \qquad = [Q] \underline{\hspace{2cm}}$

Dual Product Multiplier =

$$\frac{[L] \underline{\hspace{1.5cm}} + [M] \underline{\hspace{1.5cm}}}{[L] \underline{\hspace{1.5cm}} + [M] \underline{\hspace{1.5cm}} + [N] \underline{\hspace{1.5cm}} + [Q] \underline{\hspace{1.5cm}}} = [K] \underline{\hspace{2cm}}$$

Costs of Rising Three Year Male Non-Breeding Beef Cattle (Form Five)

Farm: _____   **Year Ending:** _____

Use the following formula to calculte the cost per head of rising three year male non-breeding cattle. Enter actual figures in place of the variables, and make the calculation accordingly.

Total Cost for Livestock Type

$$\frac{[PAC] \times \quad [C]}{[E]} \times \quad [K] \quad = \quad \$ \underline{\hspace{4cm}}$$

Plus   Specific costs allocated to this group:

$\quad$ \$ _____ x _____ [K]   =   \$ _____

Plus   Opening value of rising two year male   =   \$ _____
non-breeding beef cattle

Plus   Cost of rising three year and older male   =   \$ _____
non-breeding beef cattle

Total Cost of all rising three year male beef cattle   =   \$ _____ [G]

Average Cost per Head

$$\frac{\text{Total Cost [G] above}}{[BB]} \quad = \quad \$ \underline{\hspace{4cm}} \text{ per head}$$

Variables and Multipliers

[PAC]   is the total undivided cost from Form One

[DD]   is the stock unit total from Form Two

[E]   is the total farm stock units from Form Two

[BB]   is the stock number total from Form Two

Appendix B - Accrual Determinations

Determination G5B: Mandatory Conversion Convertible Notes

This determination may be cited as "Determination G5B: Mandatory Conversion Convertible Notes".

1 Explanation (which does not form part of this determination)

(1) This determination replaces Determination G5A: *Mandatory Conversion Convertible Notes* for notes entered into on, or after, the date of publication of this determination in the Gazette.

(2) A Mandatory Conversion Convertible Note is a financial arrangement in which the holder of the Note provides money to a company, and the debt is discharged at a future date by the issue of shares (or stock) in that company only. Interest may be payable for the period between the issue of the Note and conversion into shares. Such payments are called Coupon Interest payments.

(3) As a share is an excepted financial arrangement under section 64B of the Act, only the coupon interest payments and amounts attributed to those payments by this determination are regarded as income or expenditure for the purposes of calculating accrual income or expenditure.

(4) Determination G5B prescribes the method to be used when calculating for accrual purposes the income derived or expenditure incurred in respect of a Mandatory Conversion Convertible Note. It also details which amounts are to be included for this calculation, and which are attributable to an excepted financial arrangement.

(5) Determination G5B differs from Determination G5A by providing a method for allocating coupon interest payments between seller and purchaser when a Note is sold part way through an interest period. The seller is to calculate interest that accrues before the date of sale (on a straight-line basis) and that amount is treated as the buyer's acquisition price.

2 Reference

This determination is made pursuant to section 64E(1)(b) and (e) section 64E(6) of the Income Tax Act 1976.

3 Scope of Determination

Except where its application is specifically excluded in another determination, Determination G5B applies to every Mandatory Conversion Convertible Note which:

(1) is entered into on, or after, the date of publication in the Gazette (however, it does not apply to notes which are issued pursuant to a binding contract entered into before the date of publication), and

(2) meets the following criteria:

(a) conversion into shares of a company is at a predetermined ratio; and

(b) coupon interest payments, if any, are payable at regular intervals of not more than 12 months; and

(c) coupon interest payments are of equal amount, or are set in relation to a market interest rate indicator (if this condition is not satisfied because of the issue date or conversion date of the Note, but the rate at which the payment is calculated is consistent with the other coupon interest payments required under the Note, this determination shall apply as if the condition were met); and

(d) at the date of issue of the Note, the market value of the underlying shares amounts to at least 80% of the acquisition price of the Note; and

(e) the Note is not part of another financial arrangement.

4 Principle

(1) A Mandatory Conversion Convertible Note has both debt and equity components. It can be regarded alternatively as:

(a) a loan to a company with repayment in shares (debt component); or

(b) a forward purchase of shares (in which case the holder of the Note is buying a share of a business and has equity in it).

The accruals regime is not intended to deal with equity, and therefore classifies a share (equity in a business) as an excepted financial arrangement (see section 64B).

(2) As a Mandatory Conversion Convertible Note has this dual character, when calculating income/expenditure in relation to the Note it is first necessary to separate the debt and equity components of the Note.

(3) This determination specifies that, apart from the coupon interest payments and amounts attributed to those payments by this determination, all amounts relate to the underlying shares (equity component), and will not be dealt with under the accruals regime (sections 64B to 64M) when calculating assessable income.

(4) Income and expenditure in respect of the Note is calculated by pro-rata daily apportionment of the coupon interest payment to income years.

(5) For the purposes of this determination it is assumed that any change in the market value of the shares

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between the issue date of the Note and the conversion into shares is due to the equity component. Therefore the difference in share price can be ignored when calculating income and expenditure.

5 Interpretation

In this determination, unless the context otherwise requires:

(1) Expressions used, except the expression "income year", have the same meaning as in section 2 and section 64B of the Income Tax Act 1976.

(a) The "Act" means the Income Tax Act 1976.

(b) "Coupon Interest Payment" means any amount payable on the Note by the Note issuer (borrower) to the Note holder (lender) other than payments relating to the redemption or conversion of the Note.

(c) "Income Year"

(i) When a taxpayer furnishes a return of income under section 15 of the Act for an accounting year ending with a balance date other than the 31st day of March, "income year" means the period of twelve months ending on that balance date.

(ii) For any other person, "income year" means the year ending 31 March in which the income has been derived or expenditure has been incurred by that person.

(d) "Mandatory Conversion Convertible Note", or "Note" means any debenture, bond, certificate, document, Note or writing issued or given by a company:

(i) which provides evidence that the company is indebted to the holder of the Note, whether for a loan to the company, money subscribed to the company or any other liability of the company (whether or not the amount for which the company has issued the Note is secured over the undertaking or any of the assets of the company); and

(ii) which provides for the debt to be discharged only by the issue of shares in the capital of the company. This may be pursuant to a trust deed.

(e) "Underlying Shares" in relation to a Note means the shares or stock into which the Note is convertible, or in which it may be redeemed or paid.

(2) A determination to which Determination G5B refers may be changed or rescinded by a new determination made by the Commissioner. In such a case, a reference to the old determination is taken to be extended to the new determination.

(3) For convenience, words and phrases defined in this determination are indicated by initial capital letters, but the absence of a capital letter shall not alone imply that the word or phrase is used with a meaning different from that given by its definition.

6 Method

(1) Amounts to be included when calculating income or expenditure with regard to a Mandatory Conversion Convertible Note:

(a) In respect of income, gain or loss, or expenditure, and also of any other consideration receivable by the holder or payable by the issuer, the amounts taken into account to calculate income/expenditure consist of:

(i) coupon interest payments;

(ii) amounts attributed to coupon interest payments as set out in subclause 6(3).

(b) In respect of the acquisition price, the amounts to be included when calculating income/expenditure are those attributed to coupon interest payments as set out in subclause 6(4).

(2) The income derived or expenditure incurred in respect of a Mandatory Conversion Convertible Note shall be calculated by daily apportionment of the coupon interest payments to income years. For the method, see Determination G1A: *Apportionment of Daily Income and Expenditure*

(3) If a Mandatory Conversion Convertible Note on which interest is payable is sold part way through an interest period, then it is necessary to apportion the coupon interest payment between the seller and the purchaser. The seller is allocated interest, on a daily straight line basis, that accrues before the date of sale. (See Example C).

Note: If the coupon interest payment is not known until after the date of sale, it shall be assumed to be equal to the coupon interest payment for the previous period (adjusted for any difference in the length of the period).

(4) The portion of the sale price thus attributed to accrued interest and allocated to the seller is, in turn, treated as the purchaser's acquisition price of the financial arrangement. If the purchaser later receives the coupon interest payment for the sale period, then this acquisition price may be immediately offset against the amount received when calculating the amount of income derived from the financial arrangement in that year. (See Example C).

7 Example

Example A

On 13 September 1987 a convertible Note is issued for $100 with an interest coupon of 12% payable half-

yearly in arrears. The Note is mandatorily convertible on 13th September 1988 to 10 shares in the issuing company.

The market value of each share at issue date is $9.00. By conversion date this has risen to $15.00.

Both the issuer and the holder use a 31 March balance date and apply Determination G1A on a 365 day basis when apportioning daily income and expenditure.

The coupon interest payments are made as follows:

13 March 1988	$6.00
13 September 1988	$6.00

(a) Year ended 31 March 1988

Coupon payment 13/3/88	$6.00

Apportionment of coupon payment due on 13/9/88
(There are 18 days between 13 March and 31 March 1988, and 184 days between 13 March and 13 September 1988)

18/184 x $6.00	$0.59
Income/Expenditure	$6.59

(b) Year ended 31 March 1989

As the Note matures in this year the base price adjustment (section 64F of the Act) is required. The formula a - (b + c) is applied:

a = the sum of all amounts paid ($12.00)

b = acquisition price

c = income/expenditure in previous years ($6.59)

As all amounts other than the coupon payments are attributable to the underlying shares, the issue price and sharemarket value can be ignored for the purposes of calculating income and expenditure. This effectively gives the Note an acquisition price of nil (for accrual purposes). Therefore, in this example "b" has a value of zero.

Income/Expenditure = a - (b + c)
= $12.00 - (0 + $6.59)
= $5.41

Example B

On 13 November 1992 a convertible Note is issued for $100 with an interest coupon of 10% payable half-yearly in arrears, with the exception of the first period which is 5 months. The Note is mandatorily convertible on 13th October 1994 to 10 shares in the issuing company.

The market value of each share at issue date is $9.00. By conversion date this has risen to $15.00.

Both the issuer and the holder use a 31 March balance date and apply Determination G1A on a 365 day basis when apportioning daily income and expenditure.

The coupon interest payments are made as follows:

13 April 1992	$4.15
13 October 1992	$5.00
13 April 1993	$5.00
13 October 1993	$5.00

(a) Year ended 31 March 1993

Apportionment of coupon payment due on 13/4/93
There are a total of 151 days in the first period. Of these, 138 are in the year ended 31 March 1993

138/151 x $4.15	$3.79
Income/Expenditure	$3.79

(b) Year ended 31 March 1994

Apportionment of Coupon Payment due on 13/4/93
There are a total of 151 days in the first period. Of these, 13 are in the year ended 31 March 1994

13/151 x $4.15	$0.36
Coupon Payment due on 13/10/93	$5.00

Apportionment of coupon payment due on 13/4/94
There are a total of 182 days in the period between payments. Of these, 169 are in the year ended 31 March 1994

169/182 x $5.00	$4.64
Income/Expenditure	$10.00

(c) Year ended 31 March 1995

As the Note matures in this year the base price adjustment (section 64F of the Act) is required. The formula a - (b + c) is applied:

a = sum of all amounts paid ($19.15)

b = acquisition price

c = income/expenditure in previous years ($13.79)

As all amounts other than the coupon payments are attributable to the underlying shares, the price and share market values can be ignored for the purposes of calculating income and expenditure. This effectively gives the Note an acquisition price of nil (for accrual purposes), hence in this example "b" has a value of zero.

Income/Expenditure = a - (b + c)
= $19.15 - (0 + 13.79)
= $5.36

Example C

The original holder of the Note described in Example B sells the Note on 20 December 1992, for $120, to a new holder who holds the Note to maturity. The sale of the Note takes place part way through an interest period, so it is necessary to apportion the coupon interest payment between the seller and the purchaser.

The coupon interest payment for this period amounts to $4.15. Using a straight-line apportionment, $1.01 of the $4.15 is attributable to that portion of the period ending

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20 December 1992 during which the Note is owned by the original holder. ($4.15 x 37/151. There are 151 days in the coupon period, and there are 37 days from the beginning of the period until the day that the Note is sold.) This amount of $1.01 is income to the original holder and acquisition price to the new holder. The original holder would be considered to have sold the equity portion of the convertible Note for $118.99.

(a) Income for the Original Holder: Year ended 31 March 1993

Since this is the "final Year" of the arrangement from the point of view of the original holder, the base price adjustment is applied, using the following values:

a = the sum of all amounts paid ($1.01)

b = acquisition price

c = income/expenditure in previous years ($0)

Income   = a - (b + c)
            = $1.01 - (0 + 0)
            = $1.01

(b) Income for the New Holder: Year ended 31 March 1993

Apportionment of coupon payment 13/4/93
There are a total of 151 days in the first period. Of these, 138 are in the year ended 31 March 1993

138/151 x $4.15	$3.79
From this, the holder can subtract the acquisition price	$1.01
Income/Expenditure	$2.78

(b) Year ended 31 March 1993

As for Example B

Income	$10.00

(c) Year ended 31 March 1994

As the Note matures in this year the base price adjustment (section 64F of the Act) is required. The formula a - (b + c) is applied:

a = the sum of all amounts paid ($19.15)

b = acquisition price ($1.01)

c = income/expenditure in previous years ($12.78)

Income/Expenditure = a - (b + c)
                        = $19.15 - ($1.01 + $12.78)
                        = $5.36

This determination is signed by me on the 22nd day of January in the year 1993.

R D Adair
Deputy Commissioner of Inland Revenue

Determination G7C: Futures and Options Markets

This determination may be cited as "Determination G7C: Futures and Options Markets".

1 Explanation (which does not form part of the determination)

(1) This determination rescinds and replaces Determination G7B: *New Zealand Futures and Options Markets* and Determination G18: *International Futures and Option Markets*, both of which were made by the Commissioner on 4 December 1989. This determination differs from Determinations G7B and G18 by amalgamating the two, updating the terminology used in relation to the New Zealand Futures & Options Exchange and members thereof, adding to the list of approved markets on that exchange and to the list of approved overseas futures and options markets, modifying the approved sources of information in respect of those overseas markets and substituting more relevant and up-to-date examples.

(2) This determination applies where, for the purpose of calculating the income or expenditure of a person in respect of a Futures Contract or Option Contract, it is necessary to determine the price of that contract.

(3) This determination sets out the approved markets, sources of information, and method, used for determining the prices for Futures Contracts and Option Contracts that are either traded on the New Zealand Futures Exchange or denominated in a foreign currency. It does not apply in relation to Option Contracts in respect of shares, as such contracts are "excepted financial arrangements" (as defined in subsection 64B(1) of the Act) and are not subject to the accrual provisions.

2 Reference

(1) This determination is made pursuant to Subsections 64E(1) and (6) of the Income Tax Act 1976.

(2) This determination rescinds and replaces Determination G7B: *New Zealand Futures and Options Markets* and Determination G18: *International Futures and Option Markets*, both of which were made on 4 December 1989.

3 Scope of Determination

This determination applies where, for the purpose of calculating the income or expenditure of a person in respect of a Futures Contract or Option Contract, it is necessary to determine the price of that contract. It does not apply in relation to Option Contracts in respect of shares, as such contracts are "excepted financial arrangements" (as defined in subsection 64B(1) of the Act) and are not subject to the accrual provisions. It

does, however, apply to options relating to share price indices (such as the NZSE-40 Capital Share Price Index Option Contract).

4 Principle

(1) Markets are approved having regard to the following criteria -

  (a) The number of participants in the market or having access to the market;

  (b) Frequency of trading in the market;

  (c) The nature of trading in the market - how the price or rate is determined and how the financial assets are traded on the market;

  (d) The existence, in relation to the market, of an appropriate regulatory body established by law;

  (e) The potential or demonstrated capacity of a person or group of persons to significantly influence the market;

  (f) Significant barriers to entry; and

  (g) Discrimination on the basis of quantity bought and sold unless based on the risks involved or the transaction costs or economies of scale.

(2) Sources of information are approved having regard to the following criteria -

  (a) Reliance on the sources of information by the market; and

  (b) The accessibility of the sources of information by participants in the market.

(3) A method of obtaining a price for Futures Contract or Option Contract is approved if it is determined by an independent source and is adopted by participants in the market.

5   Interpretation

(1) In this determination, unless the context otherwise requires -

Expressions used, except the expression "Income Year", have the same meanings as in the Act, and where a word or expression is given a particular meaning for the purposes of sections 64B to 64M of the Act, it shall have the same meaning as in the said sections 64B to 64M.

"The Act" means the Income Tax Act 1976.

"Approved Exchange" means the New Zealand Futures & Options Exchange and any exchange listed in subclause 6(3) of this determination.

"Futures Contract" means a futures contract traded on the New Zealand futures and options market or on a futures market outside New Zealand.

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"Income Year" means -

(a) Where a taxpayer furnishes a return of income under Section 15 of the Income Tax Act 1976 for an accounting year ending with an annual balance date other than the 31st day of March, the period commencing in the day after the end of the immediately preceding accounting year and ending on that balance date;

(b) In respect of the income of any person, the year in which that income has been derived by that person.

"New Zealand Dealer" means a public broker or principal trader on the New Zealand Futures & Options Exchange:

"New Zealand Futures and Options Market" means the market in futures and option contracts administered by the New Zealand Futures & Options Exchange Limited.

"Option Contract" means an option contract traded on the New Zealand futures and options market or on an organised and regulated option market outside New Zealand.

"Subscriber Screen Broadcast" means a screen broadcast by any subscriber to the ticker price feed of the relevant approved exchange.

(2) Any reference in this determination to another determination made by the Commissioner shall be construed as including a reference to any fresh determination made by the Commissioner to vary, rescind, restrict, or extend that determination.

(3) For convenience, words and phrases defined in this determination are indicated by initial capital letters, but the absence of a capital letter shall not alone imply that the word or phrase is used with a meaning different from that given by its definition.

6   Method

(1) Determination G7B: *New Zealand Futures and Options Markets* and Determination G18: *International Futures and Option Markets* are hereby rescinded with effect from the day on which this determination is signed.

(2) The New Zealand futures and options markets in the following contracts are approved:

Any contracts (other than Option Contracts in respect of shares) listed for trading on the New Zealand Futures & Options Exchange.

(3) In relation to Futures Contracts or Option Contracts traded in foreign markets, the following futures and options markets are approved:

Any contracts (other than Option Contracts in respect of shares) listed for trading on any of the following Approved Exchanges:

American Stock Exchange (AMEX)

Australian Options Market (AOM)

Belgian Futures & Options Exchange (Belfox)

Bolsa de Mercadorias & Futuros (BM&F)

Budapest Commodity Exchange (BCE)

Chicago Board of Trade (CBOT)

Chicago Board Options Exchange (CBOE)

Chicago Mercantile Exchange (CME)

Chicago Rice & Cotton Exchange (an affiliate to MidAm)

Citrus Associates of the New York Cotton Exchange Inc

Commodity Exchange, Inc (COMEX)

Copenhagen Stock Exchange

Deutsche Terminborse (DTB)

European Options Exchange (EOE)

Financial Futures Market Amsterdam (FTA)

Financial Instruments Exchange (FINEX - a division of NYCE)

Finnish Options Market Exchange and Clearing House (FOM)

Guarantee Fund for Danish Futures & Options (FUTOP)

Hokkaido Grain Exchange

Hong Kong Futures Exchange Ltd (HKFE)

Index & Options Market (IOM - a division of CME)

International Monetary Market (IMM - a division of CME)

International Petroleum Exchange (IPE)

Irish Futures & Options Exchange

Kansas City Board of Trade (KCBT)

Kobe Raw Silk Exchange

Kobe Rubber Exchange

Kuala Lumpur Commodity Exchange

Kuala Lumpur Options & Financial Futures Exchange (KLOFFE)

London Futures & Options Exchange (London Fox)

London International Financial Futures Exchange (LIFFE)

London Metal Exchange (LME) Exchange (CBOE)

Maebashi Dried Cocoon Exchange

Manila International Futures Exchange

Marche a Terme International de France (MATIF)

Marche des Options Negociables de Paris (MONEP)

Meff Renta Fila

Meff Renta Vanable

Mercardo de Futuros y Opciones S.A (Merfox)

Mid America Commodity Exchange (MidAm)

Minneapolis Grain Exchange

Montreal Exchange

Nagoya Textile Exchange

New York Coffee Sugar & Cocoa Exchange (CSCE)

New York Cotton Exchange (NYCE)

New York Futures Exchange (NYFE)

New York Mercantile Exchange (NYMEX)

New York Stock Exchange (NYSE)

OM London Ltd

OM Stockholm Ltd

Osaka Grain Exchange

Osaka Securities Exchange (OSE)

Osaka Sugar Exchange

Osaka Textile Exchange

Oslo Stock Exchange

Osterische Termin Und Optionenbouse (OTOB)

Pacific Stock Exchange (PSE)

Philadelphia Board of Trade (PBOT)

Philadelphia Stock Exchange (PHLX)

Singapore International Monetary Exchange (SIMEX)

South African Futures Exchange (SAFEX)

Swiss Options & Financial Futures Exchange AG (SOFFEX)

Sydney Futures Exchange (SFE)

Tokyo Commodity Exchange

Tokyo Grain Exchange

Tokyo International Financial Futures Exchange (TIFFE)

Tokyo Stock Exchange

Tokyo Sugar Exchange

Toronto Futures Exchange

Toyahashi Dried Cocoon Exchange

Vancouver Stock Exchange

Winnipeg Commodity Exchange

Yokahama Raw Silk Exchange

(4) The following sources of information for futures and options prices are approved in relation to Futures Contracts or Option Contracts traded on the New Zealand Futures & Options Exchange:

(a) For New Zealand Dealers - the Statement of Open Position provided by a New Zealand Dealer.

(b) For persons other than New Zealand Dealers - advice as to the price for a Futures Contract or Option Contract given to that person by a New Zealand Dealer, which price shall be obtained from a source approved in paragraph 6(4)(a) of this determination.

(5) The following sources of information for futures and options prices are approved in relation to Futures Contracts or Option Contracts traded on foreign markets:

(a) A Subscriber Screen Broadcast that quotes prices for Futures Contracts or Option Contracts;

(b) Where a person does not have access to a Subscriber Screen Broadcast, advice as to the price of a Futures Contract or Option Contract from a member of the exchange at which the contract is traded. The price shall be derived from a source approved in paragraph 6(5)(a) of this determination, and shall be the price at which the member would buy or sell the Futures Contract or Option Contract.

(6) (a) Where, for the purposes of determining the income or expenditure of a person in respect of a financial arrangement, it is necessary to determine the price for a Futures Contract or Option Contract at the end of an Income Year the price for the Futures Contract or Option Contract shall be the market price for that contract in the market in which it is traded on the same exchange, as advised by an approved source of information (in respect of that exchange), at the close of trading on the last permitted day for trading in the person's Income Year. If the relevant contract has not been traded on that day, the price shall be the closing call price as determined by the relevant exchange's clearing house, or the exchange, for margin purposes at the end of that day.

(b) Where, for the purposes of determining income or expenditure of a person in respect of a financial arrangement, it is necessary to determine in New Zealand dollar value of the futures or option contract at the end of the Income Year, the spot rate for the currency in which the Futures Contract or Option Contract is quoted shall be ascertained in accordance with Determination G5D: Foreign Currency Rates, and used to convert the value of the Futures Contract or Option Contract to New Zealand dollars.

Example

(1) The Statement of Open Position referred to in paragraph 6(4)(a) of this determination will generally set out information relevant to the particular Futures Contract or Option Contract, including delivery month, number bought and number sold. The following are illustrative examples of advice as to the market price of Futures Contracts and Option Contracts which may be obtained from the New Zealand futures and options market's clearing house by New Zealand Dealers who subscribe to an optional "brokers package" system:

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(a)

```
                        MERCHANT BANK,
                        18TH FLOOR, MERCAHNT BANK HOUSE             OPEN POSITION
                        105 SYMONDS STREET                           STATEMENT
                        AUCKLAND
                        TEL -90-123456   FAX -09-123457
      TO                                          PAGE No.          :2              DATE: 01/05/92
            TRADING ACCOUNT                        MARKET            :NEW ZEALAND FUTURES & OPTIONS EXCHANGE LIMITED
                                    ACCOUNT No. 2222  LOT SIZE AND CONTRACT  :NZ$500,000 FACE VALUE
                                                                    90 DAY BANK ACCEPTED BILL
                                                   PRICE/RATE**      :INDEXED YIELD PER ANNUM
```

DELIVERY MONTH	No. OF LOTS		TRADE TYPE	DATE OF TRADE	PRICE	REFERENCE NUMBER	PREMIUM RATE	DECLARATION DATE	DEPOSIT	MARKET PRICE	MARGIN	PREMIUM VALUE
	SOLD/ GRANTED	BOUGHT/ TAKEN										
SEP 92		20	Open	12/12/91	90.85					93.13	54062.80CR	
SEP 92	10		Open	20/03/92	92.78					93.13	4168.90	
SEP 92		10	Open	01/04/92	93.14					93.13	119.30	
SEP 92	10	30	TOTAL								49774.60CR	
DEC 92		20	Open	04/02/92	90.80					92.98	51666.80CR	
DEC 92	0	20	TOTAL								51666.80CR	
	10	50	ACCOUNT TOTAL								101441.40CR	

THIS STATEMENT LISTS ALL CONTRACTS AND/OR OPTIONS HELD OPEN BY US ON YOUR ACCOUNT ON THE MARKET AS INDICATED AT THE CLOSE OF BUSINESS ON THE DATE HEREON. THE MARKET PRICE IS THE QUOTATION FOR THE APPROPRIATE MONTH(S) FIXED ON THE DATE HEREON.
ISSUED SUBJECT TO THE CORRECTION OF ERRORS AND OMISSIONS

In this example, Merchant Bank has positions in the September 92 and December 92 BBC contracts, which it has acquired at different times.

The market price for September 92 contracts at 1/5/92 was 93.13, and for December was 92.98. The margin column states the unrealised profit in terms of margin deposited, and variable margin accumulated and eroded.

Therefore, the transaction of 20 bought BBC futures contracts on 12/12/91 has an unrealised profit of $54,062.80. Merchant Bank has an unrealised profit of $49,774.60 for the September 92 maturity, and $51,666.80 for the December 92 maturity, giving a total of $101,441.40.

(b) Z1

```
                        MERCHANT BANK,
                        18TH FLOOR, MERCAHNT BANK HOUSE             OPEN POSITION
                        105 SYMONDS STREET                           STATEMENT
                        AUCKLAND
                        TEL -90-123456   FAX -09-123457
      TO                                          PAGE No.          :2              DATE: 01/05/92
            TRADING ACCOUNT                        MARKET            :NEW ZEALAND FUTURES & OPTIONS EXCHANGE LIMITED
                                    ACCOUNT No. 2222  LOT SIZE AND CONTRACT  :NZ$ VALUE OF 20 X INDEX
                                                                    NZSE40 CAPITAL SHARE PRICE INDEX
                                                   PRICE/RATE**      :SHARE PRICE INDEX
```

DELIVERY MONTH	No. OF LOTS		TRADE TYPE	DATE OF TRADE	PRICE	REFERENCE NUMBER	PREMIUM RATE	DECLARATION DATE	DEPOSIT	MARKET PRICE	MARGIN	PREMIUM VALUE
	SOLD/ GRANTED	BOUGHT/ TAKEN										
JUN 92		50	Call Option	15/04/91	1400		87	29/06/92		91	4,000.00CR	2700.00
JUN 92	3		Call Option	01/04/92	1450		45	29/06/92		62	1020.00	
JUN 92	4		Call Option	13/04/92	1450		53	29/06/92		62	720.00	4240.00
JUN 92		3	Call Option	20/04/92	1475		50	29/06/92		50	.00	
JUN 92	6	3	Put Option	27/04/92	1375		22	29/06/92		23	120.00	2640.00
JUN 92	13	53	TOTAL								2140.00CR	9580.00

THIS STATEMENT LISTS ALL CONTRACTS AND/OR OPTIONS HELD OPEN BY US ON YOUR ACCOUNT ON THE MARKET AS INDICATED AT THE CLOSE OF BUSINESS ON THE DATE HEREON. THE MARKET PRICE IS THE QUOTATION FOR THE APPROPRIATE MONTH(S) FIXED ON THE DATE HEREON.
ISSUED SUBJECT TO THE CORRECTION OF ERRORS AND OMISSIONS

In this example, Merchant Bank has a position of 53 bought, and 13 sold call and put options on the NZSE-40 Share Price Index.

The net unrealised profit position of Merchant Bank is indicated in the margin column. The premium value indicates the maximum profit that could be received by the option writer (seller) at the expiration of the option contracts (the declaration date).

If, on the expiration date, there is a debit margin (i.e., loss), that amount will be deducted from the premium value before any profit is realised.

(2) Subclause 6(5) of this determination refers to a Subscriber Screen Broadcast that quotes prices for Futures Contracts or Option Contracts. Such a service is commonly provided by companies such as Reuters, Telerate and Bloomberg LP. The following are examples of Subscriber Screen Broadcast pages provided by Telerate New Zealand Limited and Reuters New Zealand Limited:

(a)

```
06/08        0:19 GMT              [ SFE 3 YR T-BOND FUTURES ]                    PAGE 6182

MONTH    GMT      BID    ASK   [LAST]  PREV 1  PREV 2  PREV 3   HIGH    LOW     VOL    P SET

Sep92   00:19    93.57  93.58   93.58   93.58   93.58   93.58   93.60   93.55   4568   93.60

Dec92   00:19    93.12  93.14   93.13   93.13                           93.13   93.13     25   93.14

Mar93   21:03

Jun93   21:03



                        1500 Official Cash Settlement Price for Jun92 is 92.68


  S = Settlement Price                                                    P SET = Previous Settlement Price
```

This is an example of a Subscriber Screen Broadcast page provided by Telerate New Zealand Limited. It shows price information for the three year T-Bond futures contract traded on the Sydney Futures Exchange.

Two maturities are quoted - the September 1992 contract, and the December 1992 contract.

The market price for the September 1992 three year T-Bond futures contract is 93.58 (or 6.42%) being the LAST price at which trades occurred.

(b)

```
0#YTT                   3YR T BOND                      SFE AUD

  MTH    LAST   BID    ASK   HIS.CL  SETTLE  CL.BD  CL.AS   OPEN    HIGH    LOW    VOLUM   TIME

Sep2   93.58  93.58  93.58                          93.60  93.58   93.60   93.55   4571   12:20

Dec2   93.13  93.12  93.14   93.14           93.13  93.15  93.13   93.13   93.13     25   11:02
```

This is an example of a Subscriber Screen Broadcast provided by Reuters New Zealand Limited, relating to the same Futures Contract as in paragraph 7(2)(a) above. The market price for the September 1992 three year T-Bond futures contract is 93.58 (or 6.42%), being the LAST price.

(c)

```
FSEZ9          EURODOLLAR DEC9          0          LIF USD      15NOV89 02:58

LAST           LAST 1          LAST 2          LAST 3          LAST 4          BID             ASK

91.70          91.70           91.70           91.70           91.69           91.69           91.70

NET.CHNG       CLS:14NOV 89    OPEN            HIGH            LOW             OPE.BID         OPE.ASK

-0.02          91.68           91.69           91.71           91.69           91.69           91.70

SETTLE         VOLUME          OPEN.INT        CNT.HIGH        CNT.LOW         RTR.NEWS        N.TIME

91.70          1674            24459           130.01          71.24

CNT.XPRY       LOT.SIZE        LIMIT           STATUS                                          BKGRND

18DEC89        IM USD                          OCL/                                            ****
```

This is a different example of a Subscriber Screen Broadcast page provided by Reuters New Zealand Limited. It shows market prices for a Eurodollar Futures contract maturing in December 1989 as traded on the London International Financial Futures Exchange.

The market price of the contract is 91.70, being the last traded price and identified by the description "LAST" (as distinguished from "LAST 1", "LAST 2" etc.). The closing price for the previous trading day is 91.68.

This determination is signed by me on the 22nd day of January in the year 1993.

R D Adair
Deputy Commissioner of Inland Revenue

Determination G26: Variable Rate Financial Arrangements

This determination may be cited as "Determination G26: Variable Rate Financial Arrangements".

1 Explanation (which does not form part of this Determination)

(1) Determination G26 applies to variable rate financial arrangements on which Interest is paid at least annually. Any income or expense relating to a variable rate financial arrangement must be accrued. Determination G26 sets out two alternative methods by which this should be done, and explains the circumstances in which each should be used.

A variable rate arrangement may be a floating rate arrangement or a reviewable rate arrangement.

Floating rate arrangements are those where the Interest rate is reset periodically according to a predetermined formula. The formula links the Interest rate to an indicator rate such as the bank bill or interbank rate.

Reviewable rate arrangements are those where the Interest rate is set periodically in line with market rates. Any change in the Interest rate reflects and is consistent with changes in market Interest rates. The most common form of reviewable rate loan is a mortgage where the Interest rate is subject to periodic review by the lender.

(2) The income or expense in relation to a variable rate arrangement could consist of:

(a) Periodic Interest payments as determined from time to time;

(b) A premium or discount on the issue or face value of the arrangement;

(c) Fees paid or received in relation to the arrangement. These amounts must be accrued.

(3) The methods provided in this determination separately accrue:

(a) Periodic Interest on a daily basis over the income year to which it relates;

(b) Any discount or premium and fees over the term of the arrangement, on either a straight line basis (Method A) or a yield to maturity basis (Method B).

(4) The critical factor in deciding whether Method A or Method B applies to an arrangement is the size of the premium or discount (including fees) relating to the arrangement.

(a) Method A applies to financial arrangements where there is a small (or no) discount or premium. These are arrangements where the discount or premium and fees (non-contingent fees with a limit of 2% of the core acquisition price, plus contingent fees) is less than 2% of the average amount of principal outstanding over the term of the arrangement. (For a full definition see clause 5 - Interpretation).

(b) Method B is of general application, and may be applied to any variable rate financial arrangement within the scope of this determination.

(5) **Method A** permits the spreading of fees and premium or discount over the term of a financial arrangement on a straight line basis, in proportion to the principal outstanding. The simplest case of Method A occurs where the principal is fixed throughout the term. In that case, the premium or discount and fees are spread on a straight line basis over the term of the arrangement.

(6) **Method B** can be applied regardless of the amount of fees and premium or discount. It requires the fees and premium or discount to be spread on a yield to maturity basis. Since the future cashflows are not known, the actual yield to maturity rate cannot be calculated, but must be estimated. This is done by using the initial Interest rate (or price or index) and assuming that this rate will apply throughout the term of the financial arrangement.

The spreading of fees and premium or discount may be done on either a per Period basis or a per income year basis. To calculate the yield to maturity, Method B uses either Determination G3: *Yield to Maturity Method* or Determination G10B: *Present Value Calculation Methods* and G11A: *Present Value Based Yield to Maturity Method*

(7) It is important to note that in both Method A and Method B there is no recalculation or respreading of fees and discount or premium when there is a change in Interest rate, price, or index. The spreading is done only once, at either the date of acquisition or issue as the case may be.

(8) Interest is calculated separately for each period (or income year) depending on the actual Interest rate applying in the Period (or the Periods within that income year).

(9) A holder of a variable rate financial arrangement to which this determination applies may bring any fees or premium received at the date of issue of the financial arrangement into income at that time.

(10) Those taxpayers to whom section 64C(2A) of the Act applies should use Determination G24: *Straight Line Method.*

2 Reference

This determination is made pursuant to section 64E(1)(b) of the Income Tax Act 1976.

3 Scope

Determination G26 shall be applied to any variable rate financial arrangements where:

(a) All of the amounts payable (other than the principal, any discount or premium, and any fees) are either:

    (i) set periodically according to a predetermined formula. That formula must link the amounts payable to economic, commodity, industrial, or financial indices or prices, or banking rates, or general commercial rates; or

    (ii) set periodically by reference to market interest rates; and

(b) The amounts of principal (including any fees and any premium or discount) and the times or intervals at which they are to be advanced and repaid, are known, or are able to be determined, or can reasonably be anticipated, as at the first balance date after issue or acquisition.

(c) Interest is paid at least annually.

Determination G26 provides two alternative methods acceptable for the purposes of section 64C(3) of the Act.

(***Note:*** A determination to which Determination G26 refers may be changed or rescinded by a new determination made by the Commissioner. In such a case, a reference to the old determination is taken to be extended to the new determination.)

4 Principle

(1) The income deemed to be derived or expenditure deemed to be incurred by a person in a Period (or income year) is calculated by adding together:

    (a) The amount of the Total Finance Charges Excluding Interest allocated to that Period (or income year); and

    (b) The amount of Interest payable or receivable in that Period (or income year).

(2) Method A and Method B find and then allocate the Total Finance Charges Excluding Interest to each Period (or an income year) of the financial arrangement. Once this amount has been allocated, the amount of Interest payable or receivable in that Period (or income year) is added to it. This gives the income or expenditure for each Period (or income year) of the financial arrangement.

    (a) Method A may only be applied to Small Discount or Premium Financial Arrangements. It results in an allocation to each Period proportionate to the amount of principal outstanding in that Period, and the length of that Period.

    (b) Method B may be applied to other financial arrangements. It assumes that the rate, price or

index known to apply in the first Period applies to all subsequent Periods. The Act and determinations are used to spread the Total Finance Charges over the term of the financial arrangement. The assumed Interest content of the Total Finance Charges in each Period (or in each income year) is then subtracted.

The yield to maturity method or other permissible method would be used for calculation purposes.

5 Interpretation

(1) In this determination, unless the context otherwise requires-

Expressions used have the same meanings as in the Act and where a word or expression is given a particular meaning for the purposes of sections 64B to 64M of the Act, it shall have the same meaning as in this determination.

"the Act" means the Income Tax Act 1976:

"Interest" does not have the meaning given in section 2 of the Act. Rather for the purposes of this determination it means any periodic payment in relation to the financial arrangement, to the extent intended to provide a return to the lender on the sums provided to the borrower. It does not include fees, discounts, or premiums, or payments effecting a reduction of principal.

"Period" means a term commencing immediately after a payment is payable or receivable, and ending when the next payment is payable or receivable. Where the Period is longer than one year, the Period is deemed to comprise one or more Periods each of one year followed (or preceded, at the option of the holder or issuer as the case may be) by a Period of less than one year.

The duration of the financial arrangement should be evenly divided into Periods, which may be measured in days, weeks, fortnights, months, quarters, half years, or years. If an even division is not possible, then the remainder should be treated as a partial Period, and expressed as a fraction of a full Period.

$$m \ x \ \frac{n}{o}$$

where

    m = the number of days in the partial Period
    n = number of full Periods in a year
    o = number of days in a year

For example, if all other Periods are measured in months then a Period of 5 days would be treated as

$$5 \ x \ \frac{12}{365} \ = \ 0.1644 \text{ of a month}$$

There must be no more than two partial Periods in any financial arrangement.

"Small Discount or Premium Financial Arrangements" means a financial arrangement to which this determination applies, in respect of which -

(a) The only variable parts of an amount payable comprise Interest which:

    (i) is payable at yearly or more frequent intervals; and

    (ii) is calculated on the amount of the principal outstanding from time to time since the previous Interest payment (or since the date of issue or acquisition if that is later); and

(b) The amount of the Total Finance Charges Excluding Interest (ignoring whether it is a positive or negative amount) is not more than the product of:

    (i) Two per cent; and

    (ii) The expected term of the financial arrangement calculated in years and fractions of a year; and

    (iii) The time-weighted average amount of principal that is reasonably expected to be outstanding during the expected term of the financial arrangement.

Clause 7 of this determination provides examples which show whether or not a financial arrangement is a Small Discount or Premium Financial Arrangement. "Total Finance Charges" in relation to a financial arrangement means-

(a) For an issuer, the total of all amounts payable by the issuer less the total of all amounts receivable by the issuer, pursuant to the financial arrangement;

(b) For a holder, the total of all amounts receivable by the holder less the total of all amounts payable by the holder, pursuant to a financial arrangement.

Any fees payable in relation to the financial arrangement must be reduced by the amount of item z as defined in sections 64BA(2) or 64BA(3) of the Act.

"Total Finance Charges Excluding Interest" in relation to a financial arrangement means the Total Finance Charges excluding all amounts of Interest payable or receivable.

(2) For convenience, words and phrases defined in this determination are indicated by initial capital letters, but the absence of a capital letter shall not alone imply that the word or phrase is used with a meaning different from that given by its definition.

6 Method

(1) A person may apply Method A to Small Discount or Premium Financial Arrangements, and Method B to any other financial arrangement. In order to deter-mine whether Method A can be applied, use the criteria outlined in the Interpretation clause of this determination.

(2) Method A shall be applied in respect of Periods. Method B may be applied either in respect of income years or Periods.

(3) The proviso to paragraph (a) of section 64C(3) of the Act allows for another method, similar to those in this determination, to also be used.

(4) Once a method has been selected for a financial arrangement, that method must be applied until that financial arrangement matures or is remitted, sold, or otherwise transferred by the person unless the prior consent of the Commissioner to adopt another method is obtained. (The Commissioner's consent may be given conditionally).

(5) A person who:

    (a) is a holder; and

    (b) who receives a premium or fee on the issue or acquisition of a financial arrangement

may elect to include that fee or premium in the income derived by that person in the income year of issue or acquisition.

(6) The formula

$$x + y$$

is used to calculate the income derived or expenditure incurred by a person in a Period (or an income year) in relation to the financial arrangement. In this formula:

x   is the amount of Total Finance Charges Excluding Interest allocated to that Period (or to that income year); and

y   is the amount of Interest payable or receivable in that Period (or that income year).

(7) Method A and Method B differ in the method used to calculate the value of x.

(a) Under Method A

$$x = \frac{a \times b \times c}{d}$$

where,

a   is the Total Finance Charges Excluding Interest payable by the issuer or receivable by the holder as the case may be;

b   is the length of the Period (b = 1 if the Period in question is a full Period, or, for a partial Period, b = a fraction calculated in accordance with the formula given in the clause 5 Interpretation);

c   is the amount of principal outstanding during the Period;

d   is the sum of all items (b x c) calculated in respect of every Period;

(b) Under Method B

$$x = e - f$$

Since, in a variable rate arrangement, the rate, price, or index varies during the term of the arrangement, the assumption is made that the rate, price or index that applies to the first Period after the date of issue or acquisition applies to all Periods of the financial arrangement. Using the assumption:

e   is the income derived, or the expenditure incurred, for a Period (or income year); and

f   is the Interest deemed to be payable by the issuer or receivable by the holder as the case may be.

The yield to maturity method is used in accordance with the Act and determinations to decide the value of e.

(8) Amounts calculated using this determination should be apportioned between income years using Determination G1A: *Apportionment of Income and Expenditure on a Daily Basis*

7 Examples

Example A (illustrating Method A)

On 12 February 1991 a company issues notes with a face value of $10,000 for 5 years, at an interest rate of bank bill plus 0.75% p.a. payable half yearly in arrears. The notes are issued at a discount of 5%. The borrower is a New Zealand company. Contingent fees of 2.5% of $10,000 are payable by the borrower; there are no non-contingent fees.

There is no change in the principal outstanding over the 5 years. The average principal outstanding is therefore $10,000, both overall and within each half year Period.

(a) Before calculating the amount of expenditure deemed to be incurred by the borrower over the term of the arrangement, it is first necessary to determine whether Method A or Method B is to be used. For Method A to be used, the arrangement must satisfy the criteria for a Small Discount or Premium Financial Arrangement (see clause 5 Interpretation).

In this example, the Total Finance Charges Excluding Interest payable by the borrower are calculated as follows:

$ 10,000	principal payable
+ 250	fees paid
- 9,500	principal received
a = 750	

Ignoring sign, $750 is less than the amount which determines whether or not Method A can be used, calculated as follows:

2% x the expected term of the financial arrangement calculated in years and fractions of years (5) x the average principal outstanding ($10,000)

$$2\% \times 5 \times 10,000 = \$1,000$$

So Method A of this determination may be applied.

(b) The expenditure deemed to be incurred by the borrower in a specific Period is calculated using the formula

$$x + y$$

(i) "x" is the amount of Total Finance Charges Excluding Interest allocated to that Period. Using Method A

$$x = \frac{a \times b \times c}{d}$$

where

a =   the Total Finance Charges Excluding Interest payable by the issuer or receivable as the case may be;

b =   the length of the Period
   =   1 throughout the time of the financial arrangement, as all of the Periods are the same length (half a year)

c =   the amount of principal outstanding during the Period;
   = $10,000 in all Periods.

d =   the sum of all items (b x c) calculated in respect of every Period;
   =   1 x $10,000 x 10 (as there are 10 half year Periods);
   = $100,000.

Therefore,

(ii) y is the amount of Interest payable or receivable in the Period.

Therefore, in this example,

y = Interest calculated at the bank bill rate plus 0.75%.

(iii) Therefore, the expenditure incurred by the borrower in each half year would be:

$$x + y$$

($75 + Interest calculated at the bank bill rate plus 0.75%)

This expenditure would be spread using Determination G1A: *Apportionment of Income and Expenditure on a Daily Basis.*

If the fees were payable to a holder who was a New Zealand taxpayer (but not a cash basis holder), this taxpayer would be deemed to have derived similar amounts of income.

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Example B (a further illustration of Method A)

On 12 February 1991 a company issues notes with a face value of $10,000 for five years at an interest rate of bank bill plus 0.75% p.a. payable half yearly in arrears. The notes are issued at a discount of 4.5%. The borrower is a New Zealand company.

$2,000 of the face value of the notes is to be repaid on each anniversary of the issue. There are no fees.

The length of each Period is measured in half years, so b = 1 throughout.

The average principal outstanding over the five years is:

$$\frac{(10,000 + 8,000 + 6,000 + 4,000 + 2,000)}{5} = \$6,000$$

(a) Decide whether Method A can be applied.

The Total Finance Charges Excluding Interest payable by the borrower are equal to:

$ 10,000	principal payable
+ 0	fees paid
- 9,550	principal received (after discount)
a = 450	

Ignoring sign, this is less than:

2% x 5 (years) x 6,000 (average principal outstanding) = $600

So Method A of this determination may be applied.

(b) Calculate the value of x

The following table sets out the allocation of the Total Finance Charges Excluding Interest:

Half Year Period b = 1	Principal Outstanding $	Sum of (b x c) $	Allocation a x b x c d $
1	10,000	10,000	75
2	10,000	10,000	75
3	8,000	8,000	60
4	8,000	8,000	60
5	6,000	6,000	45
6	6,000	6,000	45
7	4,000	4,000	30
8	4,000	4,000	30
9	2,000	2,000	15
10	2,000	2,000	15
Total		60,000	450

(i) y = Interest on the principal outstanding in the half year at the bank bill rate plus 0.75% p.a.

(ii) The expenditure incurred by the borrower in each half year Period would be: x (calculated in accordance with the above table) + y

This expenditure would be spread using Determination G1A: Apportionment of Income and Expenditure on a Daily Basis.

If the fees were payable to a holder who was a New Zealand taxpayer (but not a cash basis holder), this taxpayer would be deemed to have similar amounts of income.

Example C (another illustration of Method A)

This is similar to Example B, but issued at a premium, and seen from the holder's viewpoint. It is somewhat artificial, in order to illustrate a point.

On 12 February 1991 a company borrows $10,000 for 5 years at an interest rate of bank bill plus 2% p.a. payable half yearly in arrears.

The money is raised by issuing notes at a premium of 5%. The purchaser is a New Zealand company. Contingent fees of 2% are payable by the issuer to the purchaser (holder).

$2,000 of the face value of the notes is to be repaid on each anniversary of the issue. The length of each Period is measured in half years, so b = 1 throughout.

The average principal outstanding over the five years is:

$$\frac{(10,000 + 8,000 + 6,000 + 4,000 + 2,000)}{5} = \$6,000$$

(a) Decide whether Method A can be applied.

The Total Finance Charges Excluding Interest payable to the lender are equal to:

$ 10,000	principal receivable
+ 200	fees received
- 10,500	principal paid
a = -300	

Ignoring sign, this is less than:

2% x 5 x 6,000 = $600

So Method A of this determination may be applied.

(b) The income deemed to be derived by the holder in a Period is calculated using the formula

x + y

(i) Calculate the value of x The following table sets out the allocation of the Total Finance Charges Excluding Interest:

Half Year Period b = 1	Principal Outstanding $	Sum of (b x c) $	Allocation a x b x c d $
1	10,000	10,000	-50
2	10,000	10,000	-50
3	8,000	8,000	-40
4	8,000	8,000	-40
5	6,000	6,000	-30
6	6,000	6,000	-30
7	4,000	4,000	-20
8	4,000	4,000	-20
9	2,000	2,000	-10
10	2,000	2,000	-10
Total d =		60,000	a = -300

Note: x is negative because a premium has been paid.

(ii) y = Interest on the principal outstanding in the half year at the bank bill rate plus 2% p.a.

(iii) The income derived by the holder in each half year Period would be:

x (calculated in accordance with the above table) + y

This income would be spread using Determination G1A: *Apportionment of Income and Expenditure on a Daily Basis*

Example D (illustrating Method B on a Period Basis

This example uses Determination G3: *Yield to Maturity Method*

A New Zealand company issues notes with a face value of $10,000 for a term of 3 years at a discount of 10% ($1,000). The Interest rate is equal to Libor plus 1% p.a., and Interest is payable half yearly in arrears. There are no fees.

The Interest rate is 10% in the first Period after issue.

Assuming that this interest rate holds throughout the term of the notes, the yield to maturity is 14.21% p.a., calculated at half yearly rests.

(a) Decide whether Method A can be applied.

Total Finance Charges Excluding Interest are equal to:

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$  10,000  principal payable
+        0  fees paid
-    9,000  principal received (after discount)
a = 1,000
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Ignoring sign, this is more than:

2% x 3 (years) x 10,000 (average principal outstanding) = $600

Because the Small Discount or Premium criteria are not met, Method A may not be applied.

(b) The expenditure deemed to be incurred by the borrower in a Period is equal to x + y.

(i) Calculate the value of x (Total Finance Charges Excluding Interest allocated to that Period)

x = e - f

Method B assumes that the Interest rate applying in the first Period (10% in this example) applies throughout the financial arrangement.

"e" is the Total Finance Charge. This is calculated using Determination G3: Yield to Maturity Method (or G10B in conjunction with G11A). The yield to maturity rate is 14.21% p.a. (See table for the value of e in each Period.)

"f" is the Interest that would be payable by the borrower if the rate that applied in the first Period after the date of issue applied to all Periods of the financial arrangement. Since the initial Interest rate is 10% in this example, f = 500 for each Period.

(ii) y = the actual Interest paid in a Period. Values for this example are shown in the table below.

(iii) The expenditure deemed to be incurred in each Period using Method B is calculated in the following table:

Period	Total Finance Charges (assuming 10% p.a. interest) (Note 1)	Interest (at 10% p.a.) (Note 2)	Total Finance Charges Excluding Interest	Actual Interest Rate % p.a.	Actual Interest Payable	Total Expenditure deemed to be incurred
	e	f	x = e - f		y	x + y
1	640	500	140	10	500	640
2	649	500	149	11	550	699
3	660	500	160	9	450	610
4	671	500	171	9	450	621
5	683	500	183	8	400	583
6	697	500	197	8	400	597
	4,000	3,000	1,000		2,750	3,750

Note 1: Based on a yield to maturity of 14.21% p.a. calculated using Determination G3 and an interest rate of 10% p.a. through-out

Note 2: 10% is the rate applying in the first Period after issue

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Whole dollars and minor adjustments have been made to aid readability. The results still satisfy the requirements of Determination G2: Requirements as to Precision. That Determination allows for the use of results other than those calculated using the Yield to Maturity Method, provided they do not result in a difference of more than $5 per period.

The total expenditure is confirmed as:

$1,000 discount (x)
+ 2,750 interest actually payable (y)
$3,750

(Note: In practice the expenditure in the final income year would be determined using the base price adjustment in section 64F of the Act.)

The expenditure for each Period would be apportioned using Determination G1A: *Apportionment of Income and Expenditure on a Daily Basis*

If the fees were payable to a holder who was a New Zealand taxpayer (but not a cash basis holder), this taxpayer would be deemed to have derived similar amounts of income.

Example E (illustrating the application of Methods A and B to a reviewable rate loan)

A company borrows $1,000,000 for 5 years. The loan will be repaid on a table mortgage basis over the 5 year period with yearly interest reviews. The initial interest rate is 14.5% pa. A fee of $10,000 is charged when the loan is drawn down. The company is a New Zealand taxpayer and the issuer in relation to the financial arrangement.

For the purposes of this example, the total expenditure incurred has been calculated using both Method A and Method B.

(a) Method A The Total Finance Charges Excluding Interest payable by the issuer equals:

$1,000,000 principal payable
+ 10,000 fees paid
- 1,000,000 principal received
a = 10,000

Ignoring the sign, this is less than:

2% x 5 x 653,736 (average principal outstanding)
= $65,373

Therefore Method A may be applied.

The expenditure deemed to be incurred by the issuer is equal to x + y

(i) Calculate the value of x.

The following table sets out the cashflows in relation to the arrangement (based on an initial interest rate of 14.5% pa) and the allocation of the Total Finance Charges Excluding Interest to each income year on a straight line basis, as allowed for in Method A.

Period	Principal Outstanding (Note 1)	Payment	Principal Reduction	Interest at 14.5% p.a.	x = Allocation to each one year period
b = 1	c				$\frac{a \times b \times c}{d}$
Year 1	1,000,000	294,792	149,792	145,000	3,059
Year 2	850,208	294,792	171,512	123,280	2,601
Year 3	678,696	294,792	196,381	98,411	2,076
Year 4	482,315	294,792	224,856	69,936	1,476
Year 5	257,459	294,792	257,459	37,333	788
	3,268,678		1,000,000	473,960	10,000

Note 1: Calculated at 14.5% p.a.

Note 2: Figures rounded to nearest whole dollar

Note 3: b = 1, since are same length,
    a = 10,000, and
    d = 3,268,678
    throughout the term of the arrangement.

(ii) In this case, "y" is the actual Interest paid in a Period. Values for this example are shown in the table below.

(iii) The expenditure deemed to be incurred in each Period is shown in the table below. The example assumes that the annual payment is adjusted to reflect the move in Interest rates. Thus the principal outstanding in any period will be as calculated in the table above.

Year	Allocation	Interest Rate	Actual Interest Payable	Total Expenditure Incurred
	x	%	y	x + y
1	3,059	14.5	145,000 [Note 2a]	148,059
2	2,601	13.5	114,778 [Note 2b]	117,379
3	2,076	12.8	86,873	88,949
4	1,476	12.0	57,878	59,354
5	788	12.9	33,212	34,000
	10,000		437,741	447,741

Note 1: Figures rounded to whole numbers

Note 2: (a) $1,000,000 (principal outstanding in the first Period) x 14.5% = $145,000

(b) $850,208 (principal outstanding in the second period) x 13.5% = $114,778

Note 3: The allocation of the Total Finance Charges Excluding Interest does not change as the interest rate changes

(b)　　　Method B

This example assumes that the borrower chose to account for all its variable rate financial arrangements using Method B of this Determination. The expenditure deemed to be incurred is calculated using the formula x + y.

In Method B, x = e - f.

(i) Calculate e.
The yield to maturity is calculated as 14.923% pa using Determination G3: *Yield to Maturity Method* and the expected cashflows which are as follows:

(990,000)　　principal lent net of fees paid
294,792　　annual payments
294,792　　annual payments
294,792　　annual payments
294,792　　annual payments
294,792　　annual payments

The table below shows the values of e for each Period.

(ii) Calculate f at an Interest rate of 12.45%, the rate for the first Period. The values for f are shown on the table below.

The following table shows the calculation of the expenditure deemed to be incurred by the borrower.

Period	Total Finance Charges (assuming 14.5% p.a. interest) (Note 1)	Assumed Interest at 14.5% (Note 2)	Total Finance Charges Excluding Interest	Actual Interest Rate % p.a. (Note 3)	Actual Interest Payable	Total Expenditure Deemed to be Incurred
	e	f	x = e - f		y	x + y
1	147,734	145,000	2,734	14.5	145,000	147,734
2	125,790	123,280	2,510	13.5	114,778	117,288
3	100,000	98,411	2,159	12.8	86,873	89,032
4	71,587	69,936	1,651	12.0	57,878	59,529
5	38,279	37,333	946	12.9	33,212	34,158
	483,960	473,960	10,000		437,741	447,741

Note 1: Based on the yield to maturity rate of 14.923% p.a., calculated using Determination G3 and an interest rate of 14.5% throughout.

Note 2: At 14.5% p.a.; this is the same as in the first table in paragraph (a) of this example

Note 3: Actual interest payable (y) is calculated on principal outstanding in each Period and is the same as the second table in paragraph (a) above.

Note 4: Figures rounded to whole numbers.

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Example F (illustrating Method B on an income year basis)

Method B may be applied in respect of Periods or income years. In example D and E, Determination G3 was used to calculate the yield to maturity rate, which was then used to calculate e (Total Finance Charges), for each Period. In the present example, Determination G10B: *Present Value Calculation Methods* is used in conjunction with Determination G11A: Present Value Based Yield to Maturity Method to calculate the yield to maturity rate and e for each income year. Example F is similar to example D.

On 1 March 1992 a New Zealand investor purchases, for $9,000 a 3 year note with a face value of $10,000 maturing 1 March 1995. Interest at Libor plus 1% pa, is payable half yearly in arrears. Fees of 2% of the face value are payable by the borrower to the investor on issue. The investor balances on 31 March and elects to use a 365 day basis.

The Interest rate is 10% pa in the first Period after issue.

Assuming that this Interest rate holds throughout the term of the notes, the yield to maturity is 15.12% pa, calculated at half yearly rests. This allows for the 2% fees, and uses the net purchase price of 9,000 - 200 = 8,800.

Income deemed to be derived during an income year is calculated using the formula x + y.

(a) Method A of this determination cannot be used because the Small Discount or Premium Criteria are not met. That is, 2% x 3 (years) x 10,000 (average principal outstanding) = 600 which is smaller than the discount plus fees of $1,200.

(b) Apply Method B to calculate the value of x.

x = e - f

The following table sets out the allocation of the Total Finance Charges Excluding Interest (x) between the income years.

Income Year Ending 31/3	Present Value at Year End	Assumed Amounts Receivable During (Note 1)	Total Finance Charges Year	Interest at 10% p.a. (Note 2)	Total Finance Charges Excluding Interest
			e	f	x = e - f
1992	8,906	- 8,800	106	-	106
1993	9,253	1,000	1,347	1,000	347
1994	9,654	1,000	1,401	1,000	401
1995	-	11,000	1,346	1,000	346
		4,200	4,200		1,200

Note 1: Calculated at 15.12% p.a. in accordance with Method A of Determination G10B: Present Value Calculation Methods.

Note 2: Calculated in accordance with Determination G11A: Present Value Based on Yield to Maturity Method. In the 1994 income year, for example -

Total Finance Charges =

(a)	9,654	Present value at year end
- (b)	0	Amounts payable by holder
+ (c)	1,000	Amounts receivable by holder
- (d)	9,253	Present value at preceding year end
=	1,401	

(c) In this case, y is the actual Interest paid in a Period. Values for this example are shown in the table below.

Income Year Ending 31/3	Period	Actual Interest Rate % p.a.	Interest Received in Period	Interest Received in Income Year	Total Finance Charges Excluding Interest	Income Deemed to be Derived
				y	x	x + y
1992	-	-	-	-	106	106
1993	1	10	500	1,050	347	1,397
	2	11	550			
1994	3	9	450	900	401	1,301
	4	9	450			
1995	5	8	400	800	346	1,146
	6	8	400			
				2,750	1,200	3,950

The income deemed to be derived in each income year will be as follows:

The total is confirmed as:

	1,200	discount
plus	2,750	interest actually receivable
	3,950	

(Note: In practice the income in the final year would be determined using the base price adjustment in section 64F of the Act.)

If the fees were payable by a borrower who was a New Zealand taxpayer with the same income year end, this taxpayer would be deemed to have incurred similar amounts of expenditure.

This determination is signed by me on the 22nd day of January in the year 1993.

R D Adair
Deputy Commissioner of Inland Revenue